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MEDICAL STUDENTS' AND DOCTORS' ATTITUDES TOWARD OLDER PATIENTS AND THEIR CARE: WHAT DO WE KNOW AND WHERE DO WE GO FROM HERE?

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ABSTRACT

This thesis explores doctors' and medical students' attitudes toward older patients in UK hospital settings. There have been regular and strong assertions in the grey literature and the news media that negative attitudes toward older patients may contribute to the inequality of healthcare service provision and treatment for older patients, compared to younger patients (those aged under 65 years), in UK hospital settings. However, much of the evidence does not investigate or explore these attitudes using a theoretical framework of attitudes outlined in the scientific research literature. This thesis comprises three studies. Firstly, a systematic search and review (Study 1) was undertaken in order to determine how attitudes toward older patients had been explored to date in the English-language, scientific research literature. Results demonstrated that previous studies had focused on attitude measurement rather than exploring the content of attitudes toward older patients. In fact, there was little evidence that previous research had ever explored these attitudes, despite the number of studies attempting to measure them. Furthermore, the review indicated the lack of research emanating from UK settings. In Study 2, attitudes toward older patients and their care were explored in twenty-five in-depth interviews with medical students and doctors in a UK NHS Hospital trust. Data were thematically analysed and findings indicated that attitudes toward older patients and their care could be conceptualised as: (1) attitudes toward older patients and their healthcare needs, and (2) attitudes toward providing care for older patients (e.g. the social and organisational barriers and facilitators). Within these two domains, the themes, subthemes and nodes, which represent attitude content with increasing levels of specificity, are presented. The findings from Study 2 mark one of the first attempts in this research area to explore and describe the content of attitudes in line with a theoretical framework of

attitudes. The final study, Study 3, explored the devaluation and unpopularity of the specialty of geriatric medicine as a future career choice in a sample of junior doctors. Having identified, in Study 2, that geriatric medicine was not highly regarded in a range of doctors and medical students, Study 3 aimed to ascertain whether this was due to the organisational and working environment or due to older patient-related factors in a recently-qualified sample of doctors. The findings indicated that organisational and work-related factors serve to discourage junior doctors from pursuing geriatric medicine, rather than factors related to the older patients treated on geriatric wards.

This thesis contributes to the research literature in two main ways. Firstly, this thesis outlines the research gaps in the worldwide English-language scientific research. Secondly, this thesis presents a conceptualisation of doctors' and medical students' attitudes toward older patients in a UK hospital setting. Importantly, this conceptualisation provides research that is relevant to UK settings and is in line with a theoretical framework of attitudes that has been identified from the scientific research literature. The strengths and limitations of this work are discussed.

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Dedicated to Daljit, Parmeet and Tiggy

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Samra, R., Griffiths, A., Cox, T., Conroy. S. & Knight, A. (2013). Changes in medical student and doctor attitudes toward older adults after an intervention: A systematic review. Journal of the American Geriatrics Society 61, (7), 1188-1196.

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LIST OF ABBREVIATIONS

ASD	Aging/Ageing Semantic Differential
FAQ	Facts on Aging/Ageing Questionnaire
GP	General Practitioner
HAS	Health Advisory Service, or Healthcare Advisory Service
KAOP	Kogan's Attitudes toward Old People Scale
MDT	Multidisciplinary Team
MS	Medical students
MSAS	Maxwell-Sullivan Attitudes Survey
NHS	National Health Service
PGY	Postgraduate Year
R & D	Research and Development
REC	Research Ethics Committee
RCP	Royal College of Physicians
UCLA GAS	University of California (Los Angeles) Geriatrics Attitude Scale
UK	United Kingdom
USA	United States of America

1. BACKGROUND

1.1 Chapter overview

This chapter introduces the research area and describes the context of the present work. Outstanding gaps in the research literature are identified and the motivation for investigating the present research area is given. The chapter concludes by stating the research questions and briefly describing how these questions are addressed in the subsequent chapters of this thesis.

1.2 Background to the research topic

The world's population is living longer (United Nations, 2009). In the UK, one in six of the population are over the age of 65 years, and by 2050, this figure is predicted to rise to one in four (Cracknell, 2010). Reductions in population mortality and changing fertility levels, a process known as demographic transition, have resulted in an older world population (United Nations, 2009). The United Nations (2009) have reported that world population ageing is pervasive and profound, "having major consequences and implications for all facets of human life" (2009, p. viii). The ageing of the population presents both opportunities and challenges for society (United Nations, 2009). Amongst the challenges, individual nations' health systems need to adapt in line with the population changes (United Nations, 2009). In the UK, the growing number of older people poses many challenges to the providers of health and social care services, as well as the public financing of these services (Cracknell, 2010).

Older patients, commonly classed as those over the age of 65 years (Age UK, 2013; Imison, Poteliakhoff, & Thompson, 2012), currently constitute the majority of hospital inpatients (Cornwell, Levenson, Sonola, & Poteliakhoff,

2012). Patients over the age of 65 years occupy approximately two-thirds of UK acute and general NHS hospital beds (Cornwell et al., 2012; Imison et al., 2012). Furthermore, older patients typically have longer hospital stays and are more likely to be readmitted to hospital (Cornwell et al., 2012). A recent report by the Royal College of Physicians (RCP, 2012), entitled *Hospitals on the Edge? The Time for Action*, states that hospitals are struggling to meet demand for acute care services because they are unprepared and unequipped to deal with the older patient population. The report claims that, in hospital settings, the UK NHS system "continues to treat older patients as a surprise, at best, or unwelcome, at worst" (RCP, 2012, p. 2). The report concludes that the current system of hospital acute care cannot keep pace with the demand for clinical services, and, as a result, the system may be on the brink of collapse (RCP, 2012).

Despite the large proportion of older patients in hospital settings, there has been much debate about the level of service and treatment provision delivered to older patients (e.g. Carruthers & Ormondroyd, 2009). The current interest in the quality of older patients' healthcare service provision arguably dates back to 1997 (Black, 2004), when the Observer newspaper ran a series of articles highlighting concerns about older patients' treatment in hospital, beginning with a personal account of a journalist's experience of hospital care for his unwell grandmother (Bright, 1997). Considerable public interest and response to the articles, led to the launch of an Observer-led campaign to promote awareness of the standard of care older patients received on general hospital wards. The resulting campaign, *Dignity on the Ward,* was backed by Help the Aged, the Relatives' Association, the British Geriatrics Society, and The Royal College of Nursing (HAS 2000, 1998). As part of the campaign, the Observer created a *Charter for the Third Age* (Durham & Bright, 1997), in which it requested a task force to investigate the treatment of older patients on hospital wards.

The then Secretary of State for Health, Frank Dobson, responded by commissioning the HAS 2000 (formerly the Health Advisory Service) to investigate the matter further. The resulting report, *Not Because They are Old – An Independent Inquiry into the Care of Older People on Acute Wards in General Hospitals* (HAS 2000, 1998), found "examples of prejudiced attitudes toward older people and their care at almost every level of the service system – ward staff, training establishments, senior managers and representatives of the health authorities" (p. 58). The report also described examples of ageism at the highest levels of the hospital management system. Specifically, the HAS 2000 (1998) described a chief executive of a large acute trust who believed the hospital was "compromised" (p. 58) by the older patient population and that surgical beds should be ring-fenced to protect them from older patients.

Since the independent inquiry into the care of older people on hospital wards (HAS 2000, 1998), issues relating to equality of treatment and service provision for older patients are often investigated by, or on behalf of, governmental organisations (e.g. Carruthers & Ormondroyd, 2009; Hansard, 2008; Hansard, 2011), and not-for-profit organisations and interest groups (e.g. Grattan et al., 2002; Levenson, 2003). The publication of findings are often followed by reports in the news media, which are typically highly critical of NHS hospital care for older patients (e.g. *Hospitals lambasted for 'alarming' treatment of older people*, The Guardian, 2011; *Hospitals are 'very bad places' for millions of older people, NHS chair says,* Telegraph, 2013). Issues relating to older patient care are still commonly part of the public dialogue to the extent that Oliver (2012) suggests we risk "death by awareness" (p. 231), in which the repeated reporting of the same issues raise awareness but still fail to address the underlying problems.

Attempts to improve the quality of older patient care have been made since the publication of the HAS 2000 report (1998). In 2001, the Department of

Health in England introduced the National Service Framework for Older People, which outlined a ten-year plan of action to provide higher quality health and social services for older patients. The framework detailed eight standards, intended to serve as the fundamental principles of care for older people, and listed "rooting out age discrimination" as the first standard (National Service Framework for Older People, 2001, p. 16). *Age discrimination* can be defined as behaviour where people are, either directly or indirectly, treated unequally on the basis of age (Ray, Sharp, & Abrams, 2006). As stated by Lievesley, Hayes, Jones Clark and Crosby (2009), age discrimination is "a set of actions with outcomes that may be measured, assessed and compared" (p. 9). In attempts to measure and quantify the effects of age discrimination in NHS health and social care, the scientific research literature has typically focused on comparing service provision and quality for older patients with that offered to younger patients (Lievesley et al., 2009).

The scientific and grey research literatures (such as governmental and not-for-profit organisations) have convincingly reported evidence of age discrimination toward older patients in NHS healthcare provision and quality. The research literature on this topic is vast and typically reports that older patients are underinvestigated and undertreated for a range of health conditions in comparison to younger patients (i.e. those under the age of 65 years) (Lievesley et al., 2009). For example, older patients are less likely to be admitted to intensive care or to the resuscitation rooms after trauma injury (Grant, Henry, & McNaughton, 2000), and less likely to be admitted to hospital after a myocardial infarction than younger patients (Dudley & Burns, 1992). Older patients are also less likely to receive surgical intervention or pharmaceutical drugs to manage heart disease, than younger patients (Bond et al., 2003). Additionally, older patients are less likely to be fully investigated, or receive chemotherapy or surgery for colorectal cancer (Austin & Russell,

2003) and lung cancer (Peake, Thompson, Lowe, & Pearson, 2003) than younger patients. It should be noted that some of the research on treatment provision does not take into account patient choice, such as those who chose not to undergo further treatment, and may therefore inadvertently overestimate treatment inequality (Lievesley et al., 2009). Despite this, it can be concluded from the scientific research literature that trends indicate underinvestigation and undertreatment of older patients in hospital settings (Lievesley et al., 2009).

Measuring inequalities in service and treatment provision for older patients constitutes a quantification of age discrimination in a manner that does not inform the search for why inequality exists or persists. Differential rates of treatment and service provision for older patients can indicate the presence and extent of age discrimination, but does not address underlying reasons for discrimination. In a personal perspective published in *The Lancet*, Baroness Neuberger (2008) argues that "in the UK at least, we simply see discrimination against older people in terms of access to stroke care and other services" (p. 1744). Neuberger (2008) points out that the failure to study the ageing population adequately, as well as the societal adaptations needed for the changing population is, in itself, ageist. She also argues that this ignorance is unique to the UK because "in the UK, there is a truly negative view of old age" (p. 1744). Neuberger (2008) cites the example of the USA, where the study of how to adapt and change society for the ageing population has begun in the scientific research literature and compares this to the UK, where she argues there has not been a similar level of interest.

The investigation into possible reasons for the differential treatment of older patients in NHS settings is mostly confined to the grey research literature (e.g. Abraham, 2011; Carruthers and Ormondroyd, 2009). As age discrimination is a "manifestation of ageism" (Grattan et al., 2002, p. 1), recent research has

focused on the role of ageism and how it may manifest in healthcare settings. Ageism can be defined as “any attitude, action, or institutional structure which subordinates a person or group because of age or any assignment of roles in society purely on the basis of age" (Traxler, 1980, p. 4). A recent investigation into the care of older patients in acute care hospitals, also part of the grey research literature, reported an “almost unanimous view expressed by all staff that the acute hospital is not the ‘right place’ for the older patient” (Tadd et al., 2011, p. 18). The authors conducted 79 interviews with ward staff across four NHS acute hospital trusts and concluded that results were indicative of “underlying and widespread ageism” (p. 208), because staff placed blame with the older patient rather than with an inadequate system.

The recent focus on ageism and ageist attitudes appears to be motivated by the pervasiveness of these negative attitudes, despite reductions in levels of overt age discrimination in service provision. For example, the 2006 report, *A New Ambition for Old Age* (Department of Health), states: “Although overt age discrimination is now uncommon in our care system, there are still deep-rooted negative attitudes and behaviours towards older people” (p. 2). Similarly, a number of reports and policy documents in the grey research literature conclude that attitudes toward older patients need to be improved (e.g. Carruthers & Ormondroyd, 2009; Levenson, 2003). There have been calls for “changing the often negative culture of attitudes” (Department of Health, 2006, p. 1), the need for a “widespread shift in attitude” (Abraham, 2011, p. 10), and “tackling ageist attitudes” (Carruthers & Ormondroyd, 2009, p. 40) in the introduction or conclusion of reports despite providing no empirical evidence to support these recommendations (e.g. Carruthers & Ormondroyd, 2009; Department of Health, 2006).

As argued by Oliver (2012), the public dialogue concerning substandard older patient care has repeatedly described the same problem. The independent inquiry by HAS 2000 (1998) identified ageism at many levels of the health service system fifteen years ago, but the narrative today is similar. For example, a recent report by the Health Service Ombudsman for England, *Care and compassion?* (Abraham, 2011), included 10 patient stories detailing examples of substandard care for older patients. Abraham (2011) concluded that the "difficulties encountered by the service users and their relatives were not solely a result of illness, but arose from the dismissive attitude of staff, a disregard for process and procedure and an apparent indifference of NHS staff to deplorable standards of care" (p. 7). Following the publication of this report, Michelle Mitchell of the charity Age UK wrote a UK newspaper article entitled, *Poor treatment of older people in the NHS is an attitude problem* (The Guardian, 15 February 2011). Whilst it is plausible that attitudes of staff are affecting the care of treatment of older patients, we are not any clearer in our description of these attitudes than we were fifteen years ago after the HAS 2000 (1998) investigation. It is proposed here, that the reasons for this are that much of the evidence in the grey literature is anecdotal and there has been a lack of investigation in the scientific research literature on attitudes towards older patients. This failure to describe and detail attitudes toward older patients may underlie why we have not moved on from the narrative established over a decade ago. A more detailed and scientific conceptualisation of attitudes toward older patients in hospital settings is therefore needed.

The scientific research literature on attitudes toward older patients is heavily dominated by studies examining nurses' and student nurses' attitudes, both in the UK (Higgins, Van Der Riet, Slater, & Peek, 2007; Hope, 1994; McKinlay & Cowan, 2003; McKinlay & Cowan 2006; McLafferty, 2007; McLafferty & Morrison, 2004) and elsewhere (Courtney, Tong, & Walsh, 2000; Lookinland

& Anson, 1995; Mellor, Chew, & Greenhill, 2007). Nursing research on attitudes toward older patients has a long history (see Ingham & Fielding 1985, for a review of the early literature), and therefore, the literature predates the recent concerns regarding older patient care in hospital settings (e.g. HAS 1998, 2000). Ingham and Fielding (1985) propose that the negative portrayal of older patient care described in the book, *Sans Everything: A Case to Answer* (Robb, 1967), instigated a trend to investigate nurses' attitudes toward older patients in hospital settings. Robb (1967) included accounts of mistreatment of older patients on hospital wards and accused staff of callous treatment, cruelty, and corruption in the care of older people in NHS hospitals. The book placed much blame on the nursing staff, and claimed that senior hospital managers and doctors did not prevent older patient mistreatment (Butler & Drakeford, 2003).

Although the UK nursing research literature on attitudes toward older patients dates from the 1980s (e.g. Wells, 1980), there is no similar or corresponding body of scientific research on doctors' attitudes toward older patients in the UK. Studies investigating doctors' attitudes toward older patients do exist, but mostly originate from other countries (e.g. Lui & Wong, 2009; Maxwell & Sullivan, 1980). There is therefore a gap in the research and a pressing need to examine doctors' attitudes toward older patients. Given the role and responsibility doctors have in the medical diagnosis and treatment of all patients, in addition to the reports of unequal treatment provision for older patients (Carruthers & Ormondroyd, 2009), it is now necessary to examine doctors', and those training to become doctors' (medical students), attitudes toward older patients and their care. Therefore, the present work will focus on doctors' and medical students' attitudes toward older patients in UK hospital settings.

Despite the lack of studies investigating doctors' attitudes toward older patients, there are a number of studies in the scientific research literature which investigate medical students' attitudes toward older patients (e.g. Duke, Cohen, & Novack, 2009; Hughes et al., 2008). This research most commonly originates from the USA, but serves as a useful starting point for the present work. The question of whether American research has relevance for the UK context still remains however, and will be considered in the subsequent chapters of this thesis. In addition to this, the outstanding issue of how to conceptualise doctors' and medical students' attitudes toward older patients will be addressed.

As a starting point, anecdotal evidence reviewed in the grey research literature indicates that doctors may have different attitudes toward older patients than other healthcare professionals (Lievesley et al., 2009). After reviewing reports and documents from governmental and not-for-profit organisations, regarding quality of care and treatment for older patients, Lievesley et al. (2009) concluded:

> *"There is evidence of the presence of ageist attitudes among medical staff in secondary health care with indications that doctors may be more ageist than other staff. There is, however, no evidence within the UK of the reasons for these attitudes, whether they reflect wider societal views or are peculiar to the medical profession." (p. 19)*

To date, the general reporting of attitudes that has become increasingly common in reports by public and charitable bodies and the news media, as described in this chapter, have typically failed to investigate attitudes in line with any theoretical framework underpinned by scientific theory. The study of attitudes in general and the development of attitude theory is an

important part of social psychology, dating back more than 75 years ago (e.g. Allport, 1935). There is much psychological research detailing the structure of attitudes, and the possible components of attitudes (e.g. Bagozzi, 1978; Eagly & Chaiken, 1993; Rosenberg & Hovland, 1960). Despite the extensive psychological research on attitude composition, structure and stability, much of the debate on attitudes toward older patients in healthcare settings has not been reported in line with any theoretical model of attitudes from the scientific literature.

Of the scientific research which exists on attitudes toward older patients, the focus has been on the measurement and quantification of attitudes, as opposed to exploring the content of the attitudes (i.e. provide a description of attitudes). The present work will aim to conceptualise and describe attitudes, as opposed to reporting the positive or negative valence of attitudes, which arguably has dominated the grey literature and media reports on the subject to date. Furthermore, this research will use a theoretical framework of attitudes outlined in the scientific research literature. In line with the background literature, described here, which has motivated this research, the focus of the present work is to explore medical students' and doctors' attitudes toward older patients in hospital settings (i.e. secondary and tertiary care settings). Therefore, doctors working in primary care settings (General Practitioners) are not included as they fall outside the focus of investigation. The decision to exclude doctors working in primary care has been made to allow for clarity and focus in addressing the research problem described in this chapter. Therefore, in this thesis, *doctors* and *medical students* will refer to those working in secondary- and tertiary-care settings.

1.3 Research questions

1. How have medical students' and doctors' attitudes toward older patients been investigated in the scientific research literature to date?

2. How can medical students' and doctors' attitudes toward older patients and their care be conceptualised in UK settings?

1.4 Structure of the thesis

Chapter 2 provides a description of the relevant scientific research on attitudes. Specifically it describes the psychological theories underpinning attitude structure and composition. A definition of attitudes is provided in order to inform the present research.

Chapter 3 presents Study 1: a systematic search and review of doctors' and medical students' attitudes toward older patients in the worldwide, English-language, scientific research literature. This review describes what is known about this research area, and how medical students' and doctors' attitudes toward older patients have been investigated previously. Rather than simply classifying attitudes as positive or negative, the review classifies the strengths and weaknesses, as well as the conclusions, of the existing literature. This will allow future exploration of attitudes toward older patients in UK settings to benefit from findings from other countries that have already begun to address this research area. The review concludes with recommendations of how we should explore this research in the UK based on the strengths and weaknesses of the existing scientific research literature.

Chapter 4 outlines the theoretical and philosophical background and methodological choices made for the second study of this thesis. Study 2 (attitudes study) consists of an interview study which explores attitudes

towards older patients and their care in a sample of doctors and medical students. The findings of Study 2 are reported in Chapters 5 and 6. Specifically, Chapter 5 describes *attitudes toward older patients and their healthcare needs*, and Chapter 6 describes *attitudes toward providing care for older patients* (specifically, the social and organisational barriers and facilitators). Chapter 7 presents the final study, Study 3 (career intentions study), which is a qualitative study on the appeal, or lack thereof, of specialising in geriatric medicine, as reported by newly-qualified doctors. Finally, the findings of the thesis and its strengths and weaknesses are discussed in Chapter 8.

2. ATTITUDE THEORY

2.1 Chapter overview

Attitudes and their investigation are central to the subsequent chapters of this thesis. Therefore, this chapter includes a brief summary of how we have come to understand, investigate, and measure attitudes. Due to competing schools of thought in this area, a brief history of attitude theory is outlined, paying particular attention to attitude definition, structure, stability and measurement. To provide justification for the theories and positions adopted in the subsequent chapters of this thesis, the background to the competing theories is also provided. The chapter concludes by describing the central tenets of the attitude theory chosen to inform the present work as well as the justification for its use.

2.2 Definition of attitudes

In 1958, Gordon Allport posited that an attitude "is probably the most distinctive and indispensable concept in contemporary American social psychology" (p. 43). Despite the importance of the attitude concept, its definition at this time was still undergoing transformation. One of the first attempts to define attitudes in the scientific research literature included an examination of 183 books and articles which concluded that there were 23 different definitions of attitudes as a scientific concept (Nelson, 1939). Nelson noted that some definitions of attitudes could not be differentiated from a "habit", "disposition", "tendency" or an "opinion" (p. 367) and concluded that an accepted definition of attitudes had not yet been reached. In 1963, another review on the state of the scientific literature indicated that the attitude concept "is still in a surprisingly crude state of formulation considering its widespread use. At best it barely qualifies as a scientific

concept." (DeFleur & Westie, p. 30). The authors recommended further development, rather than abandonment of the concept altogether.

Attitude theory dating from the 1960s to the present day has shown remarkable refinement to the attitude concept, most notably in the increasing specificity of the attitude definition. In 1939, Nelson had found great breadth and lack of specificity attributable to attitudes to the point that it appeared indistinguishable from an opinion, habit, or set of behaviours. In the present day, attitudes are typically described as an evaluation of an attitudinal target (e.g. a person, concept, or object), along a continuum ranging from favourable to unfavourable (e.g. Eagly & Chaiken, 1993; Zanna & Rempel, 1988). In order to understand the reasons for the increased specificity and reduced breadth of the attitude concept as it is often described today, it is necessary to consider the debate on attitude structure.

2.2 Attitude structure: The unidimensional model versus the tripartite model

The belief that an attitude is a psychological tendency in which a particular entity (also known as an *attitudinal target* or *target*) is evaluated with some degree of favour or disfavour (Eagly & Chaiken, 1993). This view is based on the unidimensional model of attitude structure. This model assumes that all the information contributing to the resultant attitude lies on the same single evaluative dimension, varying from positive (favourable) to negative (unfavourable). Measurement scales that assume an attitude can be captured as a point along a preference scale, ranging from positive to negative, are based on the unidimensional view because they use unidimensional scaling (Edwards, 1957). Specifically, Likert's summative scales (1932), Thurstone's equally-appearing intervals scales (Thurstone, 1928; Thurstone & Chave, 1929) and Guttman's scalogram analysis (1944) are all unidimensional scales (McIver & Carmines, 1981). Regardless of what is being evaluated, all of these

scales measure a single dimension (e.g. how much an individual 'agrees' or 'disagrees' with items) and scores can be compared on that single dimension, (ranging from positive to negative) between individuals (McIver & Carmines, 1981). The unidimensional model of attitudes posits that all attitudinal-related information is represented along a single dimension which is akin to an *evaluative summary* of information about an attitudinal target (Fazio, 2007). Despite the common use of these types of attitude scales, imposing unidimensionality on attitudes has been heavily criticised. For example, Diab (1967) has argued that it is not realistic to consider that an individual's attitude can be adequately represented by an average score on a preference scale along a continuum ranging from positive to negative. It is unlikely that two individuals who score the same preference for a target have the exact same attitude toward the target (Diab, 1967).

Although attitude scales and measurement techniques for capturing attitudes often implicitly assume the unidimensional model of attitude structure, the scientific research literature dedicated to exploring attitude structure has tended to regard attitudes as multidimensional (Tesser & Shaffer, 1990) since the 1940s (Smith, 1947). The late 1940s saw the birth of a three-component (three-dimensional) model of attitude structure, also referred to as the *tripartite model,* and refinement of this model continued throughout the 1950s (Katz and Stotland, 1959) and 1960s (Ostrom, 1969; Rosenberg & Hovland, 1960; Triandis, 1967). Smith (1947) was amongst the first to describe the components of the tripartite model in a study investigating attitudes of the American public toward Russia in 1947. Smith (1947) argued that his analysis demonstrated multiple components of attitudes, specifically: (a) how a person feels toward the subject (affective information); (b) what a person thinks about the subject (cognitive information); and (c) what actions should be taken (termed *policy orientation* in Smith's article, p. 514, and later referred to by others as *behavioural/behavioral information,* e.g. Rosenberg

& Hovland, 1960, p. 3). Smith (1947) argued that these findings supported the use of this conceptual model as a framework for the investigation of attitudes.

Following further development during the 1950s, the tripartite model of attitudes was then formally outlined by Rosenberg and Hovland (1960). According to this model, attitudes consist of three dimensions: (a) affective information (feelings toward the target), (b) behavioural information (past and future behavioural intentions in relation to the target), and (c) cognitive information (beliefs or stereotypes about the target). These three dimensions (Maio, Olson, Bernard & Luke, 2006) are typically referred to in the scientific literature, and henceforth in this thesis, as *three components* of attitudes (Rosenberg & Hovland, 1960). In contrast, the unidimensional model assumes that the attitude is a single *evaluative summary* and that this single dimension is separate and distinct from, but can be informed by, affective, behavioural and cognitive information (Eagly & Chaiken, 1993).

In order to resolve the unidimensional versus tripartite model debate, Ostrom (1969) offered statistical support for the existence of three components of attitudes, as outlined in the tripartite model. Ostrom's (1969) study used a multitrait-multimethod design (Campbell & Fiske, 1959) and employed multiple measures of the hypothesised constructs of affective, behavioural, and cognitive information. Using four different methods of attitude measurement for each of the three components of the tripartite model, Ostrom (1969) sought to determine whether each component correlated with itself (as measured by a different scale) better than the other two components. Ostrom (1969) found evidence for the unique additional variance for the three components over the shared variance of the combined three components and, therefore, found statistical support for the tripartite model. He did note that the unique additional variance of the three components was small and this was confirmed in a later reanalysis of the data

(Bagozzi, 1978). Importantly, a major strength of the tripartite model is the statistical validation it has received (Breckler, 1984; Breckler & Wiggins, 1989; Woelfel, Cody, Gillham, & Holmes, 1980).

Despite the statistical validation of the tripartite model (e.g. Breckler, 1984; Ostrom, 1969), studies measuring attitudes have consistently and increasingly used unidimensional scales (characterised as one dimension ranging from positive to negative), thus implicitly assuming the unidimensionality of attitudes (e.g. Edwards, 1957; Likert, 1932; Thurstone, 1928; Thurstone & Chave, 1929). In doing so, Ostrom (1968) has argued that the attitude data elicited by using these scales (preference for or against a target), may simply represent the affective component of the tripartite model. The move away from the tripartite model of attitude structure was described by Ostrom (1968) as follows: “the bulk of attitude research and consequently, the theory developed to understand the attitude change process, continues to focus primarily on affect to the detriment of understanding the other characteristics of attitude” (p. 27). Ostrom (1968) essentially argued that attending to only one of the three components misses valuable information on the attitude and reduces the validity of subsequent measurement.

Another account of the movement toward assuming the unidimensionality of attitudes, despite statistical support for the tripartite model, relates to the ease and convenience of taking the unidimensional view. Writing in 1967, Fishbein argued that the definition of attitudes should be closer in line with the techniques of measurement of attitudes at the time, rather than the other way around. He went on to justify the use of measuring only one component of the tripartite model because it was easier to employ rigorously and created fewer problems than multidimensional concepts. Fishbein (1967) concluded, “a conceptual system in which only the affective component is

treated as attitudinal, and the other two components are linked to beliefs, should permit a more productive approach to the study of attitudes" (p. 257).

Similarly, Triandis (1967) has claimed that the tripartite model fell out of favour due to a lack of adequate procedures for attitude measurement, rather than any particular weakness associated with its underlying theory. In contrast, research assuming the unidimensional view in which attitudes vary on a single evaluative dimension, from favourable to unfavourable, had a number of possible techniques in which attitudes could be measured consistent with this view (Guttman, 1944; Likert, 1932, Thurstone, 1928; Thurstone & Chave, 1929).

Despite the amount of research that measures attitudes using unidimensional scaling, researchers are increasingly concluding that it is likely that attitudes are not unidimensional (e.g. Bell, Esses, & Maio, 1996; Haddock & Zanna, 1999; Maio, Esses, & Bell, 2000; Trafimow & Sheeran, 1998). Haddock and Zanna (1998) have suggested the use of open-ended measures (as opposed to traditional unidimensional scales such as Likert scales) to generate and answer research questions pertaining to attitudes. Haddock and Zanna (1998) propose that open-ended measures can help identify which attitude components are relevant to the particular attitudes being investigated, as there is the possibility that the dimensionality of attitudes may depend on the individual or the type of attitudinal target (i.e. attitudes toward people may differ in dimensionality from attitudes toward objects or concepts; Breckler, 1984).

This discussion of the history of the concept and measurement of attitudes indicates that the unidimensionality of attitude structure could not be assumed. According to the unidimensional model (e.g. Eagly and Chaiken, 1993), even if an attitude is a single evaluative dimension, it is informed by

cognitive, affective and behavioural information. Therefore, both major models of attitude structure, unidimensional and tripartite, require investigation of affective, behavioural and cognitive information. Unidimensional models require these three sources of information because attitudes are considered to be an evaluative summary of them. The tripartite model of attitude structure posits that affective, behavioural and cognitive information *are the attitude* and result in three different response classes of information about the attitudinal target (i.e. data representing the three components should not be summed into a single score or *summary evaluation*).

The research objectives of the present work included reviewing the scientific research on attitudes toward older patients held by doctors and medical students, as well as examining how these attitudes can be conceptualised in a UK setting. To meet these objectives, the present research adopts a view in line with the tripartite model of attitudes (e.g. Rosenberg & Hovland, 1960); attitudes consist of three components, (a) affective information, (b) behavioural information, and (c) cognitive information, relating to an attitudinal target (i.e. older patients).

The scientific literature highlights that the rapid adoption of the unidimensional model appears to be influenced by a lack of appropriate measurement procedures for the tripartite model, rather than any shortcomings of its underlying theory (Triandis, 1967). Additionally, empirical validation of the tripartite model (e.g. Breckler, 1984), and the similarity of the unidimensional model to the affective component of the tripartite model (Ostrom, 1968) were all factors in this decision. Most importantly, the decision to consider three components and, therefore, conceptualise attitudes as multidimensional, does not preclude the possibility that any data are, or will be found to be, unidimensional. However, if attitudes are

considered to be unidimensional and investigated as a single construct, this may preclude the possibility that multidimensional data will be found.

2.3 Attitude stability

Historically, attitudes have been considered to be relatively stable, well-formed and enduring because they were thought to be represented in memory structures (e.g. Fazio, 2007). According to this view, when an individual is questioned about their attitude, they sample from a memory structure that holds information about the individual's attitude (Wilson & Hodges, 1992). In direct contrast to this view, it has been argued that an individual's attitudes do not exist in a long-lasting form and may be immediately constructed, when accessed, based on whatever information is pertinent to the individual at the time (Schwarz, 2007a). This latter view represents a radical position on attitude stability, whilst the former view (Wilson & Hodges, 1992) can be considered a conservative position.

Between these radical and conservative positions on attitude stability, there is an intermediate view, which the present work adopts. Specifically, it is posited that attitudes can vary between stable (i.e. well-formed) and fluid (i.e. situational) depending on the circumstances and context of their access and retrieval. Converse (1964) has posited that attitudes vary between well-formed and situational, depending on how much an individual has previously thought about the attitude target. Converse (1964) argues that when an individual is discussing an object about which she or he has not previously considered very deeply, the attitude is not well-formed and will be subject to greater influence of context effects because a judgement is produced on the spot.

The present research is conducted under the assumption that attitudinal responses have some underlying order and organisation and may be

represented in an individual's memory (Wilson & Hodges, 1992). This theory assumes that the probability of a defined attitude is likely to reoccur when an individual is repeatedly presented with the same stimulus, rather than random attitudinal responses which may be constructed on-the-spot (e.g. Gawronski, 2007). Converse's (1964) argument concerning the reliability of verbal reports is also accepted in the present work. Specifically, Converse argues that reliability of verbal reports is likely to be affected by the extent an individual has considered his or her attitude or thought about the attitudinal target. Therefore, it is accepted that an individual may not have a well-formed attitude and his or her attitude may be relatively fluid and subject to context effects, such as the effects of social desirability (for a review, see DeMaio, 1984). Therefore, although more radical positions do exist (e.g. Gawronski, 2007; Schwarz, 2007b), the present research assumes an intermediate position on the stability of attitude structures (e.g. Eagly & Chaiken, 2007). This view was adopted in line with Bohner and Dickel's (2011) recommendation that research take into account the stable and situational accounts of attitude structure to combine the strengths of both accounts.

2.4 Attitude Measurement

2.4.1 Indirect and direct approaches

There are two approaches to the measurement of attitudes; direct and indirect. The direct approach to attitude measurement involves a form of self-report, such as interviews, focus groups or survey-based study designs, where individuals are asked directly to access and report their attitudes (e.g. Schwarz, 2007a). In the research literature, direct measures of attitudes have also been referred to as "explicit" measures, "deliberative" measures, "controlled" measures, or "conscious" measures (Horcajo, Brinol, & Petty, 2010, p. 939), depending on the theoretical perspective of the researcher. Specifically, attitude theorists may see direct measures as accessing attitudes

that have to be reported (explicit), that require deliberate thought (deliberative or controlled), or that an individual is aware of (conscious) (Horcajo et al., 2010).

The indirect approach to attitude measurement typically involves accessing attitudes without the conscious awareness of the holder of the attitude (Dovidio & Fazio, 1992). This is by measuring physical and physiological responses, to target-relevant stimuli, which are deemed to be outside of conscious control. There is therefore an assumption that the physiological response is indicative of positive or negative valence to target stimuli. An example of indirect attitude measurement is measuring reaction times in word association tests (Fazio, Jackson, Dunton, & Williams, 1995). In such tests, faster reaction times are assumed to indicate easier processing because words or concepts are already strongly associated in the individual's memory, therefore revealing an individual's attitude outside of their conscious control (Greenwald & Banaji, 1995). Less common methods of indirect measurements of attitudes include physiological responses to target stimuli, such as event-related potentials (Cacioppo, Crites, & Gardner, 1996), functional magnetic resonance imaging (Phelps et al., 2000), and facial electromyography (Vanman, Saltz, Nathan, & Warren, 2004). Indirect measures have also been referred to as "implicit" measures, "automatic" measures, and "unconscious" measures (Horcajo et al., 2010, p. 939). Depending on the theoretical perspective of the researcher, it is believed that indirect measures access attitudes that do not require individuals to report the attitude (implicit), tap into the automatic evaluations or reactions toward a target (automatic), or that the individual is not consciously aware of (unconscious).

Naturally, the existence of two different approaches to attitude measurement has led to debate regarding which approach better captures an

individual's "true" attitude (Schwarz & Bohner, 2001, p. 649). This research debate has been fuelled by discrepant findings in a number and variety of studies that measured individuals' attitudes directly and indirectly (see Gawronski & Bodenhausen, 2006 for a review). Contradictory explicit attitudes (measured directly) and implicit attitudes (measured indirectly) in the same individual have commonly been reported (e.g. Gawronski & Strack, 2004). It has been claimed that indirect measures bypass social desirability biases and, as a result, are more likely to encompass an individual's true attitude. This has been countered by researchers who favour direct measures who state that it is not known with any certainty as to what the data from indirect measures actually represents. Furthermore, attitude data from the use of an indirect approach have been shown to be subject to experimental manipulation through the use of social cues and contextual information (Barden, Maddux, Petty, & Brewer, 2004). This calls into question the argument that these processes are not subject to biases, such as social desirability (Gawronski & Bodenhausen, 2006).

Recently, the indirect versus direct measurement debate has progressed beyond which measurement technique is superior to the other, to what each approach may actually measure. Gawronski and Bodenhausen (2006) have tried to reconcile the findings of contradictory attitude data in the same individual, when measured indirectly and directly, by arguing that indirect and direct measures access different aspects of an attitude. Gawronski and Bodenhausen (2006) claim that indirect measures access positive and negative evaluations about a target, regardless of whether an individual subscribes to these beliefs. Therefore, indirect measures indicate that an individual is aware of positive and negative stereotypes, rather than indicating the individual's level of favour or disfavour toward the target. This information is then examined at a conscious level for truth and validity, through propositional and syllogistic reasoning. Finally, stereotypes are either

rejected or accepted after the reasoning process and the resultant position becomes the explicit attitude, which may be accessed by direct measurement, such as through self-report. In short, Gawronski and Bodenhausen (2006) claim that indirect measures access our awareness of positive or negative evaluations (such as stereotypes), but direct measurement accesses the attitudes we subscribe to after thinking and reasoning (subject to contextual factors such as social desirability).

It has also been proposed that attitudes that require low levels of elaborate or deliberate thinking may best be researched using indirect approaches (Maison, Greenwald, & Bruin, 2004). For example, choosing a brand in a supermarket is often done quickly and consumer behaviour researchers have had more success predicting brand choice by measuring attitudes indirectly, than directly (Maison, Greenwald, & Bruin, 2004). Attitudes that require elaborate thinking and reasoning, such as attitudes toward people, may benefit from direct attitude measurement because this measurement technique allows thinking and reasoning (Horcajo et al., 2010). Indirect attitudes, measured by reaction times or physiological response, may not be predictive of an individual's position after they have deliberated or processed his or her thoughts (Horcajo et al., 2010).

The present research adopts a direct approach to attitude measurement by using self-report methods. The rationale for this approach has been highlighted in this discussion of the debate regarding indirect and direct approaches to attitude measurement. Firstly, direct attitude measures are typically suited to attitudes which require deliberate thought and processing, as is often the case with attitudes toward people or groups (e.g. Horcajo et al., 2010). Secondly, the lack of certainty regarding what indirect data represents was a concern, especially with regard to the tripartite model of attitude structure. It has been posited that attitude data from indirect measures

actually represents an awareness or knowledge of positive and negative evaluations regarding a target, which is not necessarily one's attitude. Instead, it may simply reflect knowledge of positive or negative stereotypes concerning an attitudinal target (Gawronski & Bodenhausen, 2006). In contrast, the use of self-report data (from direct measurement) allows, in principle, for the collection of all three sources of information, although it is accepted that this information may be subject to contextual factors, such as socially desirable responding.

2.4.2 Challenges of measuring direct attitudes

Direct measures of attitudes involve the collection of self-report data and there are a number of challenges to collecting such information (Schwarz, 1999; Schwarz, 2007a). Studies involving interviews or focus groups may ask respondents to verbally report attitudes, and this involves a series of tasks that all play a part in the reliability of the resulting verbal report (Schober, 1999). Firstly, the researcher has to formulate and pose the question to the holder of the attitude. The identification of the phenomena to be investigated, as well as the wording of the question includes a succession of decisions and a number of subjective processes, for which the researcher is responsible (Schwarz, 2007a). Following this, respondents can interpret questions in a number of ways (again, a subjective process), and are then required to formulate an answer (Schober, 1999). Respondents' ability to formulate an appropriate answer may vary according to individual verbal reasoning skills (Schwarz, 1996). Respondents also have to decide how they want to respond, in terms of the level of detail they are willing to share and the level of honesty with which they are comfortable (Schwarz, 1996).

Written self-report data, such as survey methodology, also suffer from challenges to their validity and reliability. Should respondents not understand a question or the answer format, there may not be a researcher present to

address their queries and so they may guess or answer inaccurately (Schober, 1999). If respondents are completing a survey with response categories, they will need to map their attitude into the predetermined list or response categories given to them by the researcher (Schwarz, 2007a). At the final stages, respondents may want to edit their responses with regard to acceptable social norms, such as by self-monitoring and providing socially desirable answers (Schwarz, 2007a).

In conclusion, self-reports of attitude data, whether written or verbal, are subject to a range of biases that may be present at a number of stages of the process. Despite these drawbacks, the present research uses the direct attitude measure of self-reporting in order to answer the research questions. The limits of this method should be noted, especially with regard to the reliability of self-reports, because the results of subjective decisions may vary from time to time and according to the context-dependent factors described above. However, attempts to identify and address the challenges associated with self-reports will be outlined in the methodological chapter of this thesis (Chapter 4). Additionally, limitations of the methods chosen are discussed in Chapter 8.

2.5 Chapter summary

As discussed in this chapter, debate still exists on a number of features of the attitude concept and its measurement. Awareness of the main sources of debate is fundamental to the investigation of any attitudes in any population. This chapter reviewed a range of positions that can be adopted in relation to attitude structure, stability, and measurement. Each section ended with the position taken in this thesis, as well as the reasoning for this, in order to state the scope and context for the present research. The relevant attitude theory has been described here to allow the subsequent exploration of attitudes to be framed and referenced within the context described in this chapter. In

short, having discussed the remit and scope of attitudes, how attitudes are stored, and what attitude data may represent, we now move on to the present research topic with greater specificity. The next chapter examines how doctors' and medical students' attitudes toward older patients have been explored in the scientific research literature to date.

3. STUDY 1: SYSTEMATIC SEARCH AND REVIEW

3.1 Chapter overview

This chapter presents a systematic search and critical review of the scientific research literature on the topic of medical students' and doctors' attitudes toward older patients. The chapter begins with the objective of the review and details the research question it addresses (Section 3.2). Following this, description and justification of this type of review is provided (Section 3.3), in addition to the scope of the review (Section 3.4). The methodological decisions are reported in Section 3.5. Results of the review are then presented in three separate sections (Sections 3.6, 3.7, and 3.8). The main findings, and the limitations, of the review are presented in the discussion (Section 3.9).

3.2 Study 1 objective

The overall objective was to determine what scientific research on doctors' and medical students' attitudes toward older patients had found, as well as the strengths and weaknesses of the evidence. This review addresses the first research question outlined in the present work (Section 1.3): How have medical students' and doctors' attitudes toward older patients been investigated in the scientific research literature to date?

3.3 The review paradigm

The review involved systematically searching and critically reviewing the literature, referred to as a 'systematic search and review' (Grant & Booth,

2009). A systematic search and review includes systematic searching which allows for greater transparency of stages in the review process. However, it allows more flexibility with regard to the review stage than a conventional systematic review (Grant & Booth, 2009). A conventional systematic review aims to answer a narrowly-defined research question with predefined and explicit concept definitions related to the phenomena of interest (Grant & Booth, 2009). In contrast to this, the aims of the present review included the identification and critical evaluation of literature pertaining to medical students' and doctors' attitudes toward older patients and therefore a conventional systematic review was not appropriate. Aspects of the systematic review process were considered to be ideal for the present review, specifically the systematic searching and detailed reporting of search and analysis procedures. The main advantages over a traditional narrative literature review are the replicability and transparency of the search and analysis procedures (Grant & Booth, 2009).

The main reason for the use of a systematic search and review, over a conventional systematic review, was the present review did not intend to limit included articles to tightly defined boundaries related to study quality. In order to generate a picture of the research in this area, the present review required critical analysis of methodologically strong, as well as methodologically weaker, studies. Such information was to be gathered in order to postulate improvements to future research designs and identify gaps in the research literature. The decision not to exclude studies based on quality assessment criteria meant that the current review would not meet the criteria for a systematic review (Grant & Booth, 2009). Study quality was still assessed and critically appraised, but studies were not excluded on the basis of predefined methodological weaknesses. As a result, the present review is deemed to be a *systematic search and review* (Grant & Booth, 2009), as opposed to a systematic review. The main advantage of a systematic search

and review over a conventional systematic review is that it can provide a more complete picture of the research pertaining to the topic (Grant & Booth, 2009).

3.3.1 Aggregative and configurative review approaches

The conceptual underpinnings of conventional systematic reviews have been described as aggregative (Gough, Thomas, & Oliver, 2012), in that they are designed to aggregate similar data or summarise information in order to develop empirical statements about the phenomena under investigation with greater confidence. Aggregating evidence requires strict adherence to tightly defined and well-specified concepts to ensure that the evidence is sufficiently similar to be comparable (Ilott, Booth, Rick, & Patterson, 2010). Typically, conventional aggregative systematic reviews have strict inclusion and exclusion criteria. In contrast, the present review was exploratory in nature and involved the evaluation of a broad range of evidence. A scoping review of the literature demonstrated that studies investigating attitudes toward older patients in the existing literature had not used well-specified concepts of attitudes and often used terms such as beliefs, stereotypes and attitudes interchangeably (e.g. Beall, Buamhover, Simpson, & Pieroni, 1991; Belgrave, Lavin, Breslau, & Haug, 1982; van Zuilen, Rubert, Silverman, & Lewis, 2001). Varying terminology used to describe attitudes toward older patients was identified in the literature, as were differing study designs and a range of methods of attitude measurement. This suggested that a review in this area would not achieve the typical homogeneity of evidence required for a traditional aggregative systematic review.

This present review, therefore, adopts a configurative approach (Gough, Thomas, & Oliver, 2012). Unlike aggregative reviews, which depend on ‘aggregate logic’ such as that achieved in conventional systematic reviews, configurative reviews attempt to configure and make sense of heterogeneous

evidence (Gough et al., 2012). Configurative approaches are useful for arranging and interpreting heterogeneous data and generating theory (Gough et al., 2012). Reviews with an underlying configurative philosophy are also ideal for bringing together information relating to ambiguous concepts (Ilott et al., 2010), such as attitudes. Configurative reviews make use of the differences between studies to identify patterns. Gough et al. (2012) propose that systematic reviews often involve components of both aggregative and configurative logic, with one predominating over the other. Therefore, the conceptual underpinning of the present review is the use of a predominantly configurative approach due to the heterogeneity of the evidence. Reviews based on predominantly configurative logic tend to be exploratory and theory-building and are used to determine the direction of future research.

3.3.2 Bridging the paradigm divide: Quantitative and qualitative data

In order to determine what has been investigated on this research topic, this review needed to allow for the inclusion of vastly different methods and study designs in order to capture trends in the research findings. Both quantitative and qualitative studies were therefore evaluated. Harden and Thomas (2005) have called the synthesis of quantitative and qualitative findings as crossing the paradigm divide, and a useful method of addressing complex questions. It has often been suggested that the triangulation of quantitative and qualitative data, also known as mixed methods research, results in a greater and more detailed understanding of the phenomenon of interest (Bryman, 2012).

This systematic search and review comprised the following stages: (a) a systematic search strategy; (b) application of the inclusion and exclusion criteria to isolate relevant studies; (c) quality assessment; (d) data extraction; (e) data presentation; and (f) data integration.

3.4 Scope of the review

Articles could include qualitative or quantitative data, and had to be published in a peer-reviewed academic journal. No time period was specified. Articles had to be available in English, but did not need to originate from the United Kingdom. Research syntheses and book chapters were not included in the review as they often reiterated or repeated data from published primary studies and were, therefore, likely to result in duplication of study data for the present review.

More specifically, the requirements for articles to be considered for review were:

i) The construct investigated was considered to be an attitude or conceptually similar to an attitude. In general, attitudes can include cognitive information (such as stereotypes), emotions (affective information), or intentions to behave (behavioural information) toward a target (Breckler, 1984). Articles that investigated any of these components were therefore included regardless of whether the author referred to them as 'attitudes'.

ii) The holders of the measured attitudes were medical students or medical doctors working in secondary or tertiary care settings.

iii) The target of the attitude was older people or older patients, defined as those aged over 65 years in line with the prevailing view in the medical research literature (Imison et al., 2012).

3.5 Method

3.5.1 Developing the search strategy

A list of terms to search for, in the title and abstract of articles, was developed by brainstorming, conducting test searches, and scanning abstracts for synonyms. Following this, the list of search terms were: a first set of 54 words or phrases representing a doctor or medical student (such as

‘physician’, ‘surgeon’, ‘internist’ or ‘registrar’); a second set of 19 words or phrases representing an older person (such as ‘elderly’, ‘frail’, ‘aged patient’); a third set of 14 words representing an attitude (such as ‘belief’, ‘opinion’, stereotype’). Various specialty types for doctors were included in the first set after test searches revealed that a number of articles used these terms instead of ‘doctor’ or ‘physician’ in their title or abstract. Doctors unlikely to work with older patients (such as paediatricians, pathologists, radiologists) were not included in the first set. Doctors training in family medicine (US) or general practice (UK) often complete part of their training in hospital settings and were, therefore, deemed relevant to the search at this stage. Words within each of the three sets (Set 1-3, See Table 1) were combined with the Boolean operator ‘OR’, and each set of words was combined with other sets using the Boolean operator ‘AND’.

Test searches also revealed that articles containing the word ‘ageism’ in the abstract did not necessarily contain a word from all three sets. Ageism signifies two constructs in a single word, namely, age and attitude. As a result, an additional step was added to the end of the search strategy as the fourth set (Set 4; See Table 1). ‘Ageism’ was searched for in conjunction with the first set of doctor synonyms. Therefore, articles were identified through the two possible methods illustrated in Figure 1.

Table 1.

Terms used to search title and abstract of articles

Set	Search terms used
1.	Doctor; physician; consultant; registrar; clinician; hospitalist; internist; surgeon; geriatrician; psychogeriatrician; psychiatrist; cardiologist; general practitioner; family practitioner; gynaecologist; obstetrician; gastroenterologist; haematologist; haematologist; neurologist; oncologist; respirologist; rheumatologist; dermatologist; urologist; endocrinologist; hepatologist; nephrologist; neurosurgeon; ophthalmologist; physiatrist; anaesthesiologist; anaesthetist; pulmonologist; otolaryngologist; immunologist; medical student; medical resident; medical fellow; medical professional; medical specialist; medical practitioner; medical officer; medical intern; medicine student; medicine resident; medicine fellow; medicine professional; medicine specialist; medicine practitioner; medicine officer; medicine intern; house officer; associate specialist.
2.	old* person; old* patient; old* adult; elder*; frail; aging; ageing; aged care; aged patient; aged person; geriatric care; geriatric patient; geriatric person; old age; seniors; senior citizens; senior adult; senior person; senior patient.
3.	Attitud*; belief; ageis; agis*; discriminat*; prejudic*; preconception; misconception; stereotyp*; attribution; stigma; labeling; labelling; age bias.
4.	ageis*; agis*

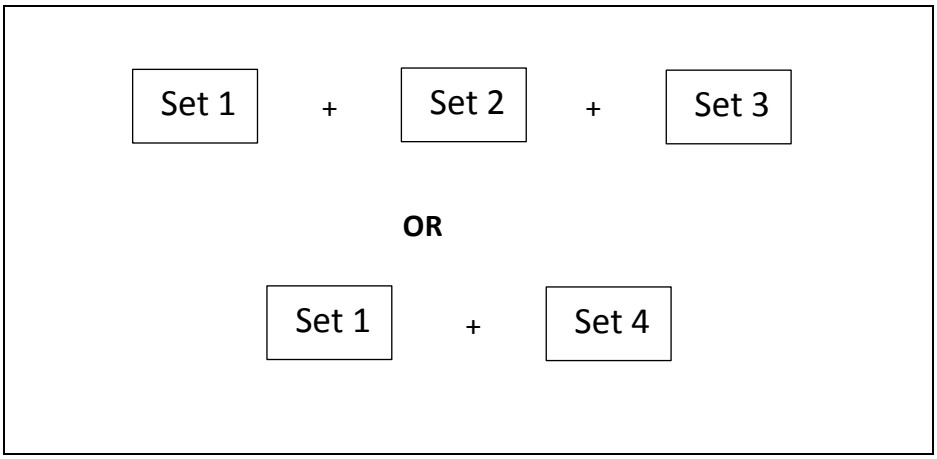

Figure 1. Illustration of search strategy

Twenty-three databases were searched. For all databases, the appropriate truncation was sought and used. Due to indexing differences between the databases, different index terms were used. For Ovid databases (e.g. Medline, Embase, PsychInfo), the term 'physician' was exploded and added to the set. Additionally, the terms 'aged' and 'attitudes' were exploded and focused to the set. An example search strategy is included as Appendix 1.

3.5.2 Search results and study selection

Across all databases, the search produced 17,319 hits. These were exported to EndNote (Thomson Reuters, Version X4, 2010). With the duplicates removed, the number of hits was reduced to 10,763 (see Table 2 for a breakdown of search results). The titles and abstracts of the 10,763 search results were scanned to remove obviously irrelevant hits, leaving a remaining 2519 articles. The abstracts of these articles were screened in line with the inclusion and exclusion criteria, which is provided**.**

Table 2.

Database Search Results to April 2011 (duplicates removed)

Database	Date searched	Hits
1. ABI/Inform	1923 to April 2011	140
2. Allied and Complementary Medicine Database	1985 to April 2011	54
3. Applied Social Sciences Index and Abstracts	1987 to April 2011	141
4. British Nursing Index (BNI)	1985 to April 2011	9
5. Business Source Premier	1961 to April 2011	439
6. CAB Abstracts International	1910 to April 2011	59
7. CSA Linguistics & Language Behavior Abstracts	1973 to April 2011	21
8. CSA Sociological Abstracts	1952 to April 2011	137
9. Cumulative Index to Nursing & Allied Health	1981 to April 2011	725
10. Embase	1980 to April 2011	712
11. Educational Resources Information Center	1966 to April 2011	94
12. Health Technology Assessment (HTA)	1996 to April 2011	8
13. International Bibliography of the Social Sciences	1951 to April 2011	8
14. ISI Web of Science	1956 to April 2011	525
15. Journal Storage (JSTOR)	1842 to April 2011	2194
16. Medline	1948 to April 2011	2076
17. Politics and International Studies	1972 to April 2011	15
18. PubMed	1966 to April 2011	136
19. PyscInfo	1806 to April 2011	1001
20. SciVerse Scopus	1977 to April 2011	1987
21. Social Science Abstracts	1983 to April 2011	149
22. SPORTDiscus	1957 to April 2011	129
23. Worldwide Political Science Abstracts	1975 to April 2011	4
Total		*10763*

3.5.2.1 Inclusion criteria

Articles were included if they met the following criteria:

i) Participants were medical students or medical doctors in secondary or tertiary care settings.

ii) Measured attitudes (e.g., cognitions, intention to behave, stereotypes) toward adults aged 65 and older.

iii) Published from database inception to April 30, 2011.

iv) Available in English.

v) Published in a peer-reviewed journal.

vi) *For quantitative studies only*: Overall mean scores for attitude measurement are provided.

3.5.2.2 Exclusion criteria

Articles were excluded if any of the following were applicable:

i) Participants included only primary care physicians.

ii) Studies took place in community practice settings.

iii) Participants were not aged 18 and older.

iv) Study data were duplicated in another study included in the review.

v) *For quantitative studies only*: Studies that did not report the measure used or, in the case of locally developed measures, provide details of the items employed.

vi) *For quantitative studies only:* Studies that did not provide overall mean attitude scores.

vii) *For quantitative studies only:* Studies that did not report p-values.

3.5.2.3 Application of inclusion and exclusion criteria

To be included in the review, studies needed to report the instruments used to collect the attitude data, and the mean scores achieved. Articles that referred to a questionnaire used in data collection but did not expand upon the items in the questionnaire or the type of questions asked, were excluded

on the basis that it was not possible to determine whether questions actually addressed attitudes toward older patients. Furthermore, articles that did not report descriptive results (e.g. mean scores on a questionnaire, themes occurring from interviews) were excluded on the basis that data extraction was not possible. Articles that did not report inferential statistics were excluded on the basis that it could not be determined whether there was any meaningful difference or patterns in the data. Therefore, whilst methodological quality was not an exclusion criterion (as studies showing bias and methodological concerns were still included in the subsequent analysis), the quality of data reporting was a factor determining exclusion.

The abstracts of 2519 articles were screened according to the inclusion and exclusion criteria, leaving 247 articles. The reference lists of these 247 articles were then checked for potentially relevant articles which had not been identified by the search strategy (known as 'snowballing'). This resulted in the identification of 19 potentially relevant articles which were then added to the analysis, resulting in a total of 266 articles. Copies of the 266 articles were obtained and the full text was scanned to determine if the inclusion and exclusion criteria were satisfied. All decisions were made by one reviewer, but any uncertainties regarding inclusion and exclusion were discussed with the primary research supervisor. After examining the full text, 57 articles were deemed to have satisfied the inclusion and exclusion criteria. Details of this process, including the reasons for study exclusion, are provided in the flowchart for study eligibility (see Figure 2).

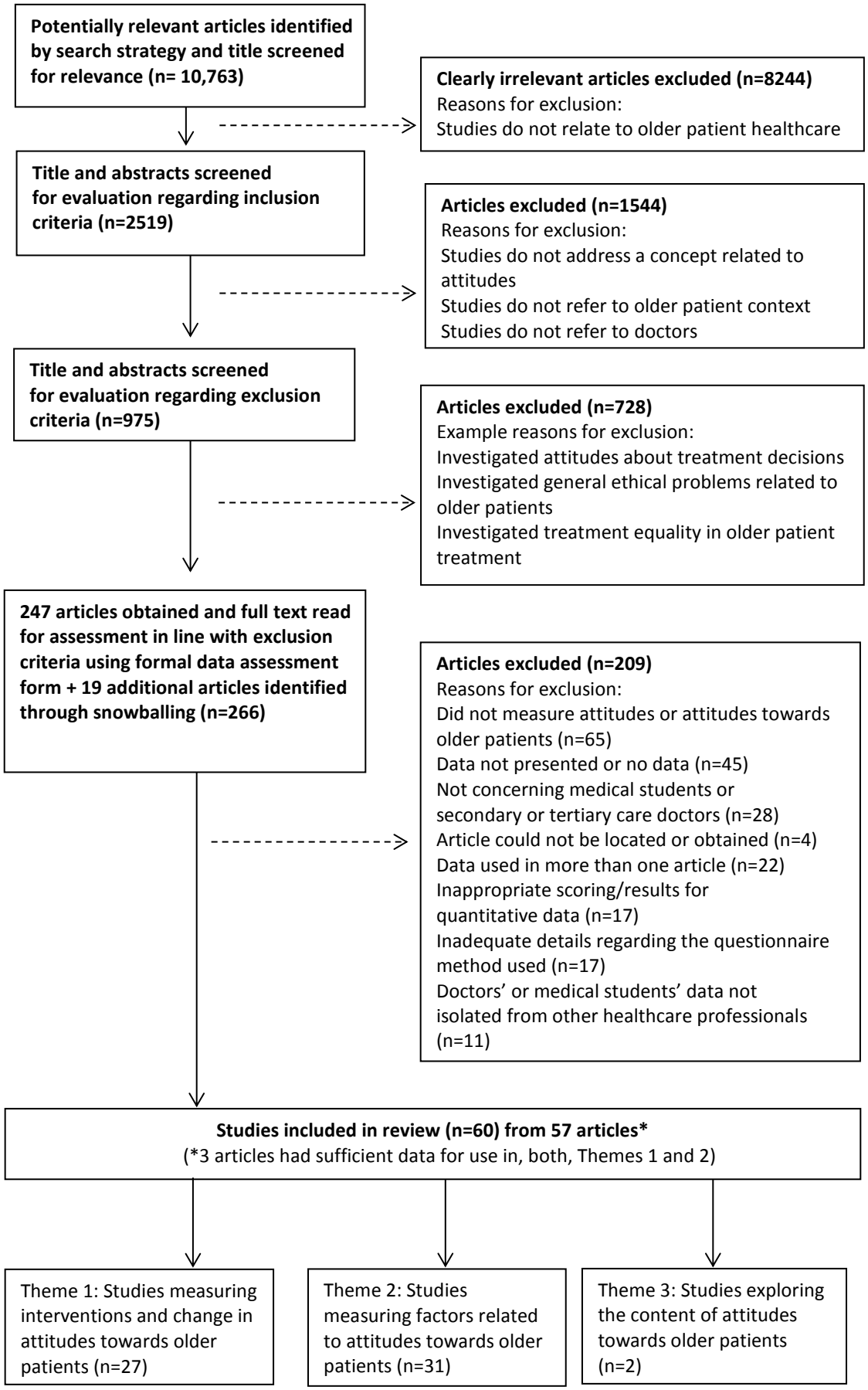

Figure 2. Flowchart demonstrating eligibility of studies

3.5.3 Data Analyses

3.5.3.1 Quality assessment

All 57 articles were subject to quality assessment. Articles that contained quantitative data were subjected to a different quality assessment form (Godfrey, Randall, Long, & Grant, 2000; see Appendix 2) from articles that contained qualitative data (Long and Godfrey, 2004; see Appendix 3). Both of these quality assessment forms allowed for the identification of the strengths and weaknesses of studies. Studies that included methods that may have compromised the results of the study were identified during this quality assessment phase, but were still included in the results of this review.

3.5.3.2 Study categorisation

Examining the full text of the 57 included articles revealed that studies could be categorised according to three themes, relating to the underlying research question it addressed:

i) **Theme 1: Do medical students' and doctors' attitudes toward older patients change after an intervention?**
These studies investigated the effect of educational or training interventions related to older patients and their care. Typically, these studies used a questionnaire to measure attitudes toward older patients before and after the intervention and used tests of difference on these scores to determine whether interventions were successful or not.

ii) **Theme 2: What variables are related to medical students and doctors attitudes toward older patients?**
These studies investigated variables related to medical students' and doctors' attitudes toward older patients. Typically, factors relating to participants' demographic characteristics, education, work experience or personality were investigated for their relationship with attitudes toward older patients. These studies

generally conducted correlation and/or regression analyses to determine factors associated with higher or lower scores on an attitude questionnaire, or tests of statistical significance of group difference to determine if attitude scores differed according to participant characteristics.

iii) **Theme 3: What do medical students and doctors think about older patients and their care?**

These studies investigated what medical students or doctors thought about older patients in their own words, often without the use of questionnaire measures. Typically these studies were qualitative and descriptive in nature.

Three articles (Fields, Jutagir, Adelman, Tideiksarr, & Olson, 1992; Hughes et al., 2008; Lee, Reuben, & Farrell, 2005) had sufficient and appropriate data to be included in both parts of the review, which considered interventions (Theme 1) and variables associated with attitudes (Theme 2), without constituting duplication of data. These three articles addressed these two research questions and collected, both, data relating to an intervention and cross-sectional data from different groups of participants. All three articles included both sets of findings, with separate inferential analyses conducted on the two sets of data. As a result, the 57 different articles produced 60 sets of findings (henceforth results are considered to comprise 60 'studies') for the systematic search and review. Twenty-seven studies were included in the intervention study review (Theme 1). Thirty-one studies were included in the cross-sectional study review (Theme 2). Two studies were included in the exploratory study review (Theme 3). These three subdivisions of empirical data were separated and data were extracted separately to form three separate sets of review results. The details of the data extraction process for the three sets of studies are presented serially. Following this, the results from the three themes are also presented serially.

3.5.3.3 Data extraction

3.5.3.3.1 Intervention studies (Theme 1)

In terms of data extraction, weaknesses in study design and analysis were included as 'main threats to validity and reliability' in the corresponding results table (Table 3). The other data extracted with the evaluation tool (Godfrey et al., 2000) comprised: bibliographic details of the study (author names and date published), setting (location of study), participant characteristics (age range, medical school year group or doctor grade), study design (study type, number of groups), intervention details (content of intervention, duration and frequency of exposure), comparison interventions (use of comparison group, use of alternative exposure), time period of measurement, sample selection (size of source group, selection method, random allocation, group size justification, comparability of groups), study method, (attrition, control of confounders), study instruments (instrument used, outcome measurement criteria, validity and reliability reports, attitude scores), data analysis methods (suitability of statistical techniques), and process issues (reported problems in data collection).

In Table 4, intervention studies are categorised according to whether they demonstrated positive change in attitude (successful) or no positive change (unsuccessful). For the purpose of this analysis, in studies without a comparison group, positive change was deemed to have occurred when postintervention scores were significantly higher than preintervention scores. In studies with a comparison group, positive change was evidenced by significantly different postintervention attitude scores between the intervention and comparison group. Studies demonstrating negative or no change in attitude scores were categorised as 'no positive change' (i.e. not successful). All study variables were categorical, specifically intervention type (course/rotation/course and rotation/mentoring), duration of intervention (short/medium/long), focus of questionnaire (older people/older patients),

fully reported response rates (yes/no), use of validated questionnaire (yes/no), study quality (adequate/poor), intervention content (empathy-fostering/knowledge-building) and attitude change results (positive change/no positive change). Results were analysed using chi-square tests of independence (2-sided) unless expected cell counts were lower than 5, in which case, Fisher's exact tests (2-sided) were used. $P < .05$ was considered statistically significant.

3.5.3.3.2 Cross-sectional studies (Theme 2)

In terms of data extraction, weaknesses in study design and analysis were included as 'main threats to validity and reliability' in the corresponding results table (Table 5). The other data extracted comprised: bibliographic details of the study (author names and date published), setting (location of study), participant characteristics (age range, medical school year group or doctor grade), study design (study type, number of groups), time of assessment (year), sample selection (size of source group, selection method, sample size justification, response rates), study method, (control of confounders), study instruments (instruments used, outcome measurement criteria, validity and reliability reports, attitude scores), data analysis methods (suitability of statistical techniques), variables investigated and results (associated and nonassociated variables; this information is presented in Table 6) and process issues (reported problems in data collection).

3.5.3.3.3 Exploratory studies (Theme 3)

The main threats to the study design and analysis were included as 'main concerns' in the corresponding results table (Table 7). The other data extracted included the bibliographic details of the study, setting, study design, phenomena under study, theoretical framework used, time period of measurement, country of study, sample selection and justification, sample characteristics and suitability to study, outcome criteria, data collection

methods, explanation of data elicitation, role of researcher in data collection, evidence of reflexivity, data analysis methods and suitability, emerging themes, exploration of potential researcher bias and reported implications of the study.

3.6 Intervention studies' results: Attitude change after an intervention

Twenty-seven studies investigated whether attitudes changed after an educational or training intervention. The following information is presented (see Table 3) to summarise each study:

No.: Study number (labelled 1-27).

Authors: Name of authors of study and year published.

Demographics: Number of participants, year in medical school (for medical students) or postgraduate training year (PGY; for doctors) and job role (for doctors), country of study.

Study design: Preintervention and postintervention measurement, use of comparison group, randomisation of allocation to comparison group.

Intervention: Description of intervention for experimental and comparison groups, frequency and duration of delivery.

Intervention content: Whether content was solely knowledge building, or included an empathy-fostering component as part or all of the intervention

Attitude assessment: Measure used (noting any modifications to established measures), number of questions in measure, response format and scoring range.

Response rates: Percentage of people who returned questionnaires.

Attitude scores: Mean attitude assessment scores and standard deviations for experimental and comparison groups, inferential statistics for difference between experimental and comparison groups.

Change: Positive change, negative change, or no change as described by authors.

Main threats to validity and reliability: Weaknesses in the study design, implementation and reporting regarding effects including selection/attrition, history, maturation, instrumentation, testing, and statistical.

Table 3.

Characteristics of studies investigating attitudes toward older patients before and after an intervention designed to influence attitudes in doctors and medical students

No.	Authors	Demogra-phics	Study design	Intervention	Intervention content	Attitude assessment	Respon-se rates (%)	Attitude scores	Change	Main threats to validity and reliability
1	Baum & Nelson (2007)	67 doctors (PGY1*), United States	Single group Pretest-Posttest (8 cohorts, over 8 years)	Geriatrics rotation, 12 months,	Knowledge-building	Maxwell-Sullivan Attitude Scale, 28 item, 5-point response, score range =1(neg) to 5(pos)	Pre** and post =82.7	Pre M***=3.6 Post M=3.7 *Within group difference, p<.001*	Positive	*Statistical:* Used data from drop-outs and some participants did not receive pretest questionnaire, but authors reported using a paired samples statistical test; no power analyses or sample size justification. *History & Maturation:* No comparison group; no investigation about equivalence of each cohort over the 8 year period, no demographic information provided.
2	Bernard, McAuley, Belzer, & Neal (2003)	225 medical students (1MS**** and 2MS), United	Pretest-Posttest with comparis-on group	Healthy Seniors mentorship program, intermittent over 2 years	Empathy-fostering (mentoring)	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =1(neg) to	Pre and post =74.0 to 79.1	Experimental: Pre M=3.45 Post M=3.85 Comparison: Pre M=3.42	Positive	*Selection:* Follow-up questionnaire attrition was 23.5%; comparison group was in different year group to experimental group;

		States		(experimental) Vs. no exposure (comparison) over 1 year		7(pos)		Post M=3.59 *Within group difference, p<.01*		comparison group studied over 1 year compared to 2 years for experimental group, with no justification. *Statistical*: No power analyses reported.
3	Carmel, Cwikel, & Galinsky (1992)	47 medical students (1MS), Israel	Single group Pretest-Posttest, with follow-up (3-6 months after posttest)	Geriatrics course, intermittent 25 hours in total, over approximately 1 year	Empathy-fostering (informal contact)	Locally developed – ratio of unpleasant/ pleasant descriptors for older adults, score range =larger score(neg)	Pre and post and follow-up =62.6	Pre M=1.20 Post M=1.28 Follow-up M=1.44, *Within group difference, NS*	No change	*History:* Did not measure course attendance. *History & Maturation:* No comparison group. *Instrumentation:* No validity or reliability information for new measure. *Statistical:* Small sample (average group size was 42 participants) and no power analyses reported.
4	Deary, Smith, Mitchell, & MacLenn-an (1993)	133 medical students (4MS and 5MS), United Kingdom	Separate sample pretest-posttest	Geriatric course with attached geriatric rotation, 4 weeks	Knowledge-building	Locally developed, 15-item, 2 factor scale, Factor 1: negative attitudes, score range =0(pos) to 9(neg)	Pre and post =unclear	Factor 1: Negative attitudes Pre M=2.02 Post M=1.34 *Within group difference, p<.001.* Factor 2: medical	Positive	*History:* No comparison group. *Selection:* Response rates not reported; different pretest and posttest groups without matching or randomisation. *Instrumentation:* No validity or reliability information for new

						Factor 2: Medical intervention, score range =0(pos) to 6(neg)		intervention Pre M=1.92 Post M=1.57 *Within group difference, NS*		questionnaire reported. *Statistical:* No power analyses or justification of sample size.
5	Diachun, Dumbrell, Byrne, & Esbaugh (2006)	42 medical students (1MS), Canada	Posttest and follow-up (1 year after posttest) with comparis-on group	Geriatrics course, Experiential learning (experimental) vs. didactic learning (comparison), 3 hours.	Empathy-fostering (ageing simulation)	Modified Palmore Bias score (1977) - minor changes to fit Canadian context, 20-item, true-false response, score range =-15(neg) to +5(pos)	Post and follow-up =unclear Used (from follow-up) =42	Experimental: Post M=-3.50 Follow-up M=-4.58 Comparison: Post M=-4.06 Follow-up M=-3.94 *Between group difference, NS*	No change	*Selection:* 42 questionnaires used out of 100; full response rate data not given; did not report equivalence of used and unused data (e.g. demographics). *Statistical:* Very small sample (group sizes were 17 and 25); no power analyses or justification of sample size. *History & Maturation:* Tests taken one year after learning session, matching relied on participants' memory of which course they attended and contributed to the large attrition rate. *Instrumentation:* Palmore's bias scores have previously

										demonstrated a weak relationship with other attitude measures such as the Aging Semantic Differential (Holtzman & Beck, 1979).
6	Diachun, Van Bussel, Hansen, Charise, & Rieder (2010)	262 medical students (3MS), Canada	Pretest-Posttest with comparis-on group	Geriatric rotation (experimental) vs. nongeriatric rotation (comparison), 2 weeks	Knowledge-building	Modified UCLA Geriatric Attitudes Scale (minor changes to fit Canadian context), 14-item, 5-point Likert scale, score range =1(neg) to 5(pos)	Pre and post =67.4	Experimental: Pre M=3.72 Post M=3.58 Comparison: Pre M=3.69 Post M=3.46 *Between group difference, NS*	No change	None found.
7	Duke, Cohen, & Novack (2009)	55 medical students (1MS), United States	Single group Pretest-Posttest	Seniors mentoring program, intermittent over 1 year	Empathy-fostering (mentoring)	Modified UCLA Geriatric Attitudes Scale - changed wording to future tense, 11 items (reduced from 14), 5-point Likert scale, score range =1(pos) to 5(neg)	Pre and post =77.5	Pre M=1.5 Post M=1.3 *Within group difference, p<.01*	Positive	*History & Maturation:* No comparison group. *Instrumentation*: Removed 3 items from questionnaire without explanation; did not report alpha coefficients for modified questionnaire. *Statistical:* Small sample with no power analyses or justification of sample size.

8	Eskildsen & Flacker (2009)	129 medical students (1MS), United States	Single group Pretest-Posttest	Geriatric course, 1 week.	Empathy-fostering (informal contact)	UCLA Geriatric Attitudes Scale, 14-item, 5-point Likert scale, score range =1(neg) to 5(pos)	Pre and post =99.2	Pre M=3.7 Post M=3.8 *Within group difference, p<001*	Positive	*History:* No comparison group. *Statistical:* No power analyses or justification of sample size.
9	Fields, Jutagir, Adelman, Tideiksarr, & Olson (1992)	127 medical students (4MS), United States.	Single group Pretest-Posttest	Geriatrics Rotation, 4 weeks.	Knowledge-building	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	Pre and post =unclear	Pre M=130.5 Post M=126.6 *Within group difference, NS*	No change	*History:* No comparison group. *Statistical:* Unequal group sizes (54, 53, 20) with no report of statistical treatment or correction; no power analyses or justification of sample size. *Selection:* Response rates unclear.
10	Gonzales, Morrow-Howell, & Gilbert (2010)	208 medical students (1MS and 2MS), United States.	Pretest-Posttest with comparis-on group	Healthy Seniors mentorship program, four 2-hour sessions (experimental) vs. no exposure (comparison) over 1 year.	Empathy-fostering (mentoring)	Refined Aging Semantic Differential (Polizzi, 2003), 24-item, 7-point Likert scale, score range =24(pos) to 168(neg)	Pre and post =unclear Used =70.8 to 76.8	Experimental: Post M (corrected for pretest scores) =67.3 Comparison Post M (corrected for pretest scores) =74.0	Positive	*History & Settings:* Intervention conducted at 8 different sites, but differences in intervention processes not investigated nor measured; intervention compliance not investigated. *Selection:* Did not fully report response rates,

								Between group difference, p<.001.		*Attrition:* Does not justify why 9.5% to 12.8% of post questionnaires were not used in analysis. *Statistical:* No power analyses or justification of sample size.
11	Hughes et al. (2008)	70 medical students (4MS), United Kingdom.	Single group Pretest-Posttest	Geriatric course incorporating clinical training, 8 days.	Knowledge-building	Modified UCLA Geriatric Attitudes Scale - minor changes to fit UK context, 14-item, 5-point Likert scale, score range =1(neg) to 5(pos)	Pre and post =85.3 Used =58.3	Pre M=3.9 Post M=3.9, *Within group difference, NS*	No change	*History:* No comparison group. *Attrition:* Approximately 40% of the sample chose to remain anonymous and their results could not be matched from preintervention to postintervention and were not used in comparison.
12	Intrieri, Kelly, Brown, & Castilla (1993)	96 medical students (3MS), United States.	Pretest-Posttest with comparis-on group	Psychiatry clinical rotation with gerontology training programme (experimental) vs. same rotation without gerontology programme	Empathy-fostering (ageing simulation)	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	Pre and post =94.1	Experimental: Pre M =128.9 Post M=118.1 Comparison: Pre M =123.9 Post M =124.1 *Between group difference, p<.01*	Positive	*Statistical:* No power analyses or justification of sample size.

				(comparison), 6 weeks.						
13	Lee, Reuben, & Farrell (2005)	61 doctors (geriatrics fellows), United States	Single group Pretest-posttest	Geriatric medicine fellowship training, 1 year.	Knowledge-building	UCLA Geriatrics Attitudes Scale, 14-item, 5-item Likert scale, score range =1(neg) to 5(pos)	Pre and post =55.1	Pre M=4.1 Post M=4.0 *Within group difference, NS*	No change	*Statistical:* Small and unequal group sizes (54, 38 participants) with no power analyses or justification of sample size.
14	Lindberg & Sullivan (1996)	93 doctors (PGY1, PGY2, and PGY3), United States.	Multiple treatment groups with random assignme-nt, pretest-posttest	Geriatrics rotation with attending geriatrician (full experimental) vs. same rotation without attending geriatrician (quasi-experimental) vs. no exposure to rotation (comparison), 4 weeks.	Knowledge-building	Modified Maxwell-Sullivan Attitude Scale, 24-item (reduced from 28), 5-point response, score range =1(neg) to 5(pos)	Pre and post =93.9	Full experimental: Pre M=3.7 Post M=3.9 Quasi-experimental: Pre M=3.6 Post M=3.7 Comparison: Pre M=3.7 Post M=3.7 *Between groups difference, NS*	No change	*Instrumentation:* Does not say explain or justify why MSAS was modified, does not report alpha coefficients for modified questionnaire. *Statistical:* Small and unequal group sizes (44, 25, 24 participants) with no power analyses or justification of sample size.
15	Linn & Zeppa (1987)	179 medical students (3MS),	Single group Pretest-Posttest	Surgical rotation, 12 weeks	Knowledge-building	Locally developed 22-item measure, 4-point scale,	Pre and post =unclear	Factor 1: Old people Pre M=26.4 Post M=27.1	Positive	*Selection:* Response rate data not given. *History:* No comparison group.

		United States				scoring =higher scores are more positive, 3 factors, Factor 1: Attitudes toward old people, Factor 2: Treating old people, Factor 3: Surgery in the elderly,		*Within group difference, NS* Factor 2: Treating old people Pre M=10.1 Post M=10.6 *Within group difference, p<.01* Factor 3: Surgery in elderly Pre M=22.1 Post M=23.7 *Within group difference, p<.001*		*Instrumentation:* No validity or reliability information for new measure. *Statistical:* No power analyses or justification of sample size.
16	Lorraine, Allen, Lockett, & Rutledge (1998)	100 medical students (4MS), United States	Single group Pretest-Posttes	Ageing Simulation workshop, (3 hours) as part of geriatrics clerkship 2 weeks.	Empathy-fostering (ageing simulation)	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	Pre and post =100	Pre M=171.6 Post M= 148.7 *Within group difference, p<.001*	Positive	*History:* No comparison group. *Testing:* Did not specify when pretest was conducted (i.e. before ageing simulation or before clerkship).
17	Lu, Hoffman, Hosokawa,	137 medical students	Pretest-Posttest with	Healthy Seniors mentorship	Empathy-fostering (mentoring)	Aging Semantic Differential, 32-item, 7-point	Pre and post =71.4	Experimental: Pre M=116.2 Post M=107.9	No change	*Selection:* Participants self-selected to experimental group; only

	Gray, & Zweig (2010)	(1MS), United States	nonrand-omised comparis-on group	programme (experimental) vs. no exposure (comparison), 1 year		Likert scale, score range =32(pos) to 224(neg)		*Within group difference, NS* Comparison: Pre M=118.7 Post M=115.1 *Within group difference, NS*		34 per cent agreed to join experimental group. *Statistical:* Unequal group sizes (46, 91 participants) with no power analyses or justification of sample size.
18	MacKnight & Powell (2001)	83 medical students (1MS), Canada	Single group Pretest-Posttest	Geriatrics course, 6 hours, over approximately 1 week	Empathy-fostering (informal contact)	Form A of the Opinions about People questionnaire, 32 statements, 9-point Likert scale, with seven factors: (A1) realistic toughness toward ageing, (A2) denial of the effects of ageing, (A3) anxiety about ageing, (A4) social distance to the old, (A5) family responsibility, (A6) public	Pre and post =unclear	A1 Pre M=96.1 Post M=93.0 A2 Pre M=17.0 Post M=14.6 A3 Pre M=65.2 Post M=67.7 A4 Pre M=128.2 Post M=131.3 A5 Pre M=96.4 Post M=97.1 A6 Pre M=61.3 Post M=58.4 A7 Pre M=58.2 Post M=53.9 *Within group difference, A2 and A7 p<.01. All others, NS*	Negative	*History:* No comparison group. *Selection:* Did not fully report response rates. *Statistical:* Ran repeated t-tests on the same data without reporting statistical correction to significance levels; no power analyses or justification of sample size.

						responsibility, (A7) unfavourable stereotypes. Scoring=lower scores (neg)				
19	Neiman, Vernon, & Horner (1992)	105 medical students (2MS), United States	Single group Pretest-Posttest	Geriatrics course, intermittent over 2 semesters.	Knowledge-building	Locally developed 45-item, 5-point Likert scale, score range 1(neg) to 5(pos)	Pre and post =77.2	Pre M=3.7 Post M=3.7 *Within group difference, NS*	No change	*History & Maturation:* No comparison group. *Instrumentation:* No validity or reliability information for new measure. *Statistical:* No power analyses or justification of sample size.
20	Pacala, Boult, Bland, & O'Brien (1995)	55 medical students (4MS), United States	Pretest-Posttest with comparis-on group	Ageing simulation workshop (experimental) vs. no exposure (comparison), 3 hours.	Empathy-fostering (ageing simulation)	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(neg) to 224(pos) Modified Maxwell-Sullivan Attitude Scale, (7-items from this scale, and 2 additional locally	Pre and post =77.5	ASD-Experimental: Pre M=130.8 Post M=134.0 Comparison: Pre M=138.2 Post M=137.1 *Between group difference, NS* MSAS-Experimental: Pre M= 35.6 Post M= 37.2	Positive	*Selection:* Differences between experimental and comparison groups at pretest; self-selection to experimental or comparison condition. *Instrumentation:* MSAS questionnaire was modified but no alpha coefficients reported. *Statistical:* Repeated t-tests were used as opposed to ANOVA or ANCOVA; small and unequal group sizes (16, 39 participants) with no

						developed items, 5-point Likert scale, score range =9(neg) to 45(pos)		Comparison: Pre M= 34.2 Post M= 33.1 *Between group difference, p<.01*		power analyses or justification of sample size.
21	Shue, McNeley, & Arnold (2005)	161 medical students (1MS), United States	Pretest-Posttest with comparis-on group (posttest only)	Healthy older people Mentorship programme, at least 14 1-hour visits over 1 year.	Empathy-fostering (mentoring)	Modified Maxwell-Sullivan Attitude Scale, (reduced from 28 to 16-items), 5-point Likert scale, score range =16(neg) to 80(pos)	Pre and post =88.0 to 97.0	Experimental: Pre M= 62.0 Post M= 66.5 *Within group difference, p<.01* Comparison: Post M= 64.0 *Between group difference, NS*	No change	*Testing:* No pretest for comparison group to check group equivalence in demographics. *Statistical:* No power analyses.
22	Stewart, Eleazer, Boland, & Wieland (2007)	At least 277 medical students (year groups unclear), United States	Multiple treatment groups, pretest-posttest (and additional follow-up for one group)	New medical school curriculum, Groups received partial treatment over 2 years (quasi-experimental: cohorts 1 & 2),	Empathy-fostering (informal contact)	Modified Aging Semantic Differential (reduced from 7-point to 5-point Likert scale) 32-item, score range =1(pos) to 5(neg)	Pre and post =unclear Follow-up =unclear	Cohort 1 (Quasi-experimental): Pre M=2.8 Post M=2.8 *Within group difference, NS* Cohort 2 (Quasi-experimental): Pre M=2.8 Post 2 M=2.9	Positive	*Instrumentation:* Responding bias (71% of all response were neutral), modified 5-point scale may have constricted responding; modification of response format was not justified *Selection:* Response rate data not reported; number of participants

				vs. full treatment over 4 years (experimental: cohorts 3 & 4)				*Within group difference, NS* Cohort 3 (experimental): Pre M=2.9 Post M=2.8 Follow-up M=2.7 *Within group* difference*, p<.05* Cohort 4 (experimental): Pre M=2.9 Post 2 M=2.7 *Within group difference, p<.01*		in each cohort not reported. *Statistical:* Conducted over 20 t-tests on the same data without reporting correction of significance level; no power analyses or justification of sample size.
23	Van Zuilen, Rubert, Silverman, & Lewis (2001)	288 medical students (3MS and 4MS), United States	Single group Pretest-Posttest	Geriatrics course including rotation, 2 weeks	Knowledge-building	Palmore's Bias Score FAQ1, 25-items, true-false format, score range = -100(neg) to 100(pos) FAQ2, 25-items, true-false format, score	Pre and post =unclear	FAQ1 Pre M=-6.9 Post M=-20.4 *Within group difference, p<.001* FAQ2 Pre M=-19.7 Post M=-26.3 *Within group*	Negative	*History:* No comparison group. *Selection:* Response rate data not reported. *Instrumentation:* Palmore's bias scores have previously demonstrated a weak relationship with other attitude measures such as the Aging Semantic

						range = -100(neg) to 100(pos)		*difference, p<.001*		Differential (Holtzman & Beck, 1979). *Statistical:* No power analyses.
24	Warren, Painter, & Rudisill (1983)	80 medical students (3MS), United States	Single group Pretest-Posttest	Geriatrics training programme, including Geriatrics rotation, 6 weeks	Empathy-fostering (ageing simulation)	Locally developed, 25 item, 4-point Likert, score range =25(neg) to 100(pos)	Pre and post =100 Used =88.8	Pre M=72.6 Post M=77.3 *Within group difference, p<.001*	Positive	*History:* No comparison group. *Instrumentation:* No validity or reliability information for new measure. *Statistical:* No power analyses or justification of sample size.
25	Wilkinson, Gower, & Sainsbury (2002)	186 medical students (2MS), New Zealand	Pretest-Posttest with comparis-on group	Community contact programme, allocated to older people (experimental) or non-older people (comparison), 1 week	Empathy-fostering (informal contact)	Modified Aging Semantic Differential (Polizzi & Steitz, 1998) 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	Pre and post =100	Experimental: Pre M=121.7 Post M=108.4 *Within group difference on all 3 subscales of ASD, p<.01* Comparison: Pre M=118.2 Post M=115.7 *Within group difference on 2 subscales of ASD, NS. Instrumental-Ineffective subscale, p<0.01*	Positive	*Statistical:* No power analyses or justification of sample size.

26	Wilson & Glamser (1982)	82 medical students (1MS), United States	Single group Pretest-Posttest	Geriatrics course, 2 days over 2 weeks	Empathy-fostering (informal contact)	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg).	Pre and post =unclear	Pre M=130.7 Post M=120.2 *Within group difference, p<.001*	Positive	*History & Maturation:* No comparison group, posttests taken semester after end of course. *Selection:* Attrition to posttest was 26%; full response rate data not given. *Statistical:* No power analyses or justification of sample size.
27	Zwahlen, Herman, Smithpet-er, Mines, & Kalishman (2010)	347 medical students (1MS, 2MS, 3MS, 4MS, and 5MS), United States	Single group, pretest, partial-exposure, and posttest	New medical school curriculum: Full exposure of 2 years (experimental) Partial exposure after 1 year (Quasi-experimental), and Preimplemen-tation (comparison)	Knowledge-building	UCLA Geriatric Attitudes Scale, 14-item, 5-point Likert scale, score range =1(neg) to 5(pos)	Pre and post =80.1	Experimental: M=3.6 Quasi-experimental: M=3.8 Comparison: M=3.6 *Between group difference, NS*	No change	*Selection*: Equivalence of groups (before intervention) not reported. *Statistical:* No power analyses.

*PGY signifies postgraduate year, during which the respondent is a doctor. (e.g. PGY1 signifies the first year as a doctor after qualifying from medical school, PGY2 signifies the second year and so on)
** pre=pretest, post=posttest
***M=mean score
****MS=Medical student (e.g. 1MS= Year 1 medical student, 2MS=Year 2 medical student)

Table 4.

Intervention studies' attitude changes according to study characteristics

Characteristics	Positive change n = 14	No positive change n = 13
Type of intervention		
Rotation	2	4
Course	5	5
Course and rotation	4	2
Mentoring	3	2
Duration of intervention		
Short (≤2 weeks)	5	5
Medium (2 weeks to 6 months)	4	2
Long (>6 months)	5	6
Participants		
1st and 2nd year medical students	6	6
3rd, 4th and 5th year medical students	6	4
All years	0	1
Doctors only	1	2
Data missing	1	0
Groups		
No comparison group	8	7
Comparison group	6	6
Randomised to groups	*1*	*3*
Not randomised to groups	*5*	*3*
Focus of questionnaire		
Older people in general	9	6
Older patients	5	7
Validity statistics of questionnaire		
Known	10	7
Unknown	4	6
Methodological Quality		
Poor	4	3
Acceptable	10	10
Response rates		
Fully reported	9	9
Not fully reported	5	4
Intervention focus		
Knowledge-building only	3[a]	8[a]
i) Methodologically poor studies removed	*2*	*7*
ii) Studies using unvalidated questionnaires removed	*0*	*5*

iii) both i) and ii) above removed	*0*	*4*
Empathy-fostering	11[a]	5[a]
i) Methodologically poor studies removed	*8*	*3*
ii) Studies using unvalidated questionnaires removed	*10*	*2*
iii) both i) and ii) above removed	*7*	*1*

[a]p=.03

3.6.1 Quality of intervention studies

All 27 intervention studies were examined for strengths and weaknesses using the data assessment tool (see Section 3.5.3.1). Findings concerning the quality of the studies are discussed below.

3.6.1.1 Sampling issues

Nine of the 27 studies failed to provide full response rate data which could mask selection and attrition effects. One of the most common issues in the quality of reporting was the absence of justification of the sample size. Only one study of the 27 reported a power analysis to justify the sample size (Hughes et al., 2008). A power analysis can indicate the sensitivity of the statistical tests, given a particular sample size, to detect difference or relationships where they exist and avoid finding differences and relationships where they do not exist (Murphy, Myors, & Wolach, 2012).

Fifteen of the 27 studies did not use a comparison group in their design and, therefore, compared pretest and posttest scores from a single group. As a result, any difference between pretest and posttest scores may not necessarily be due to the intervention under investigation. This is because effects of factors such as having taken the test before and naturally occurring maturation in participants between pretest and posttest could underlie any observed differences (Bryman, 2012). Where a comparison group was employed, eight of the 12 studies did not randomly assign participants to groups. A number of studies allowed participants to self-select to the intervention group which posed a threat to validity, known as volunteer bias (Rosenthal & Rosnow, 1969). This is where volunteers differ from non-volunteers and, as a result, may not be representative of the population.

3.6.1.2 Methodological issues in design and analyses

Seven of the twenty-five studies suffered from methodological issues that may have compromised their results (Baum & Nelson, 2007; Bernard et al., 2003; Diachun et al., 2006; Hughes et al., 2008; MacKnight & Powell, 2001; Pacala et al., 1995; Stewart et al., 2007). These methodological issues included using paired statistical tests on data which were not exclusively paired (Baum & Nelson, 2007), conducting over twenty t-tests without evidence of correcting alpha levels (MacKnight & Powell, 2001; Pacala et al., 1995), comparing a two-year intervention group with changes in a comparison group over one year (Bernard et al., 2003), high levels of unused data due to methodological issues in collection (Hughes et al., 2008; Diachun et al., 2006), and major changes of the response format of a previously tested questionnaire without piloting (Stewart et al., 2007). These seven studies were flagged as having poor methodological quality (see Table 4) as these methodological limitations may have compromised the results of the study.

Sensitivity analysis showed that removing the studies with methodological limitations did not change the ratio of positive to non-positive results across all studies. Therefore, studies with compromised methodology did not show marked differences in finding positive or no positive attitude change.

3.6.1.3 Validity of attitude measures

Six studies used locally-developed questionnaires but did not report any details regarding the measures' validity (Carmel et al., 1992; Deary et al., 1993; Linn & Zeppa, 1987; Neimon et al., 1992; Pacala et al., 1995; Warren et al., 1983). Therefore, it is unknown what the resulting scores actually represent.

An investigation of the validity of established questionnaires used, revealed further problems. The Maxwell-Sullivan Attitude Survey (Maxwell & Sullivan,

1980) is composed of 5 categories, which some authors refer to as factors or subscales, but these categories were never validated, such as by subjecting them to a factor analysis (Stewart, Roberts, Eleazer, Boland, & Wieland, 2006). Furthermore, the validity statistics of the overall measure are not known (Hollar, Roberts, & Busby-Whitehead, 2011).

Palmore's bias scores derive from the author's 'Facts on Aging Questionnaires' (FAQ) (1977; FAQ2 1981), which are both true-false measures of knowledge about older people, not attitudes. Furthermore, the extent to which Palmore's FAQ (1977) and FAQ2 (1981) are valid measures of knowledge about older people has been called into question (Miller & Dodder, 1980). Klemmack's (1978) analysis of the FAQ (1977) revealed seven of the twenty-five items to have little utility due to low levels of discriminatory power, such that they would normally be rejected in a standardised test (Nunnally, 1978). The extent to which Palmore's bias scores (from the FAQ, 1977; and FAQ2, 1981) can be used to measure attitudes has not been empirically confirmed. As a result, Palmore's bias scores (1977; 1981) are not validated measures of attitudes.

The most common measure of attitudes was the Aging Semantic Differential (Rosencranz & McNevin, 1969), or a modified version of this measure (e.g. Polizzi, 2003), which was used in ten studies. The validity of the Aging Semantic Differential (Rosencranz & McNevin, 1969) has also been called into question (Polizzi & Millikin, 2002). It has been argued that the measure is outdated and confusing due to the use of double-barrelled statements (Polizzi & Steitz, 1998). As a solution, Polizzi (2003) created a refined version of the Aging Semantic Differential, which attempts to reduce the confusing items and old-fashioned terminology. Despite this, only two of the 10 studies used a modified version of the measure (Gonzales et al., 2010; Wilkinson et al., 2002). In contrast, the UCLA Geriatrics Attitude Scale (UCLA GAS; Reuben

et al., 1998), which was used in six studies, has been developed for use with, and validated on, a sample of doctors (Reuben et al., 1998).

3.6.1.4 Reliability of attitude measures

A number of studies using locally developed measures failed to include any information about the reliability of the scales. Some studies significantly modified an established measure (Duke et al., 2009; Lindberg & Sullivan, 1996; Stewart et al., 2007) but failed to report reliability for the modified measure. The lack of information about reliability was problematic given that many of the studies administered the questionnaires twice, in one or more groups.

In an investigation of two commonly used measures of attitudes toward older patients, Stewart et al. (2006) found that the reliability coefficients of UCLA GAS (Reuben et al., 1998) failed to meet the 0.70 Cronbach's alpha coefficient criterion, which is traditionally deemed the acceptable cut-off point for scale reliability (Nunnally, 1978). Stewart el al. (2006) found the internal consistency of the measure to be problematic, evidenced by a lack of relationship between many of the items, as well as problematic reliability of the overall measure. Stewart el al. (2006) also investigated the reliability of the Maxwell-Sullivan Attitudes Survey and reported having "no confidence in either the scales or the full measure" (p. 413), also due to low reliability coefficients.

3.6.1.5 Focus of attitude measures

Across all studies, the attitude measures used differed in one major respect, specifically, whether the focus of investigation was older patients or older people in general. The Aging Semantic Differential (Rosencranz & McNevin, 1969), Palmore's bias score (Palmore, 1977; 1981), and 'Form A of the Opinions about Older People' scale (Ontario Welfare Council, 1971) were developed for the measurement of attitudes toward older people in general.

Items in the general older people questionnaires could be considered irrelevant to the older patient context (e.g. An example item from Palmore's 1977 FAQ: "Older people tend to become more religious as they age", p.316). In contrast, the UCLA GAS (Reuben et al., 1998), and the Maxwell-Sullivan Attitudes Survey (1980) measure attitudes toward older patients (e.g. An example item from the Reuben et al.'s 1998 UCLA GAS: "Taking a medical history from an elderly patient is frequently an ordeal", p.1430). It cannot be assumed that a medical student or doctor who expresses negative attitudes toward older people in general will hold the same attitudes toward older patients.

Typically, the studies included in this review employed an intervention designed around the older patient (such as geriatrics rotations or geriatrics courses). However, 15 of the 27 studies used an attitude measure that referred to the older person in general. These two targets (older patient versus older person) are likely to differ, as older patients are typically older, frailer and more ill than an older person in the general population. It is quite possible that the participants may have had different mental representations of an older person versus an older patient. For studies using general older people questionnaires, there was typically a mismatch between the area of interest (older patients), as described in the introduction and discussion sections of the study articles, and the focus of the attitude measure (older people in general). The difference in the focus of investigation between older people and older patients is rarely addressed in studies, despite being a conceptually relevant issue.

3.6.2 Findings of intervention studies

Of the 27 studies, 24 investigated the attitudes of medical students. Two of these 24 studies originated from the UK (Deary et al., 1993; Hughes et al., 2008). Only three of the intervention studies investigated doctors' attitudes,

all originating from the USA (Baum & Nelson, 2007; Lee et al., 2005; Lindberg & Sullivan, 1996). No studies measured attitude change in UK doctors following intervention.

Types of interventions included: (a) courses; (b) rotations; (c) course and rotations; and (d) mentoring. Courses were educational in nature and generally involved teaching medical students or doctors about core topics in the treatment of older patients. This includes functional loss, normal versus pathological ageing, and common diagnoses. Rotations, also referred to as clinical attachments, are a requirement of medical school and involve interacting with, and attending to, patients in hospital care under the supervision of more experienced doctors. In 'course and rotation' interventions, each participant encountered both of these elements as part of the intervention. Finally, mentoring typically entailed the pairing of the participant with an older adult from the local community. In most cases, the mentoring did not address geriatric care issues, but included socialising and interacting with the mentor outside of the hospital environment. Statistical analyses revealed that positive change in attitudes was not associated with the intervention type (p=.71, Fisher's exact test).

The duration of interventions varied from 3 hours to 4 years. Interventions were categorised into short (less than two weeks), medium (2 weeks to 6 months), and long (more than 6 months) duration. Positive attitude change was not associated with the duration of the intervention (p=.79, Fisher's exact test).

Statistical analyses also revealed that positive attitude change was not associated with the focus of the attitude measure (older patients versus older people; p=.45, chi-square). Positive attitude change was also not associated with whether the response rates were fully reported (p =.45, chi-square),

whether a validated questionnaire measure was used (p=.44, Fisher's exact test), or according to the methodological quality of the study (acceptable versus poor quality; p= .55, Fisher's exact test).

The analyses of intervention studies did indicate one major finding, which concerned what the studies actually appeared to measure rather than what the authors claimed to have measured. Specifically, there was a lack of clear understanding between an intervention designed to address attitudes and an educational intervention designed to increase knowledge in medical students or doctors. A detailed look at the studies indicated that some interventions simply taught medical students or doctors more information about the medical diagnoses of the older patients, whether as part of a course or rotation. These were categorised (by the present researcher) as knowledge-building interventions and tended to consist of education on topics relevant to geriatric care such as common diagnoses or patient presentations (e.g. Eskildsen & Flacker, 2009; Neimon et al., 1992). All interventions that consisted solely of educational information, such as older patient statistics, core geriatric topics and common diagnoses, or patient presentations were considered knowledge-building interventions (see Table 4). The results of this analysis indicated that in 11 studies, the interventions had solely knowledge-building content. Three of these studies resulted in positive change whilst the remaining eight showed no positive change.

Sixteen studies were categorised as empathy-fostering interventions, which encouraged the participant to see, think or feel like an older person or patient. Empathy-fostering interventions included those with ageing simulations or mentoring with older people. Empathy-fostering interventions were operationalised as those that included the use of persons, materials, or experiences that encouraged participants to understand the emotions, cognitions or behaviours of the older person. The interventions had to

include an understanding of the person or patient outside of a solely medical and diagnosis-based context. Therefore, an intervention in which the participant conducted a mock patient interview was categorised as knowledge-building, because the participant was taught about the patient from a medical context, often with a diagnostic focus. These interventions essentially consisted of medical training for the participant to be a better doctor, now or in the future. However, if the participant was to meet an older person or patient as part of an intervention and had to speak to them about their life, their coping, and what challenges they face as a result of ageing, this intervention was categorised as empathy-fostering. In these interventions, the participants were not required to search for diagnoses, but had to listen and learn about the experiences of the older person.

Of these 16 empathy-fostering studies, 11 showed positive change after an intervention and five did not. Statistical analyses revealed that positive attitude change was associated with the intervention content (p=.03, chi-square). Studies that included an intervention with an empathy-fostering component, either on its own, or in addition to any knowledge-building were associated with more positive attitude scores postintervention compared to studies with only knowledge-building intervention content.

Therefore, statistical analyses revealed that the content of the intervention was the only variable found to be associated with attitude change. Interventions with an empathy-fostering component were associated with positive attitude score change (i.e. attitude scores became more positive from pretest to posttest). Of the empathy-fostering interventions, five studies employed a variation of the Ageing Game (McVey, Davis, & Cohen, 1989) as part of their intervention (Diachun et al., 2006; Intrieri et al., 1993; Lorraine et al., 1998; Pacala et al, 1995; Warren et al., 1983). The Ageing Game is an exercise in which participants experience some of the difficulties associated

with normal and pathological ageing, by using materials to mimic common age-related health issues, such as sensory loss. Typically participants may wear gloves to simulate tactile deficits or earplugs to simulate hearing loss (McVey et al., 1989). The Ageing Game is designed to encourage a participant to feel or understand the difficulties and frustrations that may come with normal or pathological ageing.

Five empathy-fostering interventions consisted of a mentoring programme that required the participant to interact, and develop a relationship, with an older person who was typically well, lived independently and resided outside of a hospital-based environment (Bernard et al., 2003; Duke et al., 2009; Gonzales et al., 2010; Lu et al., 2010; Shue et al., 2005). These interventions encouraged the participant to learn about an older person, but not in relation to diagnoses or ill health. A further six studies included informal contact with the healthy older people which may have been as part of a course-based or rotation-based intervention (Carmel et al., 1992; Eskildsen &Flacker, 2009; MacKnight & Powell, 2001; Stewart et al., 2007; Wilkinson et al., 2002; Wilson & Glamser, 1982). These interventions appeared to encourage seeing the older person as unique, by learning about their personal history and experiences. These interventions did not necessarily involve many meetings and, therefore, were not considered mentoring, with some studies incorporating only a single meeting with the older person (Diachun et al., 2006; MacKnight & Powell, 2001).

The classification of intervention according to whether it was knowledge-building or empathy-fostering is proposed as the most useful way of approaching the lack of consistency in study findings and to help make sense of such diverse study designs and findings. When participants were encouraged to learn about a patient case and improve their ability to diagnose accurately, attitude scores did not change in a positive direction.

However, in interventions where even a short ageing game or informal contact with the healthy older people was used to encourage the participant to understand the experience of an older person, studies were more likely to find positive change in attitudes from pretest to posttest.

3.7 Cross-sectional studies' results: Variables related to attitudes

Thirty-one studies investigated variables related to medical students' and/or doctors' attitudes toward older patients. The following information is presented (see Table 5) to summarise each study:

No.: Study number (labelled 1-31).

Authors: Name of authors of study and year published.

Sample, setting and response rate: Number of participants, year in medical school (for medical students, labelled 'MS') or postgraduate training year (PGY) or job/role (for doctors), country of study, response rate (RR).

Attitude assessment: Measure used (noting any modifications to established measures), number of questions in measure, response format and scoring range.

Attitude score: Mean attitude assessment score.

Related to attitude scores: Variables that demonstrated a significant relationship with attitude scores.

Not related to attitude scores: Variables that did not show a significant relationship with attitude scores.

Main threats to validity and reliability: Weaknesses in the study design and implementation, which may account for differences, such as effects of selection, attrition, history, maturation, instrumentation, testing, and statistical.

Conclusions: Details of variables authors claimed were related to attitudes scores.

Table 5.

Characteristics of studies investigating factors related to attitudes toward older patients in doctors and medical students

No.	Authors	Sample, setting, & response rate (RR)	Attitude assessment	Attitude score	Related to attitude score	Not related to attitude score	Main threats to validity and reliability	Conclusions
1	Beall, Baumhover, Simpson, & Pieroni (1991)	30 doctors: PGY1 (n=9) PGY2 (n=12) PGY3 (n=9) from two training programmes, United States RR=47%	Kogan's Attitudes Toward Old People Scale, 34-item, 6-point Likert scale, score range, 34(neg) to 204(pos)	M=167.7	None reported	(1) Gender (2) age (3) undergraduate major (4) year of residency (5) knowledge score	*Statistical:* Small group sizes and no power estimation or justification of sample size; unclear which statistical tests were conducted on the data.	Variables studied showed no relationship with attitude scores.
2	Belgrave, Lavin, Breslau, & Haug (1982)	120 medical students: All 1MS from two university schools (n=27, and n=94), United States RR=80%	Modified Palmore's Bias score (1977), 25 items reduced to 15 true-false, score range 0(pos) to 15(neg)	M=5.3	(1) Attending research-oriented school (2) seeing medicine as an 'exciting job' (3) 'helping others' as reason for medical career choice	(1) Gender (2) race (3) age (4) orientation to authority (5) Medical College Admission Test (MCAT) verbal (6) MCAT quantitative score (7) preferred specialty (8) preferred future location	*Instrumentation:* Reliability statistics for new questionnaire not reported; did not justify reduction of items in measure from 25 to 15; used knowledge questionnaire to measure attitudes. Palmore's measure is a knowledge test and has previously demonstrated a weak relationship with other attitude measures such as the Aging Semantic	Attitude scores were more positive for those attending a community-focused medical school as opposed to a research focused school, and those who reported entering medicine to help others. Attitudes scores were more negative in those who reported entering medicine

						choice	Differential (Holtzman & Beck, 1979). *Statistical*: Significance levels chosen are unclear; no power estimation or justification of sample size.	because it was an exciting job.
3	Cammer-Paris, et al. (1997)	330 medical students: All 1MS from three cohorts: 1986 (n=109) 1991 (n=105) 1994 (n=116) from one university school, United States RR=90%	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	1986 M=129.5 1991 M=134.7 1994 M=126.5	(1) Age	(1) Gender (2) exposure to a nursing home (3) previous undergraduate course in geriatrics. (4) amount of contact with older persons	*Selection:* Mean attitude score of 1991 sample significantly different to other groups but no explanations sought or provided. *Instrumentation:* Additional measures used on 1991 and 1994 samples but not 1986 sample without providing justification. *Statistical:* No power estimation or justification of sample size.	Older medical students had more positive attitude scores.
4	Cheong, Wong, & Koh (2009)	342 medical students: 1MS (n=218) 3MS (n=124) from one university school, Singapore RR=95%	Kogan's Attitudes Toward Old People Scale, 34-item, 6-point Likert scale, score range, 34(neg) to 204(pos)	1MS M=135.2 3MS M=138.2	None reported	(1) Gender (2) year of course (3) ethnicity (4) household income (5) having a doctor as a parent	*Statistical:* Ran large number of t-tests on the same data without reporting corrections to significance levels; no power estimation or justification of sample size.	Variables studied showed no relationship with attitude scores.

5	Chua, Chay, Merchant, & Soiza (2008)	244 medical students: All 1MS from one university school, Singapore RR=98%	Modified UCLA Geriatric Attitudes Scale, (minor changes to suit local context and additional question added), 15 item, 5-point Likert scale, score range =1(neg) to 5(pos)	M=3.6	(1) Willingness to consider career in geriatric medicine	(1) Gender (2) age (3) ethnicity (4) previous experience caring for older people	*Testing:* Data allowed identification of student and so may have resulted in socially desirable responding (93.4% of the sample reported a positive attitude to older people). *Statistical:* No power estimation or justification of sample size.	Medical students who were more willing to consider a geriatric medicine career had more positive attitude scores.
6	Chumbler, Robbins, & Poplawski (1996)	481 medical students: 2MS (n=unclear) 3MS (n=unclear) from a randomly selected national sample, United States RR=70%	Locally developed, 7-point Likert scale, 2 factors; Factor 1: expected satisfaction in treating older adults, 2-items, score range, 2(neg) to 14(pos) Factor 2: Perceptions of effectiveness in treating older adults, 4-items, score range 4(pos) to 28(neg)	Satisfacti-on M=3.9 Effective n-ess M=7.9	(1) Gender (2) ethnicity (3) level of intrinsic motivation (4) level of extrinsic motivation	(1) Year of course (2) future residency choice (3) socioeconomic background index	*Instrumentation:* Two of the 5 scales used in this study demonstrated Cronbach's alpha levels below the acceptable level of 0.70. *Selection:* Year group numbers not provided.	Attitude scores were more positive in female respondents, white respondents, and those who reported higher levels of intrinsic motivation as a reason for entering medicine. Negative attitude scores were more likely in those reporting greater levels of extrinsic motivation for entering medicine.
7	Chumbler & Ford (1998)	533 medical students:	Chumbler et al. (1996) attitude	1MS & 2MS	1MS & 2MS: (1) gender	All groups: (1) ethnicity	*Instrumentation:* Effectiveness subscale	More positive attitude scores were

		1MS and 2MS (n=364) 3MS and 4MS (n=166) from a randomly selected national sample, United States RR=76%	measure, 7-point Likert scale, 2 factors; Factor 1: satisfaction, 2-items, score range =2(neg) to 14(pos) Factor 2: Effectiveness, 4-item, score range =4(pos) to 28(neg)	satisfacti-on M=6.0 1MS & 2MS effective-ness M=5.9 3MS & 4MS satisfacti-on M=5.6 3MS & 4MS Effective-ness M=5.8	(2) level of intrinsic motivation 3MS & 4MS: (1) gender (2) level of intrinsic motivation (3) amount of clinical contact with older patients	(2) future surgical residency preference (3) exposure to geriatric health issues education	demonstrated Cronbach's alpha level (reported as ranging from 0.67 to 0.69) below what is deemed acceptable; 'Exposure to geriatric health issues education' measure also indicated lower than acceptable alpha coefficient (0.69); no power estimation reported.	found in female respondents, and those reporting greater levels of intrinsic motivation as a reason for entering medicine. For 3rd and 4th years, positive attitudes were more likely in those reporting greater amounts of clinical contact with older patients.
8	Edwards & Aldous (1996)	93 teaching faculty doctors, and 290 medical students: 1MS (n=68) 3MS (n=54) 4MS (n=86) 5MS (n=85) from one university school,	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =1(pos) to 7(neg)	1MS M=129.9 3MS M=126.7 4MS M=125.8 5MS	(1) Knowledge score	(1) Gender (2) year of medical school (3) attitude scores from students in same year group of a non-medicine-related course (English, and Computer	*Statistical:* Conducted large number of t-tests on the same data without reporting correction to significance level; no power estimation or justification of sample size.	Attitude scores were more positive in those with higher knowledge scores.

		United Kingdom RR=65% to 70%		M=124.8 Faculty: M=124.8		science)		
9	Fields, Jutagir, Adelman, Tideiksarr, & Olson (1992)	127 medical students: All 4MS from one university school, United States. R=100%	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	ASD M=130.5	(1) Age	(1) Gender (2) knowledge scores (3) specialty preference (4) prior nursing home experience (5) contact with elderly (6) having previously completed gerontology coursework	*Testing:* Identical knowledge measure used for pretest and posttest. *Statistical:* No power estimation or justification of sample size.	Younger medical students had more positive attitude scores.
10	Fitzgerald, Wray, Halter, Williams, & Supiano (2003)	171 medical students: All 1MS from one university school, United States RR=89%	UCLA Geriatric Attitudes Scale, 14 item, 5-point Likert scale, score range =1(neg) to 5(pos) General attitudes category of Maxwell-Sullivan Attitude Survey, 6-item, 5-point Likert scale, score	UCLA GAS M=3.7 MSAS General attitudes M=2.0	(1) Gender (UCLA only) (2) interest in geriatric medicine career	(1) Gender (MSAS only) (2) Ethnicity (3) patient age group preference (4) prior care experience (5) knowledge scores	*Instrumentation:* Low reliability for MSAS measure (Cronbach's alpha= 0.56); no rationale for use of only one category was given; referred to measure as a subscale but it has never been subject to a factor analysis, and validity is unknown and its reliability is poor; UCLA GAS measure demonstrated	Attitude scores were more positive in females, and students reporting a greater interest in a geriatric medicine career.

			range =1(pos) to 5(neg)				alpha coefficients below the acceptable level (0.69). *Statistical:* No power estimation or justification of sample size.	
11	Hellbusch, Corbin, Thorson, & Stacy (1995)	200 doctors from one hospital, United States RR=47%	Modified Kogan's Attitudes Toward Old People Scale, 34-item, 7-point Likert scale (increased from 6-point), score range =34(pos) to 238(neg)	M=97.9	(1) Age (2) number of years in practice	(1) Gender (2) percent of patients over 65 (3) previous course on ageing (4) doctor specialty	*Statistical:* Different group sizes for ANOVA ranging from 6 to 67 without providing evidence of statistical treatment or correction; no power estimation or justification of sample size. *Selection:* Over 90% sample male but no demographic information on the composition of the source population given. *Instrumentation:* Changed attitude measure, Likert scale and scoring but failed to provide any rationale.	Attitude scores were more positive in those with fewer years in practice. The oldest group of doctors had the most negative attitude scores.
12	Hollar, Roberts, & Busby-Whitehead (2011)	116 medical students: All 1MS from one university school, United States RR=73%	UCLA Geriatric Attitudes Scale, 14 item, 5-point Likert scale, score range =14(neg) to 70(pos)	UCLA GAS M=52.1	(1) Gender	None reported	*Statistical:* No power estimation or justification of sample size.	Attitude scores were more positive in females.

13	Holtzman, Toewe II, & Beck (1979)	314 medical students: 1MS (n=unclear) 2MS (n=unclear) 3MS (n=unclear) 4MS (n=unclear) from three university schools (n for each school= unclear), United States RR=48% to 98%	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	M=123.7	(1) Interest in primary care career (family, general internal and paediatrics)	(1) Gender (2) age (3) year of medical school	*Selection:* Failed to provide sufficient information on the sample demographics, including year group; response rate varied 48% to 98% between groups but no demographic comparisons done to check equivalence of groups. *Statistical:* Ran large number of t-tests on the same data without evidence of significance correction; ran multiple post hoc analyses without justification; no power estimation or justification of sample size.	Attitude scores were more positive in students expressing an interest in a primary care medicine career.
14	Holtzman, Beck, & Ettinger (1981)	118 medical students 1MS (n=68) 3MS (n=50) from one university school, United States RR=unclear	Aging Semantic Differential, 32-item, 7-point Likert scale, Score range =32(pos) to 224(neg)	1MS M=119.1 3MS M=124.4	(1) Knowledge scores (for 3MS only).	(1) Year of medical school (2) age	*Selection:* Found group differences between demographics in 1MS and 3MS but did not investigate or correct for this; did not provide response rates. *Statistical:* No power estimation or justification of sample size.	Attitude scores were more positive in those with higher knowledge scores for the 3rd year medical student group only.
15	Hughes et al. (2008)	163 medical students:	Modified UCLA Geriatric	1MS M=3.7	(1) Willingness to consider geriatric	(1) Age (2) gender	*Instrumentation:* Found UCLA GAS demonstrated	Attitude scores were more positive in

		All 1MS from one university school, United Kingdom RR=96%	Attitudes Scale (minor changes to fit UK context), 14-item 5-point Likert scale, score range =1(neg) to 5(pos)		medicine career	(3) ethnicity (4) previous experience of caring for older people	cronbach's alpha level (0.69) below the traditional cut-off for acceptable reliability (Nunnally, 1978).	those more willing to consider a career in geriatric medicine.
16	Kishimoto, Nagoshi, Williams, Masaki, & Blanchette (2005)	156 medical students and 55 doctors: 1MS (n=54) 2MS (n=52) 3MS (n=50) PGY1 (n=20) PGY2 (n=12) PGY3 (n=12) Geriatric Medicine fellows (n=11) from one university school and affiliated training programme, United States RR=75% to 100%	Modified UCLA Geriatric Attitudes Scale, 16 item (increased from 14), 5-point Likert scale, score range =1(neg) to 5(pos)	1MS M= 3.9 2MS M= 3.7 3MS M= 3.6 PGY1 M=3.6 PGY2 M= 3.8 PGY3 M=3.7 Geriatric Fellows M=4.1	(1) Year in medical school or career		*Statistical:* Ran large number of t-tests on the same data without reporting corrections to significance level; authors have not made statistical association data clear enough to determine what variables were compared to attitude scores; no power estimation or justification of sample size.	Attitude scores were more positive in first year medical students and geriatrics fellows.
17	Lee, Reuben, & Farrell (2005)	177 doctors: PGY1 (n=unclear) PGY2 (n=unclear)	UCLA Geriatric Attitudes Scale, 14 item, 5-point	PGY1 M=3.5	(1) Personal experience with older people	None reported	*Instrumentation:* The measure of personal and professional experience	Attitude scores were more positive in those with greater

		PGY3 (n=unclear) from one university affiliated training programme United States RR=84% to 97%	Likert scale, score range =1(neg) to 5(pos)	PGY2 M=3.7 PGY3 M=3.6	(2) professional experience with older people (3) interest in geriatric medicine career (4) ethnicity (5) Year of residency		with older people included a single item and yes/no response format for both variables, but provided no evidence this is a valid or reliable measure. *Selection:* Did not report full demographic information, such as year group sizes. *Statistical:* No power estimation or justification of sample size.	personal and professional experience with older people, and those with a greater interest in geriatric medicine career. Asian-Americans had more negative attitude scores than Caucasians. Attitude scores were more positive in PGY2 than in PGY1 and PGY3.
18	Leung, LoGiudice, Schwarz, & Brand (2011)	122 doctors: Junior doctors (n=44) Registrars (n=41) Consultants (n=37) from two hospitals, Australia RR=35% to 80%	Fraboni's Scale of Ageism, 29 items, 5-point scale, score range =29(pos) to 145(neg)	M=61.5	(1) Age (2) gender (3) job seniority (4) amount of social contact with older people (5) interest in geriatric care	(1) Country of birth (2) languages spoken	*Selection:* Response rates varied from 35% to 80% for different grades of doctors; did not report possible differences in demographic data of the different groups. *Instrumentation:* Did not justify why information on country of birth and languages spoken was collected and analysed.	Attitude scores were more positive in females, those over the age of 30 years, those with a more senior professional grade, and those with higher amounts of contact with healthy older people.
19	Lui & Wong (2009)	54 junior doctors from one hospital, Singapore	Modified Kogan's Attitudes Toward Old People Scale 34 items, (reduced from 6-	M=114.4	(1) Seeing older patient care as 'unrewarding'	(1) Age (2) marital status (3) medical school attended (4) nationality	*Instrumentation:* Did not justify why information on marital status, medical school attended, or nationality was analysed;	Attitude scores were more positive in doctors who reported older patient care as

		RR=83%	point to 5-point likert scale), score range 34(neg) to 170(pos)			(5) years in practice/seniority	did not justify changing the response format of Kogan's attitude measure. *Statistical:* No power estimation or justification of sample size.	rewarding work.
20	Maxwell & Sullivan (1980)	150 doctors: PGY1 (n=unclear) PGY2 (n=unclear) PGY3 (n=unclear) from 40 training programmes, United States RR=38%	Maxwell Sullivan Attitudes Scale, 28 item, 5-categories, 5-point Likert scale, score range= 1(pos) to 5(neg)	M= 2.2	(1) Year in residency	None reported	*Selection*: Did not report number of respondents in each year group; low response rate across sample. *Instrumentation*: Did not report validity testing or factor analysis of the new measure, so the validity of the 5 categories was unexplored; reliability reported for the 5 categories indicated very poor performance for some of the categories. *Statistical:* No power estimation or justification of sample size.	Attitude scores increased in positivity with each year of residency.
21	Menz, Stewart, & Oates (2003)	81 medical students from podiatric medicine: 3MS (n=57) 4MS (n=24) from two university	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	M=120.0 Effective-ness scale M=18.6	(1) Knowledge scores (2) gender	(1) Intrinsic/ extrinsic motivational reasons for entering medicine (2) age (3) desire to work	*Selection:* Response rate not reported; no explanation of how sample was recruited; data were not anonymous (linked to student number).	Attitude scores were more positive in females, and those with higher knowledge scores.

		schools, Australia RR=unclear	Chumbler et al. (1996) attitude measure – Effectiveness subscale only, 4-items, score range =4(pos) to 28(neg)			in private/public sector (4) contact with grandparents	*History:* Sample had completed compulsory geriatrics course immediately prior to study. *Statistical:* No power estimation or justification of sample size.	
22	Muangpai-san, Intalapapro-n, & Assantachai (2008)	60 doctors and 146 medical students: All 4MS from one university hospital, Thailand RR=50% to 61%	Modified UCLA Geriatric Attitudes Scale, 16 items (increased from 14), 5-point Likert scale, score range =16(pos) to 80(neg)	4MS M=41.8 Doctors M=40.7	(1) Exposure to older people.	(1) Gender (2) age (3) number of elderly people living at home	*Statistical:* Ran large number of t-tests on the same data without reporting corrections to significance level; no power estimation or justification of sample size. *Selection:* Did not report how participants were recruited.	Attitude scores were more positive in those with greater exposure to older people.
23	Perrotta, Perkins, Schimpfhau-ser, & Calkins (1981)	127 medical students: All 1MS from one university school, United States RR=100%	Modified Kogan's Attitudes Toward Old People Scale 34 items, (reduced from 6-point to 5-point likert scale), score range =34(pos) to 170(neg)	M=81.0	(1) Knowledge scores	(1) Amount of contact with older people (2) attitudes toward geriatric medicine	*Statistical:* Three regressions were conducted despite no signs of correlations; power calculations not reported despite entering over 10 predictor variables into each regression; no power estimation or justification of sample size.	Attitude scores were more positive in those with higher knowledge scores.

24	Reuben, Fullerton, Tschann, & Croughan-Minihane (1995)	554 medical students: All 1MS from five university schools, United States RR=92%	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	M= 128.4	(1) Gender (2) ethnicity (3) age (4) knowledge scores	(1) Marital status (2) undergraduate degree (3) age of oldest parent (4) having taken a prior geriatrics courses (5) prior work with older people	*Instrumentation:* Reported alpha levels for some subscales as under 0.70 which is traditionally deemed to be the cut-off for acceptable reliability (Nunnally, 1978). *Statistical:* No power estimation or justification of sample size.	Attitude scores were more positive in females, older respondents, and those with higher knowledge scores. Attitude scores were more negative in Asian-Americans.
25	Reuben et al. (1998)	142 doctors: PGY1 (n=38) PGY2 (n=33) PGY3 (n=25) Fellows (n=14) Faculty (n=11) from one university hospital, United States RR=unclear	UCLA Geriatric Attitudes Scale, 14 item 5-point Likert scale, score range =1(neg) to 5(pos)	PGY1 M=3.4 PGY2 M=3.6 PGY3 M= 3.8 Fellows M=4.2 Faculty M=4.2	(1) Year of residency (2) job seniority (3) interest in geriatric career	(1) Specialty (2) gender (3) age (4) ethnicity	*Selection*: Response rate data not provided. *Statistical:* Statistical tests and analyses conducted not clearly reported; no power estimation or justification of sample size.	Attitude scores were more positive in PGY1-PGY3 doctors who reported an interest in pursuing geriatric medicine. Attitude scores were more positive in fellows and faculty members (teaching staff) than PGY doctors. Attitude scores were more negative in PGY1 and PGY2 doctors than other respondents.
26	Richter & Buck (1990)	85 doctors: PGY1 (n=10) PGY2 (n=19) PGY3 (n=21) Faculty (n=35)	Maxwell-Sullivan Attitude Scale, 28 item, 5-point response, score range	PGY1 M=102.0 PGY2 M= 105.3	(1) Amount of geriatric-related didactic training and educational experience (in	(1) Living parents older than 65 (2) contact with grandparents (3) contact with	*Statistical:* No power estimation or justification of sample size. *Selection:* Lacked basic demographic information	PGY1-PGY attitude scores were more positive in those who had had a greater amount of didactic

		from six training programmes, United States RR=69% to 86%	=28(neg) to 140(pos)	PGY3 M=105.6 Faculty M=104.3	undergraduate school, medical school, and residency programme) (2) faculty attitude scores.	elderly other than grandparents (4) settings of educational experience with elderly (5) year of residency	of participants.	training in geriatrics. PGY1-PGY3 attitude scores showed a positive association with faculty attitude score.
27	Sainsbury, Wilkinson, & Smith (1994)	68 doctors: PGY1 (n=unclear) PGY2 (n=unclear) PGY3 (n=unclear), who had attended one university school 1-3 years prior, New Zealand RR=62%	Aging Semantic Differential, 32-item, 7-point Likert scale, score range =32(pos) to 224(neg)	M=115.8	None reported	(1) Year of residency (2) having completed a health care of the elderly clinical attachment in 4th year	*Selection:* Did not provide demographic information such as year group of participants. *Statistical:* No power estimation or justification of sample size.	Variables studied showed no relationship with attitude scores.
28	Shahidi & Devlen (1993)	84 medical students: All 2MS from two university schools, United Kingdom RR=unclear	Aging Semantic Differential, 32-item, 7-point Likert scale, Score range =32(pos) to 224(neg)	M=89.6	(1) Knowledge scores	(1) Gender (2) age	*Selection:* Response rate data not reported; method of recruitment not reported. *Statistical:* No power estimation or justification of sample size.	Attitude scores were more positive in those with higher knowledge scores.
29	Thorson & Powell (1991)	277 medical students: All 1MS (3 cohorts, n for	Kogan's Attitudes Toward Old People Scale 34 items, 7-point	1MS M= 102.6	(1) Personality trait of dominance	(1) 14 of the 15 personality traits measured	*Selection:* Details of how participants were recruited not reported; number in each cohort not	Attitude scores were more negative in respondents who had higher levels of the

		each group=unclear) from one university school, United States RR=unclear	likert scale), score range 1(pos) to 7(neg)				reported; response rate not reported. *Statistical:* No power estimation or justification of sample size.	dominance personality trait.
30	Voogt, Mickus, Santiago, & Herman (2008)	231 medical students: All 1MS from one university school, United States RR=73% to 75%	Revised Geriatrics Attitude Scale (changed to future tense to suit medical students) 17-item (increased from 14), 6-point Likert scale, score range =1(neg) to 6(pos)	M=4.5	(1) Interest in geriatric medicine (2) amount of prior experiences caring for older adults (3) quality of relationships with older relatives.	(1) Age (2) gender (3) ethnicity (4) frequency of interaction with older relatives	*Statistical:* No power estimation or justification of sample size.	Attitude scores were more positive in those with a greater interest in pursuing a geriatric medicine career, those who had prior experiences of caring for older adults, and those who had a higher quality relationship with older relatives.
31	Wilderom et al. (1990)	663 medical students: All 1MS students from six consecutive years (n for each group=unclear) at one university school, United States RR=82%	Kogan's Attitudes Toward Old People Scale, 34 item, 5-point Likert scale, score range =34(pos) to 170(neg)	M=81.9	(1) Interest in geriatric medicine (2) preference for treating elderly (3) perception of elderly patients (4) perceived physician attitude to elderly as patients (5) feeling of closeness with	(1) Age (2) gender (3) ageing-related undergraduate coursework (4) perceived social skills (5) desired residency choice	*Instrumentation:* Cronbach's alpha for two new scales was reported as .48 and .55, which is below the traditional cut-off for acceptable reliability (Nunnally, 1978). *Statistical:* No power estimation. *Selection:* Did not fully report sample	Attitude scores were more positive in those with a greater interest in pursuing a geriatric medicine career, those with greater feelings of closeness to grandparents and non-familial elderly, those who desired to work in a larger

					grandparents (6) feeling of closeness with non-familial elderly (7) desired future community size (8) voluntary work with elderly		characteristics (i.e. the number in each year group).	community in their future practice, those who had completed voluntary work with the elderly in the past, and those who reported a preference for treating older patients over younger patients.

3.7.1 Quality of studies

The quality assessment exercise highlighted some common weaknesses in many of the cross-sectional studies identified. The most common methodological weakness was an absence of sample size justification. All studies, with the exception of Hughes et al. (2008), failed to provide details of a power calculation to justify the size of the sample. Specifically, there was a lack of reporting or justification about the suitability of the sample size for correlational and regression analyses in relation to the number of variables investigated. Therefore, it is not known whether studies had adequate power to detect a relationship where one existed and reject one where it did not exist (Murphy, Myors, & Wolach, 2012).

Studies commonly did not report the psychometric properties of the questionnaire used. Of those that did, five studies reported alpha coefficients below the traditionally acceptable cut-off for reliability (0.70; Nunnally, 1978), yet the measure was still used (Chumbler et al., 1996; Chumbler & Ford, 1998; Fitzgerald et al., 2003; Hughes et al., 2008; Reuben et al., 1995; Wilderom et al., 1990).

Studies that used established measures of attitudes toward older people or older patients were not without concerns, as previously described (see Sections 3.6.1.3 and 3.6.1.4). In addition to these concerns, other measures were used in the results of the correlational studies presented here. Seven studies used Kogan's Attitude toward Old People (KAOP) scale (Kogan, 1961a) or a modified version of this measure. Kogan (1961a) developed the KAOP scale from a questionnaire that measured perceptions of disadvantaged people, such as ethnic minorities, by substituting the phrase 'ethnic minority' for 'old person' (Hilt, 1997). The KAOP scale consists of 17-paired statements, one of each set of statements is positively worded whilst its counterpart is negatively worded, which address a range of facets of life in the context of the older person, from perceptions of the power of older people in society to how

they tend to look and dress. Hilt (1997) has criticised the KAOP scale for the use of many double-barrelled statements (e.g. “old people spend too much time prying into the lives of others and giving unsought advice” (Kogan, 1961a, p.46). A major criticism associated with the KAOP scale concerns the reliability of the positive and negative subscales of the measure. It appears that the positive and negative scales have approximately 26 per cent shared variance, which indicates that these items are not equivalent. Kogan (1961b) has also conceded that the low parallel-form reliability levels (ranging from 0.46 to 0.52) suggest that the positive and negative statements may be “logical, but not psychological, opposites” (Kogan, 1961b, p.620). Essentially, whilst the statements are logically opposite, respondents may react to them differently due to responding biases.

One of the notable criticisms of the KAOP measure is that it is not a measure of attitudes, but of stereotypes. This is because most of the items are positive and negative stereotypes that may be associated with older people (e.g. “most old people are pretty much alike”), without the corresponding affective information regarding whether these stereotypes are favourable or unfavourable. For example, if a respondent answers that most old people are deemed to be pretty much alike, it is still not known whether the respondent thinks this is a positive or negative attribute. Instead, the KAOP measures the stereotypical features the respondent claims that older people possess. In addition to this, a number of the stereotypes outlined in the measure may be irrelevant to medical students’ or doctors’ attitudes toward older patients (e.g. “older people have too much power in business and politics” and “most old people tend to let their homes become shabby and unattractive” (Kogan, 1961a, p.46). For these reasons, the use of the KAOP measure to ascertain attitudes toward older patients is questionable.

3.7.2 Findings of studies

Across the 31 cross-sectional studies, relationships between the measured variables and attitudes toward older patients are demonstrated in Table 6. Variables are categorised according to whether a significant relationship was, or was not found, with attitude scores. Studies are identified by the study number (1-31) assigned to them in the first column of the previous table (Table 5).

Table 6.
Variables related to attitudes toward older patients with the corresponding study number

Variable investigated	Related to attitude score*	Not related to attitude score*
Demographic factors		
Gender	[6]; [7]; [10]; [12]; [18]; [21]; [24]	[1]; [2]; [3]; [4]; [5]; [8]; [9]; [11]; [13]; [15]; [22]; [25]; [28]; [30]; [31]
Age	[3]; [9]; [11]; [18]; [24]	[1]; [2]; [5]; [13]; [14]; [15]; [19]; [21]; [22]; [25]; [28]; [30]; [31]
Marital status		[19]; [24]
Ethnicity	[6]; [17]; [24]	[2]; [4]; [5]; [7]; [10]; [15]; [25]; [30]
Nationality or country of birth		[18]; [19]
Socioeconomic background		[4]; [6]
Having doctor parent/s		[4]
Languages spoken		[18]
Education and training factors		
Year of medical school	[16]	[4]; [6]; [8]; [13]; [14]
Choice of med school	[2]	[19]
Years of practice/seniority	[11]; [16]; [17]; [18]; [20]; [25]	[1]; [19]; [26]; [27]
Previous geriatric education	[26]	[1]; [3]; [7]; [9]; [11]; [24]; [31]
Faculty attitude scores	[26]	
Completed previous older patient rotation		[27]
Exposure to older people		
Knowledge of older people	[8]; [14]; [21]; [23]; [24]; [28]	[1]; [9]; [10]
Relationships with older people	[17]; [18]; [22]; [30]; [31]	[3]; [9]; [21]; [23]; [26]
Prior care or nursing home experience	[30]; [31]	[3]; [5]; [9]; [10]; [15]; [24]
Age of parents		[24]; [26]

Personality and cognitive factors		
Cognitive ability		[2]
Orientation to authority		[2]
Motivation for entering medicine	[2]; [6]; [7]; [19]	[21]
Dominance personality trait	[29]	
Perceived social skills		[31]
Job and career factors		
Interest in Geriatric medicine career	[5]; [10]; [15]; [17]; [18]; [25]; [30]; [31]	[23]
Clinical contact with older patients	[7]; [17]	[11]
Specialty choice/preferred specialty	[13]	[2]; [6]; [7]; [9]; [11]; [25]; [30]; [31]
Preferred future location/setting	[31]	[2]; [21]
Preferred patient age	[31]	[10]

*Studies are identified by the study number assigned to them in the first column of Table 5 (i.e. no. 1 to 31)

3.7.2.1 Demographic factors

The variables investigated for possible relationships with attitude scores included the participants' gender, age, ethnicity, marital status, nationality, socioeconomic background, languages spoken, and having a doctor as a parent. As demonstrated in Table 6, no association was found with marital status, nationality, socioeconomic background, languages spoken and having a doctor as a parent. Each of these five variables was only investigated in either one or two studies and so the absence of association with attitude scores is not conclusive. However, the choice to investigate these five variables was not justified by the studies' authors and it is not clear why variables, such as marital status or languages spoken, would be related to attitude scores.

Twenty-two studies sought to determine whether gender and attitude scores were related, and a relationship was found in seven studies, with the remaining 15 studies finding no relationship. All seven studies that identified a link between attitude score and gender found females to have significantly more positive attitudes toward older patients in comparison to males.

Eighteen studies investigated the relationship between age of the respondent and attitude scores. Five studies found a significant relationship whilst the remaining 13 studies did not. Of these five studies, three reported more positive attitude scores in older respondents (Cammer-Paris et al., 1997; Leung et al., 2007; Reuben et al., 1995), whilst two found the opposite pattern (Fields et al., 1992; Hellbusch et al., 1995). These results should be interpreted with caution, however, as most studies failed to acknowledge that age was a unique and complicated variable in this research area. Firstly, the age range of most studies was very limited due to the fact that medical students and doctors in the postgraduate training years (PGY1-3) will most often be in the 18-30 year age range. In the cases of medical students, the

age differences may have been indicative of another variable, such as having taken a year out before university. Furthermore, many studies did not recognise that age was likely to show multicollinearity with other variables (year of study, years of practice, previous undergraduate degree) and, in these cases, should have been treated with caution in any correlation or regression analyses as it may have violated statistical assumptions. Overall, thirteen studies did not find a relationship with age, whilst five studies found a relationship but produced mixed findings as to the nature of the association. Therefore, it is plausible that relationships with age may have been a methodological artefact.

Eleven studies investigated the relationship between respondents' ethnic background and attitude scores, of which three studies found a significant relationship (Chumbler et al., 1996; Lee et al., 2005; Reuben et al., 1995) and the remaining eight, did not. Reuben et al. (1995) found Asian medical students to have more negative attitudes than Caucasians, but the authors did not provide the response format for the ethnicity data and it is unclear what is meant by 'Asian' in this study (e.g. south Asian such as Indian or Pakistani, or east Asian such as Chinese or Korean). In Reuben et al.'s (1995) study, 69 per cent of participants identifying as Asian were not born in the USA, and the study's authors point out that language differences might have accounted for the negative results. Lee et al. (2005) also found that those identifying themselves as Asian had more negative attitude scores than members who identified themselves as 'black', 'non-Hispanic white' and 'Hispanic'. Lee et al. (2005) included only four ethnic backgrounds in their questionnaire and the extent that these categories can produce meaningful or useful data is therefore questionable. Chumbler et al. (1996) found scores were more negative in non-white participants. However, the authors coded race as 'white' and 'non-white' and therefore further investigation into attitude differences according to ethnic backgrounds cannot be conducted.

Overall, results indicating a relationship between ethnic background and attitude scores should be interpreted with caution. Study methods highlighted great confusion regarding the ethnicity variable because the resulting data collected represented a mix of skin colour, ethnic origin, nationality, or country of birth data being used as proxies for the ethnic and cultural background of the respondent. Therefore, the resulting data does not provide convincing evidence for a relationship between attitudes and ethnicity.

3.7.2.2 Education and training factors

The education-related variables that were investigated for their relationship to attitudes toward older patients included the respondent's year of medical school training (for medical students only), years of practice or seniority (for doctors only), factors related to the type of medical school attended, whether respondents had previously received geriatrics-related education, the attitude scores of faculty (doctors who teach medical students or other doctors), and whether respondents had completed an older patient attachment as part of their medical school training.

Eight studies investigated whether respondents who had completed previous geriatrics-related education had different attitude scores from those who had not completed this previous education. Only one study found a relationship between attitude scores and geriatric-related education (Richter & Buck, 1990), and the remaining seven studies that investigated this variable found no relationship. Sainsbury et al. (1994) investigated whether doctors who had completed a rotation in older patient care as part of their medical school training had more positive attitudes than doctors who had not completed the rotation, finding no score differences between the two groups. Six studies investigated whether attitudes of medical students varied according to year of medical school. Kishimoto et al. (2005) reported that more positive

attitudes were found in those in the later years of medical school, and the remaining five studies found no relationship. On the whole, variables related to level of education, previous geriatrics education and geriatrics rotations did not appear to be related to attitudes toward older patients.

Belgrave et al. (1982) investigated whether variables related to participants' choice of medical school was linked to their attitude scores. The authors found more positive attitude scores in students who attended a medical school with a community focus, in comparison to a research-focused medical school. This could be a selection effect, in which medical students are attending schools with views that may be in line with their own. There also exists the possibility that attitudes toward older patients may be in some way affected by the attitudes of those teaching them. Similarly, Richter and Buck (1990) used correlation and regression analyses and found doctors' attitude scores were significantly associated with the attitude scores of teaching faculty members at their residency (training) programs.

The relationship between attitude scores and years of practice or seniority as a doctor was investigated in ten studies, with six finding a relationship with attitude scores and the other four finding no relationship. Four of the six studies demonstrating a relationship found that attitudes were more positive in doctors with more years of practice (Kishimoto et al., 2005; Leung et al., 2011; Maxwell & Sullivan, 1980, Reuben et al., 1998). In contrast, Hellbusch et al. (1995) reported correlational analyses that indicated that as doctors' years in practice increased, their attitudes toward older adults became more negative. The studies that did not find evidence of a relationship between doctors' years of practice and attitude scores tended to contain much smaller sample sizes (ranging from 30 to 80 participants) than the studies that reported an association (ranging from 121 to 211 participants). For example, with 30 participants, Beall et al.'s (1991) study only included nine first-year

(PGY1), 12 second-year (PGY2) and nine third-year (PGY3) doctors (doctors in these training years are sometimes referred to as 'residents'). Similarly, Richter and Buck (1990) used a sample of 10 first-year, 19 second-year and 21 third-year doctors. It is plausible that these group sizes were too small and the statistical analyses, therefore, did not have enough power to detect a relationship.

Lee et al. (2005) reported an unusual relationship between attitude scores and respondents' seniority. They conducted a cross-sectional study of doctors in the professional training years subsequent to achieving their medical degree qualification (PGY1 to PGY3). Doctors' attitude scores were more negative at the end of the third year of residency (PGY3), compared to the attitude scores of doctors in the first- and second- year post-degree (PGY1 and PGY2). Interestingly, Lee et al (2005) used the UCLA Geriatric Attitude Survey (UCLA GAS) which consists of four different factors, of which scores on all four showed the same pattern of change. The authors propose that the reason for the attitude change patterns may lie in the nature of the doctors' patient experiences. The first two years of doctors' residency contained a large proportion of ambulatory clinic care (considered outpatient care in the United Kingdom) and the third year emphasised inpatient hospital care. The authors believe that the increase in exposure to the frailer, sicker and older patients in these hospital settings may be linked to the decline in positive attitudes in third year doctors. The analyses of studies investigating years of practice as a doctor or doctor seniority appear to indicate that there may be a relationship with attitude scores, but the underlying mechanisms which result in any differences are still unknown.

3.7.2.3 Job and career factors

The job- and career-related variables investigated for a relationship with attitude scores included respondents' interest in pursuing a geriatric

medicine career, general level of clinical contact with older patients, current or future specialty preference, preferred age of current or future patients, and future location or setting preferences for work.

As demonstrated in Table 6, few interesting relationships were found in this area due to the small number of studies investigating many of these variables, with one exception: participants' interest in a geriatric medicine career. Nine studies investigated the link between respondents' interest in a geriatric medicine career and attitude scores, with only one study finding no relationship between the two variables (Perrotta et al., 1981). Eight studies found the same relationship between these two variables (Chua et al., 2008; Fitzgerald et al., 2003; Hughes et al., 2008; Lee et al., 2005; Leung et al, 2011; Reuben et al., 1998; Voogt et al., 2008; Wilderom et al., 1990). Specifically, those reporting greater levels of interest in geriatric medicine had more positive attitude scores.

3.7.2.4 Exposure to older people

Four variables relating to respondents' previous exposure to older people were investigated across the studies, including respondents' exposure to a prior care or nursing home experience, contact with older people or older relatives, having living parents over the age of 65 years, and knowledge about older people. No studies found any attitude score difference according to having living parents over the age of 65 years.

Two of the eight studies investigating prior care or nursing home experience on attitude scores found a relationship between these variables. Voogt et al. (2008) and Wilderom et al. (1990) found respondents with prior care experience had more positive attitude scores. The remaining six studies did not find evidence of any relationship.

Respondents' knowledge about older people and the ageing process was investigated by nine studies, with six studies reporting significant associations (Edwards & Aldous, 1996; Holtzman et al., 1981; Menz et al., 2003; Perrotta et al., 1981; Reuben et al., 1995; Shahidi & Devlen, 1993) and three studies finding no relationship (Beall et al., 1991; Fields et al., 1992; Fitzgerald et al., 2003). In all studies that reported a relationship, respondents' scoring higher on the knowledge measure reported more positive attitude scores. Whilst it is possible that knowledge scores are related to attitude scores, it is also plausible that this relationship is related to a construct overlap. All studies which found a relationship between knowledge and attitudes used Palmore's Facts on Aging Quiz (1977) as the knowledge measure. Holtzman and Beck (1979) have reported a correlation between attitude scores and scores on the Facts on Aging (1977) quiz, which also indicates that the knowledge measure used in this review may have overlapped with the construct of attitudes being measured. Therefore, this relationship appears to be a methodological artefact.

Ten studies investigated the relationship between respondents' personal contact with older people (including older relatives) and attitude scores, and results were mixed. Five studies found no relationship between variables, with the remaining five reporting a link between personal contact with older people and attitude scores. Arguably the conflicting results may have reflected the different nature of the questions that were posed in order to categorise this variable. Four of the five studies that found a relationship, between personal contact with older people and attitude scores, asked questions pertaining to the quality of the relationship with the older person or older relative. This included how close the respondent felt to their grandparents or how many older people the respondent felt he or she knew well (Leung et al., 2011; Muangpaison et al., 2008; Voogt et al., 2008; Wilderom et al., 1990). In contrast, four of the five studies that reported no

relationship for this variable asked questions relating to the frequency of contact with older people or relatives. This included how often the respondent visited their grandparents annually, or whether the respondent knew anyone over the age of 65 years other than their parents or grandparents (Cammer-Paris et al., 1997; Fields et al., 1992; Menz et al., 2003; Richter & Buck, 1990). Therefore the mixed findings from the results might suggest that quality of contact or relationships with older people or relatives may be related to attitude scores but the frequency of contact may not.

3.7.2.5 Personality and cognitive factors

Five variables related to the personality and cognitive preferences of respondents were explored for their relationship with attitude scores, including orientation to authority, motivation for entering medicine, perceived social skills, and personality traits. Of these variables, respondents' orientation to authority (Belgrave et al., 1982), cognitive ability (Belgrave et al., 1982), and self-reported social skills (Wilderom et al., 1990) were not related to attitude scores.

Using correlational analyses, Thorson and Powell (1991) investigated the association between medical students' attitude scores and 15 different personality traits and found only one trait to be related to attitude scores. Higher levels of the personality trait of dominance were associated with more negative attitude scores. The personality trait of dominance can be characterised as the need to exert control and influence over others (Case, Fishbein & Ritchey, 2006). There was no explanation of the possible meaning of this association in Thorson and Powell's (1991) study and it is therefore unclear what this finding represents.

Five studies investigated the relationship between respondents' motivation for entering medicine and their attitude scores. In four out of five studies,

respondents who reported entering medicine for reasons that authors considered to represent intrinsic motivation, such as the opportunity to help others, were more likely to report more positive attitude scores (Belgrave et al., 1982; Chumbler et al., 1996; Chumbler & Ford, 1998; Lui & Wong, 2009). Two of these four studies also measured extrinsic motivation for entering medicine, such as future earning potential and job security, with both finding more negative attitude scores in those with higher levels of extrinsic motivation (Belgrave et al., 1982; Chumbler et al., 1996). Menz et al. (2003) was the only study that did not find a relationship between extrinsic and intrinsic motivation and attitude scores. A possible reason for this is that Menz et al. (2003) used established intrinsic and extrinsic motivation scales, developed by Chumbler and Robbins (1994), but did not score the measure or analyse the data in an established way, or as outlined by the scale's authors. Instead Menz et al. (2003) calculated the ratio of respondents' extrinsic to intrinsic motivation and conducted the correlation according to this figure. The authors reported both extrinsic and intrinsic motivation was not linked to attitude scores because the ratio was not correlated. It is not clear why Menz et al. (2003) chose to base the correlation on a single ratio representing intrinsic and extrinsic motivation or what this ratio truly represents. Therefore, Menz et al.'s (2003) discrepant findings may be the result of a methodological artefact.

3.8 Exploratory studies' findings: Content of attitudes toward older patients

Two studies investigated what medical students or doctors thought about older patients and their care. The following information is presented (see Table 7) to summarise each study:

No.: Study number (labelled 1-2).

Authors: Name of authors of study and year published.

Design: Interviews or open-ended questionnaires, how data were collected or recorded.

Sample, setting and recruitment strategy: Number of participants, participant background, how participants were recruited.

Analysis: Choice of qualitative analytical techniques.

Findings: Major and minor themes reported.

Main concerns: Weaknesses in the study implementation or reporting in areas such as selection of participants, choice and rationale of setting, analytical techniques and interpretation of findings, and the role and bias of the researcher.

Table 7.

Characteristics of exploratory studies on doctors' and medical students' attitudes toward older patients

No.	Authors	Design	Sample, setting and recruitment strategy	Analysis	Findings	Main concerns
1	Laditka, Fischer, Mathews, Sadlik, & Warfel (2002)	Semistructured, open-ended Interviews, audiotaped and transcribed.	26 doctors, all were PGY1, PGY2 or PGY3, New York, USA. Self-selected, opportunity sampling.	Grounded theory approach, beginning with open coding, coded by four authors, and independently reviewed by a fifth author.	A. Positive attitudes: (1) Can learn a lot from older patients; (2) interesting cases; (3) entertaining patients; (4) greater satisfaction. B. Negative attitudes: (1) Treating Dementia; (2) non-compliance; (3) communication barriers; (4) dealing with relatives; (5) chronicity of health issues.	Interview findings do not appear to have resulted from a sophisticated analysis. Findings were presented similar to a frequency analysis with percentages. There was great overlap between the interview questions and the themes that resulted and therefore data did not appear to have been subjected to deep analysis.
2	Stevens & Pearlman (1988)	Open-ended questionnaire.	41 doctors: 26 internal medicine and 15 family medicine residents, all were in PGY1, PGY2 or PGY3 of a university training programme, Washington, USA.	Thematic analysis, by 2 researchers blinded to participant identity. Disagreements resolved by a third researcher.	A. Positive attitudes: (1) Personal satisfaction; (2) challenge of older patient care; (3) challenge of maintaining patient functioning; (4) older patient personal qualities; (5) ability to work with relatives. B. Negative attitudes: (1) Handling social & resource problems; (2) difficult patient encounters; (3) experiencing patient deterioration; (4) medical management; (5) psychological problems.	Very little detail on how data were coded, and whether it was subject to multiple raters. Very little information on participants.

3.8.1 Quality and findings of studies

For both studies, all participants were doctors. Although the authors did not explicitly refer to the three sources of information underlying attitude data (affective, behavioural, and cognitive information), both of the exploratory studies included attitude data based on these difference sources of information. Laditka et al. (2002) reported that participants found older patients are interesting to talk to, tell great stories, but tend to be non-compliant to medical instructions. The authors did not describe these as such, but they appear to be based on cognitive information. Similarly, the authors described affective information provided by participants, specifically, that older patients can be frustrating to deal with due to the complexity of their health and illness status. Doctors also reported feeling frustrated when they felt they could not help older patients due to their chronic health conditions or physical deterioration. Frustration related to dealing with the patients' relatives was also mentioned. Positive valence affective information included reports that older patients are satisfying to treat because doctors can learn a great deal from the medical complexity of older patients' health.

Laditka et al. (2002) also reported behavioural information relating to attitudes, which included reports that doctors had to explain treatments more often, and teach older patients about medications due to the multiple medications patients often need to take. Participants also reported the need to assess mental function when dealing with older patients due to the complications of dementia or psychological issues which occur more commonly with this patient group. Therefore, Laditka et al.'s (2002) findings included affective, behavioural and cognitive information. It should be noted that the authors did not draw this distinction, but simply reported the attitudes they found and the frequency with which they occurred during the interviews.

Despite the authors' description of their data analysis as grounded theory analysis with open coding, the findings were categorised according to the five interview topics that were determined prior to the interview analysis. These comprised respondents' general view about older patients, independence of the older patient, compliance to doctors' instructions, end of life issues, and elder abuse. Furthermore, the findings were categorised according to the percentage of respondents who mentioned each subtheme. The way in which the findings are discussed seems inconsistent with grounded theory analysis as described by Strauss and Corbin (1990) because findings were classified according to interview questions, and therefore were predetermined. Typically grounded theory does not encourage the use of preconceptions to organise the data during analysis. It can be argued that in Laditka et al.'s (2002) study, that the organisation of the findings with identical themes to interview questions indicates the data analyses were not grounded, but conceived during data collection. As a result, the credibility of the study findings is questionable.

The second exploratory study (Stevens & Pearlman, 1988) used open-ended questionnaires in which participants listed their likes and dislikes about older patients and caring for older patients. Responses were subject to a thematic analysis to describe positive and negative attitudes toward the older patient and their care. Stevens and Pearlman (1988) listed participants' likes and described these as positive attitudes. These included reports that older patients tend to be reliable, dependable, honest, humorous, take an interest in their health and are independent, arguably all cognitive information. Dislikes regarding older patients, which the authors reported as negative attitudes, comprised almost entirely of challenges in the doctor-patient encounter. These included reports of the difficulty of obtaining a history from the patient, dealing with those with hearing impairments, and the tendency

for time-consuming patient encounters, which are arguably all behavioural information.

Stevens and Pearlman (1988) also found participants reported positive and negative attitudes toward caring for the older patient. Participants liked that these patients tended to be appreciative and grateful for the medical care they received. Participants also liked the intellectual challenge of dealing with such a medically complex group. Participants also reported that they found it rewarding to help maintain dignity and preserve self-sufficiency in older patients, and felt valued when this was achieved. Amongst the negative attitudes toward caring for older patients, participants reported that they had times where they felt at a loss with regard to how to manage patient care, especially in the area of managing the multiple medications that older patients were typically on. Participants also reported experiencing difficulty meeting the expectations of the patient and their family. Other disliked aspects of older patients and providing their medical care included patient non-compliance with doctors' instructions, inability of doctors to affect irreversible disease or physical deterioration, and dealing with chronically ill older patients.

Despite the simple study design of asking participants to list their likes and dislikes about older patients, Stevens and Pearlman's (1988) study produced data that clearly addressed the older patient context, rather than older people in general. Data were elicited directly from participants allowing them to use their own ideas and words, as opposed to asking them to fit their thoughts into answers in a closed-ended questionnaire. This contrasts with what was typically done in the intervention and cross-sectional studies included in themes 1 and 2 of the review (Sections 3.6 and 3.7). The findings did not include much attitude data addressing older people in society, such as their hobbies, interests or residential situations, which are included in the

content of a number of general questionnaires used in the quantitative studies included in Sections 3.6 and 3.7. Both exploratory studies addressed attitudes toward older patients and their care, rather than toward older people in general. As a result, the findings tended to be specific to medical care settings and the healthcare context, which marked an important strength of these studies. However, both studies appeared to have had surface-level analyses of the data. The findings of both studies focused on the frequency of responses rather than a detailed description of responses or any further attempts to decipher meaning. Both studies were American in origin, with no exploratory studies from the UK identified in the systematic search and review.

Methodological issues aside, the two exploratory studies collected data concerning the content of doctors' attitudes toward older patients. The findings went beyond cognitive information (such as beliefs and stereotypes), and included affective and behavioural information toward the older patient and providing their medical care. A weakness of the two exploratory studies was the simplistic data analysis techniques employed.

3.9 Discussion of the review

This review comprised of a systematic search and critical review of the English-language scientific research literature pertaining to medical students' and doctors' attitudes toward older patients. The review was designed to address research question 1 (Section 1.3): How have medical students' and doctors' attitudes toward older patients been investigated in the scientific research literature to date? A broad search strategy was used to allow the identification of diverse study designs and approaches to the measurement or description of these attitudes. This review identified that the research literature on doctors' and medical students' attitudes could be grouped according to the objectives of the studies. Specifically, the research literature

could be divided into studies that sought to: (a) determine whether a geriatrics-related intervention could change attitude scores held by doctors or medical students; (b) identify variables that were related to attitudes toward older patients; or (c) explore the content of attitudes toward older patients.

Results indicated that interventions with an empathy-fostering component were more likely to demonstrate a positive change in attitude scores from pretest to posttest. These empathy-fostering components included mentoring, informal contact with healthy older people, or taking part in an ageing simulation. In contrast, studies that incorporated only knowledge-building components, such as geriatrics courses or lectures, were not as likely to demonstrate attitude change results.

An examination of the cross-sectional studies investigating relationships between a range of demographic, educational, and professional-related variables did not indicate the presence of many consistent relationships. Three relationships were identified which are recommended for further investigation: gender of respondent, motivation for entering medicine, and interest in a geriatric medicine career. Regarding the associations with gender, fifteen studies found no relationship between gender and attitude scores, but of the eight studies which reported a relationship, all found female attitude scores to be more positive than males. Based on these findings it is unclear whether, or under what circumstances, gender may be linked to attitude scores. However, given the findings elsewhere in the scientific literature that female medical students score higher on social desirability than their male counterparts (Merrill, Laux, Lorimor, Thornby, & Vallbona, 1995; Merrill, Lorimor, Thornby, & Vallbona, 1998), it is proposed that the associations between attitude scores and gender may have been a methodological artefact. There was a failure of studies from the cross-sectional review to

measure socially desirable responding, which could have affected the scores achieved on any measure of attitudes toward older patients. Further work is therefore recommended assessing attitudes toward older patients and levels of socially desirable responding, and also the effect of gender on both of these variables. The main reason for this is to determine whether attitude scores may be inflated according to gender and whether there is a need to statistically treat attitude scores in line with socially desirable responding.

Motivation to study medicine and doctors' and medical students' interest in geriatric medicine appeared to be related to attitude scores which also warrants further investigation. Medical students who reported higher levels of intrinsic motivation (such as a desire to help others) tended to report more positive attitudes toward older patients. Also, eight of the nine studies investigating doctors' and medical students' interest in pursuing geriatric medicine found a significant positive relationship with attitude scores amongst those more interested in pursuing geriatric medicine. However, studies did not attempt to explain the nature of the relationship and the cross-sectional design of the studies means that conclusions regarding causality or the direction of the relationship cannot be drawn. On the whole, longitudinal data indicating whether these variables are linked, and the direction of the relationship, would be an interesting area for future research. Again, it is recommended that socially desirable responding is measured in conjunction to attitudes toward older patients.

The two exploratory studies described attitudes toward older patients in a very different way to the quantitative results. Both of these studies provided examples of attitudes, rather than simply the quantification of attitudes from positive to negative valence. Furthermore, both exploratory studies reported attitudes toward older patients, and did not generalise results garnered using 'older people' as the target. As a result, the exploratory studies found highly

specific examples of attitudes which related directly to the medical encounter and the older patient's health and illness.

3.9.1 Research gaps identified in the review

This review identified the need for more studies investigating doctors' attitudes toward older patients. Of the 60 studies included in the review, only 17 studies investigated doctors' attitudes toward older patients. It is also clear that the UK literature on doctors' and medical students' attitudes toward older patients is very limited. Across all 60 studies, only four originated from the UK (Deary et al., 1993; Edwards & Aldous, 1996; Hughes et al., 2008; Shahidi & Devlen, 1993). Only one of the UK studies investigated doctors' attitudes toward older patients (Edwards & Aldous, 1996) whilst the remaining three focused solely on medical students. Additionally, Hughes et al. (2008) was the only UK study conducted in the last 15 years.

Over 70 per cent of all included studies originated from the USA. Due to the unique characteristics of the UK's National Health System (NHS), there may be important differences between findings from the UK and the USA, especially given that the USA has a significant private medical sector. Additionally, the changes that have occurred to the UK's NHS in recent years to improve older patient care (e.g. Department of Health, 2001), also highlights the possibility that the majority of the UK research literature, having been conducted in the 1990s, is out-of-date. Therefore, the findings of this review indicate the need to investigate attitudes toward older patients in doctors and medical students in UK settings.

This review highlighted methodological concerns across the research literature and there appeared to be great confusion between the investigation of older people and older patients. This was most evident in some intervention studies in which the focus of the intervention (e.g. older

patients) did not match the focus of the questionnaire (e.g. older people), threatening the validity of results. All studies, with the exception of the two exploratory studies, attempted to measure attitudes and thus reduced attitude data to a score along a single dimension (from favourable to unfavourable). Without a detailed exploration of the content of attitudes, which is essentially the information on which the summated attitude score is based, we cannot be confident of what the attitude data represents.

Only two studies included in the review sought to explore what doctors and medical students actually consider when asked for their attitudes toward older patients (Laditka et al., 2002; Stevens & Pearlman, 1988). Crucially, both studies found attitudes were highly specific to the medical context relating to the older patients' health, illness, treatment, and their functional and communicative abilities, as opposed to describing attitudes of older people in general. This calls into question the assumptions of some of the past research which has not delineated 'older people' from 'older patients' in their attitude measure. There is a possibility that asking participants about their attitudes toward older people in general does not greatly inform us about their attitudes to the older patients they typically see in healthcare settings. Therefore, the results of this review indicate that studies should ensure that questionnaires measuring these attitudes include items specifically relevant to the older patient and the medical context.

This systematic search and review demonstrated that the content of attitudes is missing from the research literature, both in the worldwide English-language literature, as well as that from the UK. It is therefore argued that a conceptualisation of doctors' and medical students' attitudes toward older patients is needed; specifically, a description of the content of doctors' and medical students' attitudes toward older patients. The description of attitude content should precede attempts to measure attitude valence, given that

attitude measurement must include items relevant to the actual attitudes held. Our attitudes to any attitudinal target are the cognitions (or beliefs), emotions, and behavioural intentions toward that target (Rosenberg & Hovland, 1960). Therefore, the content of doctors' and medical students' attitudes toward older patients essentially refers to the aspects of the older patient and their care provision which are relevant and salient when one is considering the attitudinal target (i.e. older patients).

The results of this review also highlighted a common failure of the previous research to address the components of attitudes, namely, cognitive, affective, and behavioural information. Studies tended to treat cognitive information, such as stereotypes of older patients or people, as the total attitude. However, as described in Chapter 2, attitudes data includes affective and behavioural information, as well as cognitive information. By investigating only one of the three components of attitudes, attitude score data can be argued to be only a measure of how much an individual is aware of, or in agreement with, common stereotypes of an attitudinal target, rather than their overall attitude (Klemmack, 1978). Being aware of a stereotype toward a target group does not necessarily predict or indicate how an individual would historically act or intend to act in the future (behavioural information) or how an individual feels (affective information) in relation to that target. Consequently, there is a pressing need to investigate attitudes using methods that are underpinned by the scientific research literature on attitude structure. Specifically, research should ensure that attitudes measured or explored incorporate affective and behavioural information in addition to cognitive information. The research literature now requires a detailed conceptualisation of attitudes toward older patients held by medical students and doctors, which incorporates cognitive, behavioural and affective information.

3.9.2 Limitations of the review

A large number of search terms can be used to describe medical students and doctors, and it is possible that some terms were not identified in this review. Despite best efforts to locate articles, some may have been inadvertently missed. Due to the breadth of the database search, hand searching of journals was not conducted, which is a further limitation of this review. Moreover, because of publication bias, quantitative studies finding nonsignificant results are less likely to be published than those with significant findings, which may have skewed the results of the review. This review sought to identify studies of medical students and doctors working in secondary and tertiary care settings and so did not include primary care physicians or those working in community-based practices. This was in keeping with the scope of the present thesis (see Chapter 1), but it is important to note that the findings of this review are limited to doctors and medical students working in secondary and tertiary care (e.g. hospital settings).

Although efforts were made to assess and extract data systematically, the judgements made for this review were subjective, and other researchers might have come to different conclusions. Additionally, this study employed one reviewer and therefore interrater reliability could not be assessed. Other reviewers might have come to different decisions, especially with regard to the inclusion of studies and judgements of methodological quality. However, the critical review of studies depended on interpretative judgements, which made subjective judgements integral to the process. In order to qualify these judgements, decisions were described transparently, especially with regard to the quality of studies and the discussion of the attitude measures and tools used.

3.10 Chapter summary

This chapter described a systematic search and review of the published research literature on attitudes toward older patients held by medical students and doctors. This was designed to address the first research question outlined in the opening chapter of this thesis (Section 1.3). The review found that the majority of studies in this area investigated attitudes toward older patients by compiling and comparing attitude score data. Importantly, there was a lack of studies that adequately conceptualised attitudes toward older patients by either doctors or medical students, and little attention was paid to doctors' attitudes in UK settings. Consequently, the next chapter will introduce the methodology employed to empirically assess the conceptualisation of these attitudes in UK settings, in order to address this gap in the research literature.

4. STUDY 2: ATTITUDES STUDY METHOD

4.1 Chapter overview

This chapter introduces the second phase of the project, the conceptualisation of medical students' and doctors' attitudes toward older patients and their care in a UK setting. Firstly, the theoretical assumptions of the research are stated. Secondly, the rationale for the qualitative approach is given, along with strengths and limitations of this method. Thirdly, details of the methods employed for the study are provided.

4.2 Theoretical assumptions of the present work

The present research is theoretically underpinned by a postpositivist position on scientific knowledge, in the tradition of Kuhn (1962; 1970). Kuhn (1962) argues that all scientific discovery is conducted within a paradigm or research tradition (later referred to as 'an exemplar'; Kuhn, 1970) deemed acceptable by members of the research community for the accumulation of scientific knowledge. There are traditionally acceptable types of instruments, measurements, and methods for the accumulation of scientific knowledge and progress within a particular research community or discipline (Kuhn, 1962). Kuhn also argues that research questions are framed within the research tradition along with suitable ways in which to address these questions. Due to the paradigm within which individuals and scientific communities are operating, only an approximation of knowledge can be sought rather than objective knowledge (Kuhn, 1962).

Kuhn's perspective on scientific discovery (1962; 1970) has been referred to as postpositivism and is considered critical of the traditional positivist position that truth and knowledge can be known with certainty (Crotty, 1998).

In line with the postpositivist position, the present work assumes realism (that reality exists independently of the observer), and the desirability and pursuit of objective truth. However, postpositivists (e.g. Kuhn, 1962; 1970; Popper, 1965; Alexander, 1995) argue that because knowledge is based on human conjecture, objective knowledge or truth is not possible (Popper, 1965). Instead we can know reality only imperfectly and probabilistically (Kuhn, 1970). The use of qualitative research in a postpositivist framework is not uncommon, but means that the goal of the qualitative data is to approximate objective truth with more probability (Alexander, 1995), as opposed to the construction of one of many possible subjective truths (as is characteristic of relativist position). According to postpositivism, scientific knowledge is not certain. Instead, it is the best available understanding of the world and is open to refutation and further empirical investigation (Alexander, 1995).

4.3 The qualitative approach

4.3.1 Rationale for the qualitative approach

This study was designed to answer the second research question (Section 1.3), and, therefore, offer a conceptualisation of medical students' and doctors' attitudes toward older patients and their care in UK settings. Consequently, the goal of the present study was exploratory and concerned description and explanation rather than quantification. A qualitative approach was deemed appropriate because it can allow deeper understanding of social phenomena (Silverman, 2000). Additionally, the organisation of individual accounts of experience, characteristic of the qualitative approach, is considered useful for generating theory (Strauss & Corbin, 1990; Brown & Lilford, 2008). Specifically, Strauss and Corbin (1990) argue that qualitative methods are ideal for the identification of variables that may later be measured quantitatively. The scientific research literature on attitudes toward older

patients held by medical students and doctors would benefit from qualitative data, because no matter how much data are collected, quantitative data represent a single dimension of knowledge (Mason, 2002). Mason has argued that qualitative inquiry represents an additional dimension to knowledge, and should be used in conjunction with quantitative methods so that investigation is multidimensional.

4.3.2 Limitations of the qualitative approach

Many of the criticisms of the qualitative approach relate to its incompatibility with the traditional positivist paradigm, due to the inherent subjectivity associated with many aspects of qualitative study design and analysis (Bryman, 2012). The researcher acts as the instrument of inquiry and, therefore, the objectivity of data collection and analysis is called into question (Lincoln & Guba, 1985), especially with regard to the validity, reliability and generalisability of data (Lincoln & Guba, 1985). Alternatives to traditional notions of quality have been offered by qualitative researchers to allow evaluation and confidence in qualitative findings. These criteria relate to the trustworthiness of data, such as the credibility and dependability of findings (Lincoln & Guba, 1985). In light of the current postpositivist theoretical position which considers scientific knowledge to be subject to human conjecture and bias, the goal of the qualitative researcher does not differ from the goal of the quantitative researcher. This goal is to reduce bias where possible, and accurately report the study settings and context to allow others to determine the generalisability or transferability of research findings to other settings (Lincoln & Guba, 1985). With these limitations in mind, a detailed account is provided of the decisions taken regarding the interview design, style, setting, participants, and analysis. This is in order to ensure that areas of potential bias are included in this account of the study and its findings.

4.3.3 Rationale for the selection of interviewing as a research tool

Interview style is typically described as unstructured, semistructured, or structured. Unstructured interviews may appear as a free-flowing conversation between the interviewer and interviewee. At the other end of the spectrum, structured interviews consist of set questions, in a set order, and with little flexibility (Burgess, 1984). For this study, a semistructured interview style was chosen. Semistructured interviews typically have a set theme and predefined questions that serve as an interview guide (Patton, 1990). However, the order of questions and the precise terminology of the questions can vary between interviews to allow for a conversational feel to the interviews (Patton, 1990). One of the benefits of semistructured interviews is that the use of an interview guide with predefined questions allows the interviewer greater time and opportunity to focus on what is being said during the interview (Smith & Osborn, 2003). At the same time, the flexibility of a semistructured style allows the interviewer to pose questions that are not on the interview guide, if they are deemed relevant to the research aims (Patton, 1990). Therefore, semistructured interviews allow flexibility to explore new areas and new ideas during an interview. As a result, semistructured interviewing is particularly useful when there is a lack of previous research (Murphy & Dingwall, 2003), as was the case for this study. Any potential new ideas and themes raised by participants relating to the research aim were explored, as they may have been previously overlooked due to the limited depth of the prior research relating to the present topic. A semistructured style of interviewing was also selected because it was considered important that some core questions on the topic were asked of all participants, and therefore an interview guide was needed.

4.3.4 Limitations of interviews and semistructured styles of interview

It should be highlighted that the use of a semistructured interview style means that interviews differ for each participant. Despite the use of an

interview guide with core questions, some participants may be asked additional questions that others were not. This lack of standardisation in interviewing could be considered a limitation. Semistructured interviews have also been described as taking longer to conduct and the data being harder to analyse than structured interviews (Smith & Osborn, 2003). As a method of data collection, interviewing has been criticised on the grounds that it depends greatly on the skill of the interviewer and suffers from the possibility of misinterpretation and inaccuracy at many stages of data collection and analysis (Becker & Geer, 1957). Nevertheless, Silverman (1985) posits that an approach or a data collection method is not inherently superior to another; what matters is the suitability of the approach and the data collection and analysis method to answer the research question.

It has also been argued that interviews take place in an unnatural environment and, therefore, results are not likely to mirror the reality the interview data is attempting to reflect (Miller & Glassner, 1997). The postpositivist approach to interview research entails an awareness of the possibility of, and attempts to minimise, interviewer bias and the effect of social factors in the search for an approximate understanding of phenomena (Morris, 2006). The findings that emerge from research interviews are likely to be affected by a number of socially contingent factors relating to the background of the interviewer, interview setting, personality characteristics of the interviewee, and selection of participants (Silverman, 2000). The quality associated with qualitative studies tends to involve consideration of each of these factors. After a brief statement of the study objective, a detailed description of the study method is provided in order to make the methodological decisions regarding the study transparent and give “the fullest possible details about the contexts in which research accounts arise” (Seale, 1999, p.177).

4.4 Study 2 objective

The objective of this study was to address research question 2:
How can medical students' and doctors' attitudes toward older patients and their care be conceptualised in a UK setting?

4.5 Methods

4.5.1 Recruitment strategy and participants

Participants were recruited from two sites of an NHS hospital trust (also known as an acute trust) based in the Midlands area of England. Incorporating the two hospital sites, the NHS trust had over 1800 beds and provided services for the catchment area of approximately 660,000 people. Participants were medical students or doctors currently based at this NHS hospital trust. Interviews took place at both sites. Participants who were medical students had to be in their clinical years, years 4 and 5 of the medical degree, to ensure that they had some experience of hospital settings. All junior doctors working at the two hospitals were eligible to participate. All specialist doctors, with the exception of Paediatricians, were also eligible to participate as it can be expected that they will typically encounter older patients as a proportion of their patient load.

Twenty-five participants were recruited for this study using convenience sampling. Participants were, therefore, a self-selected nonprobabilistic sample. Participant information sheets were distributed in person or via email. An email advertising the study was sent to 4th and 5th year medical students at the medical school affiliated to the NHS trust. Individuals who responded to the advertisement were sent a participant information sheet, which they were advised to read, and asked to contact the researcher if they had any questions about the study. Respondents were emailed again approximately 1 or 2 days later and asked if they would be interested in being interviewed and,

if so, interviews were arranged at a time and location convenient to the participant. Doctors were accessed through advertisements on hospital noticeboards and via email. Due to low response to study advertisements by consultant doctors, these groups were also accessed by personal contact and email (via a gatekeeper who was known to the researcher and the research supervisor). Two gatekeepers assisted with the recruitment for the study. Both gatekeepers were medical doctors who worked at the NHS trust and were known to the researcher due to their research activity. Gatekeepers were asked to share the study advertisement with registrars and consultant doctors who may be interested in participating, asking them to email the researcher. Five consultant doctors responded to this method of recruitment (with the remaining four from this group responding to advertisements).

Of the twenty-five participants recruited for the study, seven were medical students and the remaining 18 were doctors. In order of experience, there were six junior doctors, two specialty trainees, one specialty registrar, and nine consultant doctors. The medical students began their experience of working on the hospital wards (often referred to as 'clinical years') halfway through their third year, and continued rotating on the wards (gaining experience on the hospital wards) throughout years 4 and 5 of medical school. In this study, medical students' experience of working on the hospital wards, ranged from 6 months to 2 years. For doctors, years of postuniversity practice ranged from 9 months to 29 years. Fifteen of the participants were female (60% of the sample). Participants' ethnic background, with percentage of sample in brackets, was as follows: White British (52%), White non-British (16%), Indian non-British (12%), Indian British (8%), Chinese non-British (4%), Black non-British (4%), Chinese British (4%). Characteristics of the sample are presented in Table 8. Findings presented in the subsequent two chapters (Chapters 5 and 6) are supported by quotes in which participants are

identified by their participant number, as presented in the first column of Table 8.

Table 8.

Demographic characteristics of participants

Participant No.	Gender	Age range	Role	Level/grade	Specialty	Years of practice
1	Female	21-30	Medical student	Year 5	-	-
2	Female	21-30	Medical student	Year 4	-	-
3	Female	21-30	Medical student	Year 4	-	-
4	Male	41-49	Doctor	Consultant	Geriatric medicine	26
5	Female	21-30	Medical student	Year 5	-	-
6	Male	41-50	Doctor	Consultant	Geriatric & stroke medicine	25
7	Female	21-30	Doctor	Specialty trainee registrar	Geriatric medicine	6
8	Male	21-30	Medical student	Year 4	-	-
9	Female	31-40	Doctor	Specialty Registrar	Geriatric medicine	10
10	Male	21-30	Medical student	Year 4	-	-
11	Male	41-50	Doctor	Consultant	Stroke medicine	18
12	Male	40-50	Doctor	Consultant	Diabetes & Endocrinology	14
13	Female	40-50	Doctor	Consultant	Stroke medicine	19
14	Female	21-30	Medical student	Year 4	-	-
15	Female	21-30	Doctor	Foundation Year 1	-	~1
16	Female	21-30	Doctor	Foundation Year 2	-	~2
17	Male	21-30	Doctor	Specialty trainee registrar	Plastics & reconstructive surgery	5

18	Female	21-30	Doctor	Foundation Year 2	-	~2
19	Female	21-30	Doctor	Foundation Year 2	-	~2
20	Female	21-30	Doctor	Foundation Year 2	-	~1
21	Male	31-40	Doctor	Consultant	Respiratory medicine	13
22	Male	31-40	Doctor	Consultant	Geriatric medicine	10
23	Female	41-50	Doctor	Consultant	Acute medicine	16
24	Female	21-30	Doctor	Foundation Year 1	-	~1
25	Male	51-60	Doctor	Consultant	General surgery	29

Dash indicates ‘data not applicable’.

4.5.2 Procedure and setting

Interviews with medical students took place in a private study room in the medical school library. Interviews with junior doctors took place in a private room on the hospital ward, or in the medical school library. Interviews with consultant doctors took place in their office. All interviews took place over a two month period from the beginning of September 2011 until the end of October 2011.

Prior to the beginning of each interview, each participant was given a participant information sheet to read (see Appendix 4), time to ask questions, and a consent form to read and sign (see Appendix 5). Participants were verbally reminded that the interview would be recorded on a digital voice recorder, but interview recordings and the resulting transcripts would be confidential. Participants were also told that any identifiable information mentioned during the interviews would not be included in the transcripts. The voice recorder was then switched on and the interview commenced. Interviews lasted an average of 50 minutes and ranged from approximately 39 minutes to 85 minutes. At the end of the interview, the participant was asked to provide their ethnicity, age and year of medical school or job role details (level of seniority, and specialty qualifications), and years of experience of working on the hospital wards. The audio recordings were transcribed by professional transcribers who had signed a confidentiality agreement. The researcher checked all transcripts against the audio recording for accuracy.

4.5.3 Developing the interview guide

Potential interview questions that had not previously been addressed in the research literature were listed. The areas of inquiry were set as:
i) The definition of an 'older patient' from the perspective of the participant.
ii) Frequency of contact with older patients (defined as over 65 years old).

iii) Cognitive information: beliefs about older patients.
iv) Behavioural information: descriptions of past interactions with, and intentions to act in the future with regard to older patients.
v) Affective information: emotions experienced when interacting with older patients.

Questions relating to these topics were constructed and discussed with the research supervisor. In line with recommendations on question construction, open-ended questions were used wherever possible to allow participants to respond with detailed or longer answers (Smith & Osborn, 2003). Potential questions went through multiple iterations in order to minimise ambiguity in the question wording. Question valence was also removed so that question phrasing was neutral and not value-laden (Smith & Osborn, 2003). A funnelling technique to question sequence was used (Smith & Osborn, 2003), in which more general questions were asked at the beginning, followed by more specific questions, where appropriate. Smith and Osborn (2003) argue that the funnelling technique reduces the risk of biasing the answers in the same direction as the interviewers' views and perspectives. The interview guide is provided in Appendix 6.

4.5.4 Piloting the interviews

The interview guide was piloted on one participant. The pilot interview was recorded on a digital voice recorder, but the data were not included in the main study due to changes in the interview guide as a result of the pilot study. The participant was made aware of this. The participant was asked the questions included in the interview guide, and afterwards was asked to comment on which questions were difficult to answer, areas of enquiry that had not been investigated, and any changes to be made to the interview guide. The participant had experience of working in hospital settings and community settings, and was currently a teacher at the medical school course

affiliated to the hospitals from which this study was recruiting. The participant was a medical doctor, but was also in close contact with medical students. Therefore, this participant was considered to be an ideal candidate for piloting the interview guide. The pilot interview lasted 65 minutes and a number of changes resulted from this piloting process. These changes to interview questions, after the pilot interview, were as follows:

1) Question 2: Participants were asked how long they had "experience on" the hospital wards, as opposed to how long they had "worked on" the wards. This was due to the fact that medical students are not formally employed by the hospital, and the original terminology of the question implied formal job experience which was not the intended meaning of the question.

2) Question 16: A prompt was added to this question ("Can you think of anything that struck you as unexpected when you first gained experience on the hospital wards?"). The pilot interview participant suggested reminding the participant of their first experience on the wards to try to capture their preconceptions and previous expectations of older patients and their care.

3) Reasons for collecting demographic information were briefly stated prior to collection.

4) Question 17: Participants were asked for their age-range, rather than their exact age. The pilot interview participant suggested that some older participants might feel uncomfortable stating their exact age.

5) A final question was added to the end of the interview, in case participants had questions about the data. The pilot interview participant stated that some participants might have concerns about confidentiality and anonymity after the interview, especially if they thought that they had shared more personal information that they expected. Therefore a question was added to allow them to share those concerns ("Is there anything you want to ask, either about the interview, data, or the research in general?")

4.5.5 Ethical considerations

4.5.5.1 Ethical approval and permissions

Before the study was initiated, the protocol was reviewed and approved by the Research Governance department of the University of Nottingham. This was to ensure that it met the university's research code of conduct, and was conducted within the ethical principles outlined in the Department of Health Research Governance Framework for Health and Social Care (2005). Following this, the study received approval from the Research Ethics Committee (REC), and the respective National Health Service (NHS) Research & Development (R&D) department. The project was assigned a REC number (10/H0408/114). Additionally, the researcher sought, and was granted, an honorary research contract for the duration of the study in line with hospital trust guidelines. As part of the required amendments to the study from the Research Ethics Committee meeting, the participant information sheets were changed so that they included greater detail in where and how participants could seek help if they had witnessed inappropriate or unprofessional behaviour whilst at work. In line with the committee's recommendations, the interviewer highlighted the contact information for help and assistance with this issue at the end of every interview. For medical students, it was advised that they discuss any issues with their course tutor.

4.5.5.2 Informed consent

Participation was voluntary and participants were informed of their right to withdraw from the study at any time and without providing a reason. Participants were given an information sheet and a consent form to read and sign should they agree to take part. Participants were assured of their confidentiality and informed that written transcripts would be anonymised ensuring that any data could not be traced back to the participants. All participants were informed that any quotes emanating from the interviews would have all identifying information removed. The anonymised transcripts

would only been seen by members of the research team and the transcripts would not be read by employees of the hospital trust. Participants were informed that the interviews were part of an academic project that formed the basis of the interviewer's doctoral research, and were not part of any organisational attempt by the NHS trust to audit or investigate employees, or by the medical school to investigate students.

4.5.5.3 Data storage and handling

Interview recordings were transcribed by employees of a professional transcription service who had signed a confidentiality agreement. Prior to sending the audio recordings for transcription, any information that identified the participant, their coworkers, or details of the hospital in which they worked were removed from the audio recording using editing software. The audio recordings were encrypted and sent to the transcription service over a secure network. The audio recordings were stored on a password protected USB drive which was in a locked cabinet at the University of Nottingham. In line with the Data Protection Act (1998), all data were held securely. Study documentation, such as consent forms, were all stored in a locked cabinet on the University of Nottingham premises, accessible only to the researcher and her supervisor. Electronic data related to the study were anonymised and password protected and stored on the university's secure web server, which was backed up every 24 hours in an encrypted format.

4.5.5.4 Concerns about unprofessional behaviour

At the end of all interviews, participants were reminded that the complaints procedure for NHS staff was outlined on the participant information sheet. In line with the hospital trust's guidance, the participant information sheet contained advice for concerned individuals to initially raise any concerns with their line manager or course tutor (for medical students). The participant information sheet also included guidance concerning the appropriate sources

of advice for concerns about malpractice. Specifically, NHS staff can consult advice from a member of the Human Resources department of their hospital, or for confidential advice, they may contact the independent charity, *Public Concern at Work*. Participants who reported negative events or negative behaviours in others were reminded that their NHS trust offers confidential counselling. The phone numbers of the staff support counselling service for the trust were also included on the participant information sheets.

As highlighted by the Research Ethics Committee, there was the possibility that accidental disclosure about inappropriate or unprofessional behaviour may have occurred during the interview. As explained in the participant information sheets, if participants disclosed any information indicated that they or someone else may be put at serious risk of harm, the researcher discussed these issues with her academic supervisor to determine the best course of action. Anonymised comments from transcripts were shown to the research supervisor when some examples of what may be construed as unprofessional behaviour were identified. A medical doctor, who was one of the key contacts outlined in the NHS ethics form to comment on ethical issues, was also consulted. He explained that the ethical issues raised need not be further investigated as they indicated well-known issues in the NHS system for older patient care and these had already been well documented in policy and practice.

4.5.6 Data analyses

The dataset was subjected to thematic analysis (e.g. Braun & Clarke, 2006; Grbich, 1999). The present research area, specifically pertaining to those working in UK NHS settings, was underresearched and lacked appropriate theory to guide the present analysis. Therefore, an inductive, data-driven approach (Patton, 1990) was chosen, where no a priori themes were identified: all themes identified came from the data (Patton, 1990). Data

were coded diversely, meaning that where excerpts were ambiguous, multiple possible meanings were coded; Braun & Clarke, 2006). Therefore, multiple coding was used; more than one code could apply to the same data. Thematic analysis allows for a flexible approach and does not need to occur from within a strict epistemological position. However, one of the main criticisms of using a flexible approach, such as thematic analysis, is that it is too subjective whereby 'anything goes'. To address this criticism, a detailed description of how data were coded is provided. Thematic analysis was conducted in line with Braun and Clarke's (2006) recommendations. The stages of the analysis are now described.

4.5.6.1 Familiarisation with data

Transcripts were imported into the qualitative data analysis software NVivo (QSR International Pty Ltd., Version 9, 2010). Transcripts were checked against audio recordings for accuracy, and then read at least three times for the researcher to familiarise herself with the data.

4.5.6.2 Initial coding

The next stage of analysis involved initial coding where data were summed up with a basic, surface-level label. Essentially this is a labelling of ideas at a semantic level. Boyatzis (1998) considers codes as "the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998, p. 63). The entire data set was coded, resulting in approximately 600 codes. These basic codes were the lowest level of analysis and were very close to the raw data. The next stage of coding therefore involved revising the codes.

4.5.6.3 Revising the codes

Revised codes were formed by amalgamating basic codes that addressed the same phenomena. These revised codes were intended to make the data more

manageable and to create the smallest useful chunk of data. Revised codes were created through extensive comparison with the raw data to ensure that each revised code still reflected all of the basic codes within it. The revised codes then became the lowest level at which the data could be analysed, and henceforth are referred to as 'nodes'. The next stage of analysis involved developing the themes to describe the nodes and patterns within and between nodes.

4.5.6.4 Theme development

Theme development was achieved by clustering nodes together in groups according to shared characteristics. This was akin to "a form of pattern recognition within the data, where the emerging themes become the categories for analysis" (Fereday and Muir-Cochrane, 2006, p. 82). Therefore, all nodes were organised under a theme to which they related. Boundaries of the themes were revised by extending or restricting their descriptions (Braun & Clarke, 2006). There was considerable iteration of the themes and the ultimate theme development depended on repeatedly going back to the raw data to ensure the theme adequately captured the raw data, as well as the nodes within it. At this stage, three different levels of data categorisation were used; nodes, subthemes, and themes. Nodes were clustered together under a sub-theme, and subthemes were clustered together under a theme.

4.5.6.5 Theme refinement

Links between themes, as well as the ordering of themes into levels were examined in greater detail. Ways in which themes might be linked together were hypothesised via thematic maps and many revisions of themes and subthemes were made to work out how best to describe the data. Theme development and refinement required input from other members of the research group. Two other postgraduate researchers and the primary supervisor all separately commented on, and questioned, the relationship

between themes and the appropriate level of themes as a subtheme or a theme. The theme development stage came to an end when the four individuals agreed on the themes and subthemes. At this point the coding framework was determined.

4.5.6.6 Reanalysis of the data set

The entire dataset was reanalysed into the coding framework that had been determined. The coding framework essentially became a way to interpret the data and, being inductive, came directly from the data. Having confirmed a way to see and interpret the data, all transcripts were then subjected to analysis again. This was to ensure that raw data had not been lost or misinterpreted (Braun & Clarke, 2006) during the development of the coding framework and to ensure that all manifestations of themes, subthemes and nodes were identified and accounted for (Pope, Mays & Popay, 2007). There were some minor differences between the two analyses before and after the coding framework was developed. Typically this was that some data were not multiply coded to all the nodes to which it applied. This was rectified in the reanalysis of the dataset and this version was used henceforth.

Approximately 50 per cent of the coded data were checked by another postgraduate researcher (i.e. a second coder) who was familiar with thematic analyses. The themes, subthemes, and nodes, along with the anonymised coded transcripts, were given to the second coder for inspection and comments. Differences in interpretations were raised and discussed. These differences occurred mainly in the names of the themes and subthemes. Minor changes to the names of themes and subthemes were therefore made in line with the recommendations of the second coder.

4.5.6.7 Division of the dataset

Whilst coding and theme development stages occurred, comparison between groups (such as doctors and medical students) or specialties (those in geriatric medicine and those who were not) were investigated. This was achieved by removing groups of participants (e.g. medical students or those specialised in geriatric medicine) from the dataset and determining whether the thematic template looked different (i.e. whether particular themes were only applicable to a particular group of participants (such as medical students). Thematic maps remained similar despite the removal of groups from the data. Therefore, all participants were analysed together despite their diverse backgrounds.

The theme development stage indicated that the data could be conceptualised as two separate, parallel streams. The first stream addressed attitudes toward older patients, and included descriptions of older patients as well as the type of care or assistance they typically need in hospital settings. These findings are henceforth referred to as 'attitudes toward older patients and their healthcare needs' and the description of the content of these attitudes (i.e. themes) are described in Chapter 5. A second stream of findings was identified and referred to, henceforth, as 'attitudes toward providing care for older patients'. These findings included descriptions of how the social and organisational environment, as well as the personal reactions to this environment, affected the individual and their ability to provide care for older patients. The descriptions of the content of these attitudes are described in Chapter 6.

The two streams were analysed and described separately because the findings in the latter dataset were embedded in the organisational system in which the participants were working. In this case, it was a UK hospital setting. As a result, all the themes in Chapter 6 describe interactions between the

social and organisational environment and the medical students or doctors working in this system. These data were deemed a separate stream because they were not about attitudes toward older patients. These were attitudes toward the nature of the job, work and organisational environment when caring for older patients, and mostly concerned the factors in this environment which helped or hindered the participants in providing care for the older patient. Therefore this data stream demonstrated how older patient care is firmly embedded in the system of care and not entirely dependent on the characteristics of the older patient or their healthcare needs. Consequently, attitudes toward older people and their care in UK settings is conceptualised as (a) attitudes toward older patients and their healthcare needs (described in Chapter 5), and (b) attitudes toward providing care for older patients (described in Chapter 6).

4.5.6.8 Researcher background and reflexivity

Reflexivity has been described as a kind of personal accounting (Finlay, 2002) with regard to how the researcher impacts upon the research. A brief history of the researcher and her journey is provided below.

The researcher (RS) is female and in her early thirties. RS conducted all interviews and took a lead role in the data analysis (under the guidance of the supervisory team). Prior to embarking on this research, RS completed a BSc. in Psychology and a Master's Degree in Occupational Psychology. Her dissertation on her master's degree concerned a similar topic, specifically, the attitudes of healthcare staff toward older patients. It was during the Master's degree that the gatekeepers for this project were introduced to RS. RS has no clinical experience and, prior to the Masters, had very little interaction with medical students and medical doctors. Therefore gatekeepers who worked as doctors in the NHS trust were required in order to obtain NHS ethical approval, as well as making appropriate decisions during the entire research

process such as to safely and conveniently recruit participants who work in hospital settings. RS believed the gatekeepers related to this study appeared to have a sympathetic attitude toward the older patient group. Most of these gatekeepers worked in settings dominated by older patients, such as geriatric medicine. RS was often aware of this attitude that can be briefly described as the belief that older patients receive inadequate care and services in NHS settings, and research should be used to improve the outcome and wellbeing of older patient experience. In comparison to the gatekeepers, this belief or assumption about older patient care was not particularly dominant during the interviews. However, RS was aware that participants sometimes appeared to present themselves in a more socially acceptable way, by qualifying harsh-sounding sentiments often immediately after verbalising them and providing self-justification after displaying negative statements toward other patients. RS tried to maintain awareness regarding issues of self-presentation and social desirability in participants. RS was aware that some participants at first appeared to think that the motivation for the research was to look for negative attitudes, beliefs or behaviours in doctors due to recent focus in the media on inadequate care for older patients. Therefore, she explained that the research was exploratory and was attempting to describe the range of attitudes that can be held, and did not attempt to measure positive or negative attitudes. It is possible that some participants qualified their statements, or mentally edited thoughts before speech, in order to represent a socially desirable response.

5. STUDY 2: ATTITUDES STUDY FINDINGS PART ONE.

OLDER PATIENTS AND THEIR HEALTHCARE NEEDS

5.1 Chapter overview

This chapter includes a description of the themes relating to participants' descriptions of older patients and their healthcare needs. Descriptions of older patients formed the first main theme of this section (Section 5.2) and the second main theme related to their healthcare needs (Section 5.3). Within these two main themes were a number of subthemes and nodes, which are also described in this chapter. A discussion of the findings presented in this chapter are provided (Section 5.4), followed by a chapter summary (Section 5.5).

The content of attitudes toward older patients and their healthcare needs, organised by the themes, subthemes and nodes presented in Table 9, are described in this chapter.

Table 9.

Attitudes toward older patients and their healthcare needs: Themes, subthemes and nodes

Theme	Subtheme	Node
Mental and physical qualities of older patients	Composure and manner	Being respectful and polite
		Demonstrating gratitude
		Demonstrating trust
		Demonstrating resilience in adversity
		Displaying hostile or challenging behaviours
	Communication skills	Being conversational
		Limited by level of cognitive impairments, temporary or long-term
		Affected by memory issues
		Affected by limitations in information processing
		Affected by sensory impairments
	Biological age	Physical limitations
		Chronological versus functional age
	Heightened vulnerability in hospital	Isolation and loneliness
		Distress
		Fragility and risk
Older patients' healthcare needs	Taking complex patient histories	The increased importance of the history
		Accessing and corroborating information from others
		Time-consuming and longer histories
	The challenge of diagnosis	Multimorbidity, comorbidity and multiple medications
		Atypical presentations and nonspecific symptoms

	The potential for misdiagnoses and missed diagnoses Constraints of performing thorough examinations
Communication with patients and their relatives	Need for clarity and brevity of speech Being patient with the patient Reassuring the patient Managing paternalistic tendencies in self and relatives
Determining the treatment plan	The appropriate level of treatment Negotiating with relatives and others about treatment Prioritising illnesses to deal with patient complexity The importance of treating the whole person Preventing complications or worsening of patient health The problem of 'social admissions'
Organising a safe discharge and future rehabilitation needs	The necessity of multidisciplinary teams for safe discharge The challenge of achieving a timely discharge

5.2 Mental and physical qualities of older patients

This theme consisted of four subthemes: (a) composure and manner; (b) communication skills; (c) biological age; and (d) heightened vulnerability in hospital. All the nodes within these subthemes are described in detail below. In this theme, participants generally described cognitive information, such as beliefs about, and stereotypes of, the typical older patients in hospital settings. Cognitive information (of which stereotypes are examples) are information whereby participants describe common prototypical descriptions of older patients.

5.2.1 Composure and manner

5.2.1.1 Being respectful and polite

Participants commonly described older patients as polite and respectful toward doctors and medical students and described their tendency to listen to and answer questions dutifully. Descriptions of the polite and respectful manner of many older patients also included good manners in interpersonal communication. A few participants described older patients as tending to be "well-mannered", and this applied even in circumstances of inconvenience or discomfort to the patient:

> *"…older people just seem so much more tolerant. They'll quite happily sit there and say 'oh no I don't mind waiting a little bit longer, oh no I'm not in pain, don't worry', whereas a younger person will scream and swing from the rafters."*
>
> Participant 7, Trainee Specialist Doctor

A few participants hypothesised that different personal values of older people, compared to younger people, was an underlying reason for their politeness and respectful manner. It was mentioned that members of the

older population placed a higher value on the importance of manner, especially showing good manners and etiquette in social interaction. It was put forward that they come from a generation where it is important to show respect to others, through being well-mannered when in the company of others:

> *"I think especially in this country older people are very, very polite, very well mannered, I think they have seen a lot of hardship in the past so they are a completely different category of people. I learn so much from them and I learn good manners, I learn to be respectful."*

Participant 6, Consultant Doctor

Many of the participants reported examples of polite verbal interaction with older patients. One participant added that the general respectful nature of many older patients was also evident in their actions and behaviour. This participant described a difference she often saw between older patients and younger patients in the context of being on time and well-turned out for appointments to the outpatient clinic at the hospital, which indicated respect and good manners:

> *"I think they, even when they come to outpatient clinic, they're always very smartly dressed. They are always on time… Whereas younger patients I think, you know, can often be late, may not even turn up, may not tell you if they're not going to turn up."*

Participant 13, Consultant Doctor

A number of participants expressed the belief that older patients tended to have a greater respect for the medical profession as a whole, and this factor may directly influence the way in which patients respectfully and politely interact in the medical encounter. It was explained by both medical student

and doctors that they felt that older patients tended to hold them in higher regard than younger patients. This excerpt directly compares the type of response they might get from an older patient with that of a younger patient:

> *"…so I'm a medical student, they say 'oh well done' and they're quite impressed and generally quite proud. I'm sort of held in a higher regard I think than a 20-something who couldn't give a crap."*

Participant 10, Medical student

There were also reports that some older patients can be overly polite or respectful to the detriment of their care and well-being. Examples were given of older patients stating that they did not want to be a burden to the doctor or take up unnecessary time. In such circumstances, participants explained that sometimes gaining the information required for the patients' medical admission and treatment could be difficult. One participant reported that older patients can be polite to the point that they are "just smiling and nodding" despite not understanding the questions or instructions of the doctor. This participant pointed out that older patients are respectful or polite, but "maybe too much so".

A few medical students reported that older patients more often treated the participant as a doctor, or thought that they were doctors. One participant explained that this was possibly due to older patients' high regard and respect for the medical professions. In such cases, the medical students had to remind the older patient that they were still learning and did not have the authority or knowledge of a qualified doctor.

Whilst the above findings describe many positive attributes of older patients described by the participants in this study, one participant did report that

sometimes you will see an older patient who is irritable, “cranky”, or “grumpy”. In such cases, the patient often wanted to be left alone.

5.2.1.2 Demonstrating gratitude

Many participants suggested that older patients appeared to feel, and tended to express, genuine gratitude for the help and support they received from doctors. One participant fondly described how older patients sometimes personally thank the doctors and remember the doctor who helped them:

> *“I think elderly people are so grateful and you will spend some time with somebody and you might sort them out, you might get them home and they’ll come up and just take your hand and go ‘oh thank you dear’ or you know they’ll recognise you on a daily basis as their doctor.”*

Participant 7, Trainee Specialist Doctor

It was noted by participants that older patients tended to express gratitude for the time spent with them, whether they were a medical student or a doctor, which medical students tended to report with surprise. A potential downside of the gratitude expressed by some older patients was described by a medical student who felt somewhat unworthy of the attention. The medical student explained that she felt she benefitted more from the learning experience than the patient benefitted from having the medical student on their care team:

> *“The majority of the older patients you meet are always really grateful for your time, as a med student it can be quite tricky ‘cause essentially you’re not doing them any good… when you go and see a patient as a medical student, it isn’t to contribute to their care it’s to contribute to your own learning.”*

Participant 1, Medical student

On being asked why older patients may be more grateful for medical care, a few participants suggested that older patients did not show the same sense of entitlement seen in younger patients. These participants suggested that older patients appear to be appreciative of the medical care they are provided with and appear to feel fortunate to receive such care. One participant expressed the belief that older patients also tend not to take advantage of the health system. He described the difference in entitlement between older and younger patients as he saw it:

> *"… a lot of these older people have got moral stance. They don't take the mickey out of the system, they don't abuse the system. They understand the value of the NHS and are grateful for what they're getting. Compared to a younger person who… actually has contributed so little, if at all any, to the country, expects everything to be on a golden plate."*

Participant 11, Consultant Doctor

5.2.1.3 Demonstrating trust

Some participants reported that older patients appeared to demonstrate great trust in both medical students and doctors, particularly by expressing interest in the suggestions and advice of the doctor or medical student. One participant explained that although most people of a variety of ages showed trust in the medical profession, this was demonstrated even more so in older patients:

> *"I think so many people have a kind of a trust in the medical profession, especially amongst the elderly population, it's very*

much they put their lives in your hands, they put their care in your hands."

Participant 3, Medical student

Another participant described how this trust is indicated in the medical encounter by the patients' complying with, and attending to the doctor:

"…as a doctor, they will listen to everything you're saying, hang on every word that you're saying which is quite terrifying as a junior doctor, and yeah, they'll more or less let you do whatever you are asking to do."

Participant 20, Junior Doctor

5.2.1.4 Demonstrating resilience in adversity

Participants commonly expressed the belief that older patients tended to be more resilient than other groups of patients. Older patients' resilience was typically described in positive terms and was characterised as a type of internal mental strength, evidenced in their responses to bad news and terminal prognoses. Participants reported that the delivery of bad news to older patients was frequently less difficult, and that patients seemed to be better prepared for it. A few participants described the way in which older patients were often much calmer after receiving bad news and some participants hypothesised that this calmness may have been related to their greater life experience due to their increased age.

A few participants described specific situations in which they had to break bad news to an older patient, who then had reflected positively on their life. Older patients were described as having a greater appreciation for mortality, having presumably spent longer considering their health and ill-health throughout their lives. Participants also described this resilience to be evident

in their continual desire for independence in the face of adversity. This desire for independence and to rely on oneself were often reported with some surprise by the participant, especially in the cases of medical student participants, and was generally well regarded by participants:

> *"I think the resilience of the older people that I see I think that's hugely positive. How they, despite all the difficulties, their aspiration for independence even now amazes me, some of these older people… Whether they are of that generation where that's how they were brought up, whether they're really different, I don't know…"*
>
> Participant 12, Consultant Doctor

Participants described the apparent hardship and difficult lives that many older patients would have endured as a possible contributory factor to their greater resilience. Living through world wars, and having to make numerous difficult decisions in their lives, as well as living in hard times and through recessions, were mentioned as reasons for their ability to cope in the face of adversity. One participant described that a change in priorities as well as a more relaxed attitude to life, might be responsible for older patients' more measured reactions to difficult news:

> *"I think older patients have a much more laid back view in general I think. You seem to have a different level of importance I think as you get a bit older and the idea, of living with a colostomy for example to you or me would be absolutely horrific, but for older patients if it means that their tummy doesn't hurt every month and that they are not constipated anymore then... I think a lot of them are more resilient than younger patients. They are willing to deal with a lot more."*

Participant 18, Junior Doctor

Related to older patient resilience and inner strength, was what some participants referred to as “stoicism”. This tolerance and stoicism was not without negative consequences. Participants explained that older patients tended to be quiet and accepting, even of discomfort and pain. Some participants described situations in which an older patient did not vocalise his or her need for assistance, and repetition or clarification of the doctor’s instructions:

> *“A lot of them are very stoic and won’t say ‘ow you're hurting me’ but that can be quite tricky. Anything as simple as being a bit hard of hearing, a lot of people again can be quite stoic and then won’t say ‘can you say that again, I didn't hear you’… like they won’t actually have heard or understood what you've said, which isn't great…”*

Participant 3, Medical student

5.2.1.5 Displaying hostile or challenging behaviours

A few participants described the exhibition of hostile and aggressive behaviours in older patients. This was exclusively reported in conjunction with cognitive impairment such as types of dementia or delirium. Where patients had some form of cognitive impairment, the possibility for aggressive behaviour was mentioned. A participant highlighted that frontal dementia often incorporated violent and aggressive behaviour as a symptom. Similar behaviour may be seen with patients suffering from acute delirium, where they are more likely to be aggressive, distressed, and shout on the wards. Participants who mentioned aggressive behaviour explained that they were aware of the issue of hostile and aggressive behaviours in the older patient

population before experiencing the wards and therefore such behaviour was not unexpected.

One participant described the type of challenging behaviour a patient with dementia or delirium can exhibit. This patient shouted in response to her fears and concerns, but the behaviour was not directed at the staff or anyone in particular. Furthermore, the challenging behaviour did not respond to support or reassurance from staff:

> *"…she generally shouts out all the time, her children and concerns about where her babies have gone and even when you remind her that her children have now grown up and they have been in to visit her and things, she then moves on to a different problem like not having had something to eat and she will shout and repeat the same sentence numerous times, during the day, regardless of whether there's anybody there to listen."*

Participant 18, Junior Doctor

This participant went on to explain that she encountered shouting and distressed patients more often on the ward she was currently working on, as it had high numbers of patients with dementia. She described in detail this challenging behaviour and how in some cases, the patient was calmed by staff and in some cases, not:

> *"… some of the patients on my ward at the moment do shout out constantly, even through the night…. I think they feel that they are being left somehow… even when they are in the bay and they can see all the other patients… A lot of the fears that they had as a younger person get multiplied and they become a lot, lot worse… but some of the patients actually get worse with talking*

to them because they move on to different ideas, other ones… calm down if you talk to them for a little bit."

Participant 18, Junior Doctor

5.2.2 Communication skills

5.2.2.1 Being conversational

Participants typically described older patients as talkative and interesting to talk to. It was commonly expressed that older patients appeared to enjoy talking to hospital staff, including doctors and medical students. Participants tended to describe older patients' desire for interaction and conversation as possibly a result of them being isolated at home without frequent contact with other people. Due to their willingness and enjoyment of conversation, it was commonly mentioned that older patients had a tendency to talk off-topic, such as general chit-chat and personal stories, unrelated to the medical encounter. A few participants reported the difficulty of being efficient in hospital settings, in instances when the patient is eager to engage in conversation:

"Sometimes it's quite difficult to get away from the patients 'cause even if you have just gone to ask them a quick question or to tick something on a chart or whatever, then they might start talking to you about things and you feel bad getting away from that conversation…"

Participant 20, Junior Doctor

Being conversational and the willingness to engage in conversation were not strictly limited to older patients without cognitive impairments. A few participants described the ability of the older patient to engage in a two-way conversation with the doctor despite the patient having cognitive

impairments. These participants described the resulting challenge of the general conversational nature of older patients masking cognitive impairment. Therefore, it could mislead the doctor into believing that the patient is not cognitively impaired due to their ability to hold a conversation. One participant described how she learnt that conversational ability was not a proxy for judging cognitive impairments:

> *"… when I was a house officer [i.e. a junior doctor], one of the very first patients I went to clerk I took the patient's name and went up to the patient and said 'are you so and so?', 'yes, yes, yes', and I went up and sat down and took a story of what had been going on and I got about 10 minutes into it and thought there's something not quite right here and so I looked at their name badge and it wasn't that person and then another person going 'cooey, that's me' and I did a brief mini mental test and scored zero out of 10 and the patient didn't even know who they were."*
>
> Participant 7, Trainee Specialist Doctor

5.2.2.2 Limited by level of cognitive impairments, temporary or long-term

When describing older patients' ability to communicate, many participants outlined the stark variability between patients. For patients with some degree of cognitive impairment, communication skills were highly variable, not only from person to person, but in the same person from one time to another. Not all factors that impair cognition in the older patient are long-term, degenerative cognitive impairments, such as those associated with dementia. Delirium is an acute confusional state, from which symptoms can improve. Confusion that persists in conjunction with a long-term cognitive impairment may not necessarily markedly improve. This within-patient variability is unpredictable and fluid, and at admission, participants reported not

necessarily knowing whether presenting confusion was acute and short-term or chronic and long-term. Typically, the new hospital surroundings are likely to exaggerate existing confusion in older patients. On top of this, older patients are more likely to present with confusion as it accompanies any physical illness:

> *"Any physical ailment can lead to confusion…..for example if somebody gets a simple fall or a concussion or a urinary infection or are a bit feverish, so they may present with serious confusion."*

Participant 6, Consultant Doctor

Variability in communication ability and skills was reported by participants regardless of whether the confusion was temporary or long-term. Confusion could result in patients not communicating on one day, but speaking coherently on the following day:

> *"You get very used to patients being very, very variable, and sometimes it does just happen that you have gone to somebody and they haven't spoken a word because, I don't know, they were confused or something, and then the next time your consultant goes to them and they speak in perfect full sentences and give an excellent account of themselves"*

Participant 18, Junior Doctor

Having cognitive impairments typically made most aspects of communication more difficult for older patients. Depending on the level or type of cognitive impairment, the patient may not understand the doctor, may not be able to formulate an answer to any questions or accurately remember events:

> *"… some of the patients that I would then typically see on my ward, somebody hasn't been able to get a history from in the*

admissions ward just because they're non-communicative or they are very confused or they don't tend to talk in full sentences or they answer inappropriately."

Participant 18, Junior Doctor

A few participants also described the limited attention span and the difficulty in focusing attention that often accompanied, not only, cognitive impairments, but also in the aftermath of experiencing a stroke:

"… because one of the crucial things is with quite a lot of patients having cognitive problems, you need to be aware of how you're going to spend the time with them. For example, with stroke I deal with a lot of people who have got very poor attention span…and also it's quite easy for them to go off in a tangential kind of area when you're talking to a patient".

Participant 11, Consultant Doctor

5.2.2.3 Affected by memory issues

Participants also spoke of issues relating to memory function in the older patient population. Reduction in memory function is a naturally occurring ageing process even in healthy older people. Also, having lived more years, older patients will have accumulated more illnesses, and have more events to report to the doctor, which may increase the likelihood of forgetting some details. Furthermore, the tendency to forget may be exacerbated by the hospital environment:

"As we all start getting older we start getting forgetful and when we start getting forgetful, obviously getting them from their own environment and putting them in a completely new environment makes them even worse."

Participant 11, Consultant Doctor

Participants spoke of how memory problems often had to be considered when communicating with older patients. Specifically, recollection of past events, as well as information on medications taken, and previous diagnoses may be inaccurate or unreliable. One participant explained that due to the effects of cognitive impairment or illness, an older patient may not recall an important recent event, even if it immediately preceded the admission:

> *"… when older people fall or pass out afterwards, when you interview them many of them have no recollection that they had fallen down or no recollection that they passed out."*

Participant 6, Consultant Doctor

In cases where memory issues were more severe, some participants suggested that older patients may not retain instructions or even recall recent conversations with members of the medical team. In such cases, the participants highlighted the need to communicate with the relatives or carers to ensure all instructions were remembered:

> *"… because of their physical and cognitive impairment they will not retain the instruction and they may not remember it afterwards. So somebody needs to keep an eye on many of them to make sure they're taking their medication. So you want to give somebody instruction about exercise, they may not remember it."*

Participant 6, Consultant Doctor

5.2.2.4 Affected by limitations in information processing

Some participants reported older patients' tendencies to process information slower than younger patients. Slower information processing was also

reported as a common characteristic of older patients. Typically, reduced information processing speed is a normal consequence of ageing and so would not necessarily be limited only to those with symptoms of pathological ageing. Participants described some older patients as taking slightly longer to process and respond to questions and instructions from the medical student or doctor.

> *"There's also, if a patient doesn't have cognitive impairment, sometimes they might just be a bit slower and take longer to take in and understand what you're saying"*
>
> Participant 19, Junior Doctor

5.2.2.5 Affected by sensory impairments

Although also associated with normal ageing, sensory impairments, such as loss or reduction in hearing and vision, were reported as factors which affected the communication ability of the older patient. Hearing loss was more frequently mentioned as it was relevant in the doctor-patient encounter, especially when admitting the patient and taking a history. Some level of hearing loss was commonly reported by participants regarding the older patient population:

> *"…a lot of them do have hearing trouble"*
>
> Participant 5, Medical student

In cases where the older patient was deaf, this was typically accompanied by a much greater challenge in communication:

> *"I remember as a medical student, doing that, seeing a patient and taking the history and I spent absolutely ages with them and I*

think this guy was deaf and couldn't lip read so I literally had to write out every single question"

Participant 16, Junior Doctor

5.2.3 Biological age

5.2.3.1 Physical limitations

Participants reported the physical limitations that had an impact on the life of the older patient. Patient frailty was often mentioned. Frailty is a clinical syndrome which encompasses a collection of characteristics, such as muscle weakness, weight loss, slow walking speed, and exhaustion (Fried et al., 2001). Mobility issues were a common physical limitation for the older patients. A few participants described the immobility and associated stiffness and pain that may accompany a broken hip after a fall. These factors were described as affecting older patients' level of activity in hospital as well as their life immediately after the hospital admission. Some physical limitations that are commonly associated with ageing, such as arthritis, were reported as making aspects of the admission difficult and uncomfortable for some older patients:

"A lot of them have mobility issues, you know if they're sitting in a chair and you need to move them around… actually moving them around can be quite difficult and trying not to hurt them, like if they've got quite bad arthritis in their back or something and you need to listen to them all round their chest or round their back. It can often be quite uncomfortable for them."

Participant 3, Medical student

5.2.3.2 Chronological versus functional age

When describing older patients, participants tended to report descriptions

related to the functional age of the patient (i.e. perceptions of what age an individual appears based on their mental and physical health and general functioning), rather than their chronological age. Functional age incorporated both the physical ability and mental capacity of the older patient. Older patients who were mobile, active, or independent appeared younger were considered to have a younger functional age than those who were chronologically the same age or younger but did not have such physical capabilities. Commonly, participants reported that functional age took precedence over actual age when dealing with older patients. Participants typically described that chronological age can be deceiving with regards to understanding the health status of the older patient, because they have such a variety of levels of physical and mental functioning. The diversity of physical abilities is much greater at an advanced age than it will be at younger ages and as a result, functional age becomes more relevant than chronological age:

> *"I guess the idea of being old isn't really a numerical value, I think the idea of being old is perhaps how a patient looks… how mobile they are, how sort of independent they are, how much that they can do, I don't think it's as simple as putting a number on things."*
>
> Participant 5, Medical student

A participant explained the complications which arose when a patient's age is used as a proxy indicator for something else. Often age may be confused with frailty, but frailty is a medical syndrome with a collection of symptoms. And due to the greater likelihood of frailty at advanced age, the two distinct concepts may be used interchangeably but inaccurately:

> *"… for me age is a description of how long someone's been on this planet for. Other people, age connotes to things that are really not age, so for colleagues in other disciplines who might connote frailty with age, or they might connote dependency with age, or*

they might connote comorbidity with age whereas I think that maybe because I spend a lot of time thinking about these things I would describe that as frailty or comorbidity or functional dependency, rather than age."

Participant 22, Consultant Doctor

Many participants, both medical students and doctors, gave examples of the variability in functional abilities in the patient population. Some younger patients suffered from illnesses which were typically seen in the older patient population, and some older patients' functional age was much younger than their chronological age. Many participants described comorbidities, the accumulation of multiple simultaneous illnesses (multimorbidity) or related illnesses which tend to occur (comorbidity), as an indicator for illnesses associated with ageing, rather than the actual chronological age of the patient:

"I think it all depends on the comorbidity. So yesterday I saw a 90 year old… she was fit, independent. So I think it's really difficult nowadays to say you're old because you are 75… I'd say it's more like a syndrome if you like, of ageing where it's not just the age, it's also what other problems you've got and difficulties you've got."

Participant 12, Consultant Doctor

The majority of participants reported chronological age to be of limited or little value in decision-making and assessment in comparison to functional age and abilities, but they did still witness the effect of age on other doctors' perceptions. Participants did offer some examples of coworkers who paid greater attention to chronological age over functional age:

"I did have one conversation where I said, something like, 'Oh but they're a really fit 86 year old.' And they were just like, 'they're probably still an 86 year old on the inside', was their comment to me so which I guess is a fair point. Their body is obviously aged for 86 years, but you see some people and you think, 'they were that old, really?!' I didn't realise they were that old because of how their mobility, their cognition, their independence."

Participant 15, Junior Doctor

It was also explained that chronological age tends to be more salient, initially, in the medical context, because the information is available and included on a patient's file or notes. Whereas if an individual meets an older person outside of a non-medical context, he or she are unlikely to know the older person's exact age. A few participants described how beliefs can form relating to the patient's chronological age when looking at their medical file, because there is only limited information to go on. However, both of these participants described how once they met the older patient, other factors take precedence and the influence of the patient's age may recede in their mind or become irrelevant:

"… you will form an opinion when you see someone, but again your opinions are built up from the more amount of time you spend with someone, you know, someone's very frail, very elderly, bedridden, can hardly move, can hardly talk, whereas someone of the same age might be up, being rambunctious or mischievous or in general being quite fun, the actual age of the person stops being entirely relevant to how you interact with that person as a person."

Participant 3, Medical student

5.2.4 Heightened vulnerability in hospital

5.2.4.1 Isolation and loneliness

Participants described how older patients frequently appear to be isolated, both, at home and when they come into hospital. Participants tended to mention that older patients appear to experience loneliness and boredom on the hospital wards. In some cases, a patient's spouse or partner had already passed away and the participant may have been isolated and lonely at home:

> *"I think a lot of older people seem to be quite lonely, especially if they are living on their own and you might be the first person they have had a proper talk with for weeks or months even."*
>
> Participant 20, Junior Doctor

Participants commonly reported that older patients received fewer visitations from relatives and had reduced social contact with others in general, compared to younger patients. Loneliness and isolation meant that for some older patients the contact with the medical team was a source of enjoyment despite the patients' ill health. Multiple participants described the sadness that some older patients appeared to experience when leaving hospital.

5.2.4.2 Distress

Participants reported that hospitals can be an unfriendly and frightening place for older patients, especially if the patient already suffers from confusion. The change of environment can often worsen confusion and cause distress. Once admitted to hospital, one participant explained that patients may still need to move within the hospital or NHS system, such as moving from one ward to another. As a result, the distress experienced at admission can also be experienced when the older patient finds their surroundings change again. The hospital admission was also described as disorientating and disruptive for older patients, even if they did not have cognitive impairments:

"… sometimes older patients I think do find it harder to adjust… but it is quite daunting I think at times for them to have a change of environment and I think in some ways they cope with changes to a routine less well, and so they can find the hospital admission quite disruptive to their usual routine"

Participant 17, Trainee Specialist Doctor

A few participants suggested that the hospital environment can be a frightening and unfriendly environment in general. For older patients, these feelings of distress may be made worse by the symptoms of illness they may be experiencing, such as confusion. Participants reported that older patients' distress was exhibited in signs of fear and anxiety:

"…[older] patients are often scared silly and they never remember anything because they're so anxious."

Participant 4, Consultant Doctor

5.2.4.3 Fragility and risk

Older patients in hospital were generally reported to have fragile health, reduced immunity to infection, and longer recovery times in response to illness. Whilst in hospital, participants described older patients as being at greater risk of infection, especially chest infection and urinary tract infection, and at increased risk of falling and suffering the effects of immobility. Typically older patients tended to have multiple morbidities and complex health issues. In trying to counteract the effects of these multiple illnesses, their immune systems were described as being vulnerable to even small risks in the hospital environment. One doctor described the fragility of the older patients' health as due to the fact that all their bodily systems had aged and were at increased risk as a result. He described fragility and risk in a

hypothetical situation where he explained a number of risk factors to the health of a frail older patient that could possibly arise from a single presentation of a fall:

> *"I'll give you an example, like say if somebody has a fall so they become immobilised because they've broken a hip let's say, so then you give them painkillers so they become drowsy from that right, so you give them opiates like codeine or whatever for pain, because of that they can get constipation, because of that they can get vomiting because of the opiates, because of the vomiting they can get dehydration, they can get renal failure and because of the immobility they could get clots in the lung, clots in the leg and with the constipation they could get urinary retention that can cause sepsis. They will stop eating and drinking because they are unwell and then you give them antibiotics and they get Clostridium difficile, C diff, so the main reason for that is every system in the body is ageing so the body is working at a different level and one little insult in one compartment establishes disarray in every compartment of the body".*

Participant 6, Consultant Doctor

When an older patient's health was compromised by factors in the hospital environment, some participants also described the faster decline of older patients in comparison to younger patients. A few participants made clear that older patients' fragility and the risk to their health in hospital was not always short-lived or overcome. This participant described how, unlike many younger patients, older patients would not always recover from the threat to their health they encountered during the hospital admission:

> *"These are things that you just wouldn't have with a younger person. They come in, they're unwell, they get their treatment,*

yes they may not feel amazing as they're going home but they're able to look after themselves and ultimately likely return to their usual baseline, whereas that's not always the case with an older patient. Often their hospital admission will cause significant decline to the point that they will not be as functional going home as they were coming in with the possibility of not ever regaining that function…"

Participant 9, Specialist Registrar Doctor

5.3 Older patients' healthcare needs

In this theme, participants described the unique healthcare needs of older patients, drawing on how older patients differed from those under the age of 65. This theme consisted of five subthemes: (a) taking complex patient histories; (b) the challenge of diagnosis; (c) communication with patients and their relatives; (d) determining the treatment plan; (e) organising a safe discharge and future rehabilitation needs. Detailed information on the unique needs of older patients, across the hospital and in general and specialist settings, is provided in the nodes within each subtheme. This overall theme generally consisted of cognitive information (including stereotypes) about the needs of older patients, as well as behavioural information. Behavioural information consists of excerpts in which participants draw on their past interactions, their current tendencies to act, and their future intentions to act with older patients. All the nodes within these subthemes are described in detail.

5.3.1 Taking complex patient histories

5.3.1.1 The increased importance of the history

When any patient arrives at hospital, doctors and medical students take a patient history to gain information and background relevant to the health and illness of the patient. Taking a patient history may include gathering medical information (sometimes referred to as a 'medical history') such as major illnesses that the patient has or had, previous major operations or treatments, regular and acute medications (sometimes referred to as the 'drug history' or 'medication history'), and allergies that the patient suffers from. The doctor or medical student may then focus on the chief complaint, namely the history of the symptoms relating to that complaint in order to identify the reasons behind the patient's hospital visit. Although the history is an important part of accurate diagnosis in all patients, many participants described history as even more important in the cases of older patients:

> *"We [Geriatricians] generally say 80 per cent - 80 to 85 per cent of your diagnosis is made from a good history."*
>
> Participant 11, Consultant Doctor

One of the reasons that taking a good history was especially important in cases with older patients was that with increased age, the patient has had the opportunity to accumulate more illnesses and may be on many medications. Therefore, without accurately collecting this information, the doctor may put the older patient at risk of harm:

> *"If you don't take the time to take a good history of a patient, and if they don't tell you that they're allergic to something, or that they've got a particular problem, if you don't have time to delve into all their, you know, their past history and things, then it could*

turn out to be detrimental to them when you treat them and then realise that something has gone amiss"

Participant 14, Medical student

An important part of the history-taking procedure for older patients included taking a social history. This encompassed information relating to the older patients' level of functioning, independence and general aspects of the life at home. The social history can include whether older patients are able to feed and clean themselves, as well as their mobility around the home and physical activity levels. Additionally, information regarding who lived with the older patient and whether anyone depended on them, or whether the patient depended on anyone else, was also sought.

Participants commonly described the social history as crucial to developing a picture of the older patient and their normal functioning. Without a good social history, a number of participants described not knowing what the patient's baseline health was. Furthermore, acquiring a social history vastly aided diagnosis because participants could begin to identify which of the patient's symptoms were acute and which may have been long-standing. Participants stressed that establishing the patient's baseline functioning was a crucial part of the beginning of diagnosis and treatment of the older patient as well as being important for their future safety and well-being:

"… you need to find out how they mobilise, can they wash and dress themselves? Are they incontinent at all? Do they have carers? If they can't mobilise you know, how do they get from bed to chair, chair to bed?... And I remember teaching some medical students last year… saying, 'I can't bang on enough about social history'. It's really, really, really important because it doesn't matter if you cure their pneumonia, if you're going to send them

home and they can't wash and feed themselves, then they're going to starve to death."

Participant 16, Junior Doctor

In general, the importance of acquiring as much information about the older patient, sometimes from a variety of sources, was stressed many times during the course of the interviews. One participant explained that without adequate information about the older patient's background, including their medical and social history, there was increased likelihood of the doctor undertreating or overtreating the patient, because the doctor would often not know which illnesses were long-standing and which were acute. Beyond using medical and social history to diagnose the patient, some participants also explained that the history can influence the extent and aggressiveness of the treatment for older patients:

"To find out what their normal functioning is, you know do they walk with a zimmer? are they bed-bound? or do they play tennis three times a week? And that really affects how aggressively you investigate and treat people."

Participant 16, Junior Doctor

The information gathered from the social history could also impact on the decision to admit the older patient to hospital. One participant explained that it is common for older patients to present at hospital (i.e. arrive at hospital with symptoms) after suffering a fall, or the effects of a fall. In these cases, if the older patient lives at home alone or does not have many close relatives to assist them, it may be unsafe to send them back to that environment with certain injuries, such as a head injury, without someone to keep watch over them:

"We see patients with head injuries a lot in A&E, and if they don't need admission, they need to go home, but they need to be watched for 24 hours. So if they live alone, then that's an issue and you might actually have to admit them to hospital so that we can watch them, because they haven't got a relative. So the social history is, is paramount whatever the age, but yeah I think with older people it's almost the most important thing."

Participant 16, Junior Doctor

5.3.1.2 Accessing and corroborating information from others

Many participants explained that even if older patients were forthcoming with details of their medical history, there was often a need to cross-check as much of the information as possible. This corroboration of information may still be required even if the older patient did not appear to have difficulty answering questions or remembering events, because they may have forgotten aspects of their medication and illness history. If the patient had signs of cognitive impairment, it became vital to collect the patient's history from other sources, often referred to as a 'collateral history'. In some cases, a patient with cognitive impairments had not been accompanied by a carer or relative at the admission, and a consequence of this was that it was more challenging and time-consuming to find the necessary medical information for the patient:

"If somebody has dementia then there's just a lot more work really. You need to find a way to contact their relatives. You need to look at past letters to see everything. Because often when the patient comes in, their notes aren't there yet, so you need to find out things from documents you've got on the computer and on the records before the notes come up. And you go through the

notes and everything, whereas a younger person could just tell you, usually, everything that's happened to them."

Participant 15, Junior Doctor

Participants explained that collateral history-taking from carers or relatives was not always straightforward, because carers and relatives did not always know or remember the patient's medical and drug history. If a patient hadn't lived at a care home for very long, care home staff might not have accumulated much information or notes on the patient. In some cases, participants described phoning a care home and talking to agency staff, who did not seem to know much about the patient, which also made collateral history taking difficult.

In some cases, the spouse or partner of the older patient was present at the admission and so participants could collect information from them. However, in some cases, the partner of the older patient had cognitive impairments of his or her own and so information was not easily accessible. Some participants described examples demonstrating the difficult dynamics in accessing information from an older patient's partner. A few participants described a similar example in which a patient's partner appeared to feel guilt or anxiety about the possibility of hospitalisation of the older patient, because he or she felt responsible for the circumstances that led to the admission. In such cases, participants claimed that accessing and corroborating information about the patient was not straightforward, because the patient's partner did not appear to listen to the questions being asked by the doctor, but wanted to reiterate their personal account of the events that led up to the admission to avoid blame or seek support from the participant.

As a collateral history involves the collection of information from sources other than the patient, this can also include staff at the patient's care home,

or the patient's General Practitioner and local surgery. Participants described how collecting medical information was particularly difficult in cases when the patient was admitted out of traditional working hours. If the patient was admitted late at night or during the weekend, participants described contacting the local surgery or General Practitioner (GP) as difficult. Typically, participants required information on patient illness, drug history and allergies as part of the medical history information:

> *"I've had a case whereby he couldn't actually confirm the drug history for a few days. So you just go by what you need to give them then, and obviously it's a danger for patients who are on insulin and things like that. You'd have to start kind of guestimating exactly what you need to give them. And then you have to get more people involved, which can be a bit of a difficulty during the weekend, like the diabetic team involved, which can be a real pain."*
>
> Participant 24, Junior Doctor

5.3.1.3 Time-consuming and longer histories

Having lived longer, older patients typically have accumulated more illnesses and may be on more medications as a result. Some participants explained that the medical encounter and interaction with the older patient tended to take longer than with younger patients, even if the patient was able to communicate:

> *"I quite often like, will be with them a lot longer than I am an adult patient. So if you go and clerk a 30 year old you might just do, do your clerking and then you're gone after 20 minutes, but often with an elderly patient you're there for a lot longer. There's*

a lot more talking involved and a lot more about the patient's story than there is often in younger patients."

Participant 1, Medical student

As well as the interaction itself, most participants who described the time-consuming nature of taking histories of older patients tended to remark on a number of stages and factors that all added to the time taken and the challenge of ascertaining an adequate history:

"… it's the extra time for the history and the slowness of getting them onto a bed and down, an incomplete drug history meaning that you have to then phone the GP or the pharmacist or wait until the son's home to pick up the medicines or it's those little things rather than the diagnostics that make it harder I think."

Participant 23, Consultant Doctor

5.3.2 The challenge of diagnosis

5.3.2.1 Multimorbidity, comorbidity and multiple medications

The medical complexity of older patient health, which related to every stage of older patients' care and recovery, was frequently described in the interviews. One of the main sources of this medical complexity was that older patients often had multiple and accumulated concurrent illnesses ('multimorbidities'), often including illnesses that typically accompany each other ('comorbidities'). The results of having multiple illnesses frequently meant that diagnosing the older patient was challenging and complex:

"There's always lots of comorbidity so, when we're just learning it can be quite tricky, in a medical sense of our knowledge and knowing how to manage elderly patients, it's always a lot more complex than your standard adult."

Participant 1, Medical student

Furthermore, older patients were often described as having a complicated picture of symptoms, not only due to the multiple illnesses, but also the multiple medications that the patients were often on, as a result. The complexity associated with multimorbidity or comorbidity in the older patient was often described by participants:

> *"Another younger adult may present with something relatively straightforward, be it chest pain or a bleed or something like that. And it's likely to be an issue that stands alone. To me, older patients are more complex medically. They often have a number of medical issues going on, sometimes interacting with each other, where you might want to treat one thing and it exacerbates another thing. These are the complexities that come with these types of patients. They'll often be on multiple medications. They may or may not have some sort of physical disability through arthritis, poor mobility. Then there's the other aspect of their cognition."*

Participant 9, Specialist Registrar Doctor

Another concern with older patients on multiple medications was the possibility that this may be due to a prescribing cascade, where a side effect of a drug is misinterpreted as a symptom or illness and additional drugs are prescribed. This may result in further side effects and drug interactions. One participant reported that, unlike most cases involving younger patients, the complications of having more illnesses and taking more medications for older patients was that the doctor may find multiple underlying issues, and so there was not a single diagnosis as such:

"You then often arrive at more than one underlying diagnosis, you have multiple pathologies"

Participant 22, Consultant Doctor

5.3.2.2 Atypical presentations and nonspecific symptoms

Participants described how a major challenge associated with assessing older patients was the frequent occurrence of having to diagnose patients based on vague and nonspecific symptoms. As older patients tend to have a greater number of illnesses or disorders at any one time, this can result in a less clear picture of symptoms at admission. Participants explained that older patients are far more likely than younger patients to present to hospital with "vague" or "nonspecific" symptoms. The meaning of vague and nonspecific in the medical context was generally described as symptoms that were very general and could potentially be caused by a wide variety of illnesses. These symptoms tended not to indicate a particular disease or single bodily system:

"Older people seem to present a bit more vaguely than other people. For instance, they might just feel faint or dizzy, or feel short of breath and there's, like there's hundreds of reasons that can cause those things so it might be more difficult to narrow down."

Participant 20, Junior Doctor

It is also common for older patients to report atypical symptoms, in which symptoms present themselves differently in older patients, than they would in younger patients, even from the same underlying health complaint:

"Medically older patients can have a different spectrum of symptoms to younger patients. They don't necessarily complain of chest pain if they're having a heart attack. It may be a

different type of pain. They may present much more nonspecifically. So if they have an infection the presentation could just be confusion rather than the traditional cough or temperature. Again they might not have a temperature even if they have infection. Their blood tests might not reflect infection quite as clearly as a younger person."

Participant 9, Specialist Registrar Doctor

Participants also reported that it was often difficult to determine which symptoms were caused by long-standing illnesses from those that were likely to be caused by acute illnesses, which typically required immediate hospital care and treatment. Due to both the nonspecific and atypical symptoms at presentation, participants explained the importance of thoroughly investigating symptoms for underlying diagnoses. Diagnosis was further complicated by the challenge of ascertaining whether symptoms were primary symptoms, which are the effects of a disease or disorder, or secondary symptoms which are complications or results of a particular primary symptom or underlying illness. For example, an older patient presenting at hospital with a fall can have a number of underlying pathologies which may have led to the fall:

"So the typical signs and symptoms that you would see in a young person, like say a young person presented with pneumonia would have chest pain, fever, chills and cough and brown sputum, in an older person they may never have a cough, they may not even get fever, they may just have a bit of a chill. You know what I mean. So they may just present with a fall and having followed them and then you examine them and you find they've got pneumonia."

Participant 6, Consultant Doctor

Participants often described that it was more difficult to determine the underlying diagnosis when treating older patients compared to treating younger patients:

> *"You've got to look for underlying things or they may have gone off their feet, become a bit more unstable or immobile or delirium, which is another big thing that we see, and again what's causing it? Is [it] an infection? Have they had a little stroke? You know, have they had a heart attack? So the presentation can be very nonspecific and you've got to delve through that and find out what the diagnosis is…. It's much more straightforward in a younger person."*

Participant 13, Consultant Doctor

5.3.2.3 The potential for misdiagnoses and missed diagnoses

Due to the complexity of older patients' health and the nature of their illness manifestations, such as the tendency for them to have multiple morbidities as well as vague and atypical symptoms, participants reported greater opportunity to miss diagnoses. Missed diagnoses occur when the doctor does not identify an illness or the root of a set of symptoms that a patient is actually suffering from. Misdiagnoses occur when an inaccurate diagnosis is made. A few participants described the greater likelihood of either of these occurring with older patients, compared to younger patients. For example, in response to an older patient who has presented to hospital with a fall:

> *"The classic example is somebody who comes in with a couple of falls. A lot of people just completely ignore that whereas what they don't realise is falls is not a disease itself - it's a manifestation of something else going astray - and actually trying*

to work that out is mighty difficult and people don't understand that."

Participant 11, Consultant Doctor

In addition to missed diagnoses, some participants also described the increased risk of a misdiagnosis, whereby an inaccurate diagnosis was made, with older patients. In this case, the same example was given by a number of participants, namely diagnosing a cognitive impairment when the older patient actually suffered from depression. A participant highlighted the possibility of mistaking depression for dementia and confusion, especially when the older patient is withdrawn and unresponsive. The challenge related to the overlap in symptoms of dementia and depression in the older population:

"I think what I wasn't prepared for was also the fact that such a large proportion of elderly patients have depression, and that there is overlap between depression and dementia, and how they keep getting worse, but then the general attitude that I got from other healthcare professionals was that it is expected."

Participant 2, Medical student

As a group, older patients tend to be more isolated in the community, especially if their partner has passed away. Participants described the difficulty in demarcating social isolation and the sadness inevitable with spousal loss, with the symptoms of depression. Older patients' social isolation and lack of community support made it hard to identify a depressed older patient from one just coping with their life circumstances. In addition, a few participants identified an inherent bias in perceiving older patients' sadness or isolation as an inevitable consequence of ageing rather than symptoms of an underlying mental illness, such as depression. It was pointed out that

depression in younger patients tends to manifest in suicide attempts or cries for help, which are explicit, whereas older patients' depression tended to manifest in a more subtle withdrawal from society and general sadness. As a result, it was less obvious to the doctor and could be misinterpreted:

> *"I think that it's often said that if you see depression in a younger person, it stands out. If you see an older person, people think it's part of ageing and they're like, 'Well of course you'd be sad, your wife died' but that results in them suffering on their own."*

Participant 16, Junior Doctor

Another complication of identifying and treating depression involved the choice that had to be made after diagnosis. If an older patient suffered from depression, the doctor must consider putting them on medication. However, older patients may already be on a multitude of drugs and the doctor may be concerned about the possible interaction or side effects of adding another drug to what may already be a substantial drug regime:

> *"this patient might be a bit depressed but can't afford to give him another drug or whatever?"*

Participant 16, Junior Doctor

More extreme examples of misdiagnoses were given, both involving dementia. In one example, a doctor explained that mild dementia can worsen in hospital settings due to the sudden change in the older patient's surroundings and in this case mild dementia can appear as severe dementia. However the diagnosis of severe dementia may have consequences on the level and aggressiveness of treatment that the individual is offered for other illnesses which they may have. This participant explained that if an older patient is thought to have severe dementia, there might be a restriction in

the treatments that are offered because their life expectancy is thought to be short:

> *"People with a diagnostic label of dementia, if they're not under a geriatrician - it doesn't matter how severe the dementia is, most consultants will take it as severe dementia. Because if you've got even mild dementia, coming into a new environment will make you even more confused, so it looks as if you're worse than you actually are… So if you have main stage dementia, your life span is about a year or something, and at that stage people start thinking is it actually worth doing what we are trying to do?"*

Participant 11, Consultant Doctor

This participant then described an incident that had occurred within the past month where one of his older patients was misdiagnosed with severe dementia and put on an end of life care pathway, where an individual receives only pain-reducing medication and no active treatment. In this case, the misdiagnosis was identified:

> *"One of my patients, she came and she's got diagnosis of dementia… She came in as a stroke [patient], she had two seizures… and she was drowsy, which is expected after the fits. And one of the registrars… had seen the patient on call and put the patient on care pathway, on the dying pathway. And understandably we went livid…my colleague saw the patient the next morning… he took the patient off the care pathway, end of life care pathway, and patient did extremely well and she has gone home. She has walked home."*

Participant 11, Consultant Doctor

5.3.2.4 Constraints of performing thorough examinations

Some participants described the additional difficulty of ascertaining an accurate and timely diagnosis when the older patient was suffering the effects of frailty, or were distressed. In such circumstances, there were limits on the tests and examinations that could be conducted. Invasive physical investigations may be unproblematic in younger patients, but could be inappropriate for some older patients. As a result of the limited examination and tests, diagnosing the older patient was sometimes made more difficult:

> *"Typical example might be, you know, somebody who's frail and old comes in with a low blood count and often we would want to look into their bowels, into the gullet, which aren't pleasant procedures and they might not be able to tolerate it. Then you might have to think okay what is the likelihood, probability and then you might therefore take a calculative approach because of those difficulties."*

Participant 12, Consultant Doctor

Furthermore, even relatively common procedures like taking a blood sample may be difficult and uncomfortable for older patients if they are frail or have other physical health complaints:

> *"They might be more prone to develop complications, for example, when you take bloods from them they might bleed more often, they might have difficult veins so you couldn't get blood samples off them. They might not be able to you know, cooperate or comply with procedures for medical testing because of their ailments like in arthritis or back trouble. So there will be technical difficulties in getting the tests done in a timely way."*

Participant 12, Consultant Doctor

5.3.3 Communication with patients and their relatives

5.3.3.1 Need for clarity and brevity of speech

Many participants explained the ways in which they may need to adjust their own communication style for older patients. Typically, participants reported speaking slower and louder for older patients:

> *"You have to ensure that you're talking at the right level, the volume's loud enough and your tone of voice is so that they can hear them if they do have hearing impairment."*
>
> Participant 8, Medical student

One participant described how she made adjustments in her clarity of speech to older patients as a rule, because she had found that she could not rely on patients to report when they have not heard or understood a question or statement, due to the stoical and accepting nature of older patients. Another participant also described how she adjusted her communication strategy so she spoke clearly for all older patients:

> *"I think from a personal point of view, I'm quite softly spoken normally and now whenever I approach an older person, whatever their age…I make an effort to speak more clearly and louder to the patient. That took a while to realise that you have to do that, blanket."*
>
> Participant 20, Junior Doctor

A further adjustment in communication style with older patients was the reduction of colloquial slang as well as complicated medical jargon. Participants described using simpler words and avoiding too many medical phrases which might serve to confuse patients or make them feel distressed. One participant reported that he tended to "de-jargonise" and "de-medicalise"

his words for older patients. This participant also stated that he found the use of medical jargon more common in younger patients, who might introduce these words themselves and in such cases he did not avoid the use of medical terms as the patient appeared to be aware of the meaning. Another participant explained that there is a large power imbalance between the older patient and the doctor, because of the respect this patient group tends to have for members of the medical profession. This participant explained that the doctor should be aware of the power imbalance and seek to communicate simply and without large amounts of medical information which may serve to alienate or distress the older patient. The use of clear and simple language and trying to gauge what the patient understands was at the heart of communication with older patients, and participants commonly described the use of a mixture of strategies to enhance doctor-patient communication:

> *"It's about adapting your style I suppose to understand what they're understanding, to understand that sometimes you have to revisit an issue multiple times, discuss it in different ways, use very simple language. Take consideration of things like they might be deaf, they can't hear you, they don't have their hearing aid on, they usually do, they need to get it. All these simple things it's about being aware of those kinds of things."*

Participant 9, Specialist Registrar Doctor

5.3.3.2 Being patient with the patient

Participants tended to report that they needed to allow more time for older patients to process medical questions, remember information, and formulate a response. Older patients tended to have a larger number of illnesses and take more medications and, as a result, needed a longer time to recall information and respond to questions about their medical history.

A number of factors served to increase the duration of medical encounters for older patients than younger patients, and a number of participants described the need for patience during interactions. As well as taking more time to describe their history and symptoms, the older patient may need longer to follow instructions. The need to be patient therefore applied to many aspects of the medical encounter. One participant advised:

> *"… leaving a little bit of time after questions to let the patient sort of process what they've said because it does take them that bit longer. Sometimes you know you can tell a patient to tie their shoes and come back five minutes later and find them tying their shoes and they didn't do it when you originally asked them and it's just because things take just that little bit longer so just being aware that sometimes it does take a little bit of time for things to happen."*

Participant 18, Junior Doctor

The importance of knowing when to take time with older patients and allow them to talk, and when to interrupt and focus the conversation on medical matters, was also mentioned. Some participants described the need to find ways of redirecting the conversation back to medical information, without interrupting or offending the older patient. Some participants described the need to let older patients talk for a few minutes even if they talk about matters irrelevant to the medical encounter and then direct the conversation to medically relevant information:

> *"If you start asking them rapid questions they tend to get very annoyed and feel like upset with them… you have actually to step back and just try and get them to talk out what they want to say, before asking questions."*

Participant 24, Junior Doctor

5.3.3.3 Reassuring the patient

Due to the distress, fragility and loneliness of some of the older patients, as well as their delicate balance of health, a few participants stated that it was an important part of the doctors' role to make them feel comfortable and cared for. In some cases, older patients may be on their own in the hospital without relatives to visit them, and therefore do not benefit from the traditional forms of social support commonplace in younger patients. As a result, the doctor had a role to play in ensuring older patients felt understood and reassured:

> *"Even if they can't communicate very well, you have to be able to reassure them that, you know, you do understand and things, and you're gonna try and help them as much as you can and stuff, because otherwise they can feel quite alone, I imagine."*

Participant 14, Medical student

One participant described being able to communicate well with the older patient, by being empathetic and reassuring, was an important part of her job as a doctor. She explained that being competent at medical diagnosis and treatment was not enough to be a good doctor:

> *"You can be the perfect person at diagnosing and treating, but if you can't sit somebody down and tell them, you know, break bad news to them in a good way, I think that makes you a terrible doctor."*

Participant 15, Junior Doctor

A few participants described the need to be reassuring with older patients in order to make them feel at ease, which would then allow an easier history-taking process for the patient and the doctor, particularly if the older patient is confused due to the hospital surroundings:

> *"You also have to make them feel at ease and then if you do then they're often able to give you all the information you want."*
>
> Participant 8, Medical student

5.3.3.4 Managing paternalistic tendencies in self and relatives

A number of participants mentioned the potential to unintentionally patronise older patients. In situations where patients have hearing impairments or cognitive impairments, participants claimed that it can be easy to become complacent and just move on with care, without fully checking what the older patient understands or wants for their care. Some participants expressed self-consciousness about appearing patronising or condescending when attempting to check if the older patient has heard or understood them. Furthermore, one participant described a tendency for carers or relatives to infantile or patronise the older patient in the doctors' presence, which then made it easier for the doctor to engage in the same behaviour without thinking to check the patients' understanding of the situation and their surroundings:

> *"I think everybody does it at some point, generally not intentional. I think it's a very common default position particularly if somebody is bit confused, to just accept that they're confused rather than trying to see how much they understand or to try and make things simple for them to understand. There's an inclination to talk over them or to talk to family and not try… but I'm not always sure that people make enough effort to engage*

with an older person. Sometimes they don't do it, even if they're not that confused."

Participant 9, Specialist Registrar Doctor

Paternalism also needed to be managed when outlining treatment options and making decisions about treatment. Participants frequently mentioned that older patients tended to prefer the doctor to take on a paternalistic role in their treatment and care. Participants explained that their medical education explicitly trained them to encourage all patients to take control of their care and treatment when appropriate to do so, often referred to as 'patient-centred' care. In contrast to this, older patients tended to be less likely or less willing to negotiate their own care, or maybe less aware that they have a choice in their medical care:

"but I think a lot of the elderly population expect a paternalistic attitude from medical professionals, they expect you to be in charge and that your decision is go and it's kind of with the younger population it's more of a dialogue, more about patient choice, whereas with the elderly population I don't think a lot of them appreciate the choice they do have in their own care and I think communicating that to some of them can be a challenge sometimes"

Participant 3, Medical student

Participants reported this as particularly challenging because they are generally discouraged from being paternalistic in their care. Additionally, participants mentioned that they often do not know what is best for the older patient due the number of instances in which the medical team do not have a detailed account of the patient's life and responsibilities at home. Participants generally reported being uncomfortable being asked to make

decisions for these patients. A few participants described the paradox of being a patient-centred doctor in cases where the older patient may want paternalistic care. On being asked why they think older patients express a preference for paternalistic care, a participant suggested that some older patients may not understand that the current state of healthcare allows more self-determination of care.

Participants also described patient admissions as being more challenging due to the fact that older patients often came into hospital with their family or carer. In some cases, the family members would attempt to answer the questions or conduct most of the talking, and sometimes had a tendency to infantilise the older patient. The participants reporting this claimed that this was not ideal for history taking as the family may have different impressions of the symptoms the older patient was experiencing, making it difficult for the participant to reach an accurate assessment. A few participants described finding themselves in three-way discussions with the older patient and the family at the same time which could be challenging:

> *"I mean it is easy to get distracted because family members will sometimes do exactly the same, sometimes they'll bypass their relative or treat them like a child or, 'don't tell them that'."*

Participant 9, Specialist Registrar Doctor

However, some benefits of having the family present were also described. One participant explained that the family would often ask questions that the older patient may not have asked but may have needed to know. In some circumstances, the patient's family are more aware or honest about how well the older patient will do once discharged than the patient themselves, who may feel more capable in their ability to look after themselves. In such cases, deciding what is best for the older patient may involve paying more attention to the beliefs of the relatives or carers than the patients themselves, which

may outwardly appear paternalistic but may be necessary to ensure the future safety of the patient:

> *"Often it's things like discharge planning, so a lot of older people might think that they would cope well at home, even though in hospital they've not been feeding themselves and they've not been cleaning themselves, they've been reliant on other people. The families are perhaps in that scenario, a bit more realistic about what might be good for the patient than the patient themselves."*

Participant 20, Junior Doctor

5.3.4 Determining the treatment plan

5.3.4.1 The appropriate level of treatment

Participants described how deciding on the appropriate level of treatment for older patients was often difficult. Some health problems such as cancer can often require aggressive treatment, but some older patients' health may be too fragile to undergo such treatment. Decisions concerning the appropriateness of a particular treatment would depend on the individual case, with particular consideration given to the functional level of the older patient rather than to the patient's chronological age. Participants described cases where the effects of the treatment could be worse than the effects of the illness it was intended to treat. As a result, the level and aggressiveness of any prescribed treatment had to be considered on a case-by-case basis:

> *"… but then at the same time, when they've got dementia, sort of end-stage dementia, the attitude is, which I think is right, 'we're not going to investigate this. We're not going to go all out and try and find the root cause of this, we need to try and prevent their falls, but at the same time, if they have had a heart attack, are we*

actually going to do anything about it because they've got end-stage dementia'."

Participant 16, Junior Doctor

Participants explained that there was a greater likelihood of aggressive treatment being carried out, when required, on a younger patient because it would be assumed that they would be in relatively good health if it were not for the illness for which they were admitted. However, participants expressed concern over being able to identify what was, and was not, appropriate treatment in cases involving older patients:

"You don't always need to treat everything and make everything perfectly right again because patients when they are older they're naturally going to deteriorate and it's not always right to treat everything aggressively. You need to kind of bring them back to their normal level of function… because the more you search, the more problems you find in older people so it's kind of honing in on what is the important thing to treat and treating that. I think that's a challenge, knowing what to do and what not to do."

Participant 19, Junior Doctor

Being able to identify what to treat and what not to treat was frequently mentioned as a concern in the medical treatment of older patients. Multiple participants explained that getting the older patient back to their previous level of functioning was the main goal of treatment, because curing all health problems was unlikely. Using aspects of the older patients' medical and social history, the baseline health level of an older patient could be determined which was essentially the general health and function of the patient prior to the latest hospital admission. This baseline level served as the point at which the participant considered the older patient's health to be well enough for

discharge. Participants generally saw this as different for younger patients, whose baseline health was often not sought because much of their functioning levels and social history was assumed (for example, their ability to feed, wash and clothe themselves).

Some participants mentioned that in the case of very ill or frail older patients, less is more. Offering less treatment or less aggressive treatment may be more appropriate than putting the older patient through invasive tests and putting him or her on a variety of medications. Another participant gave an example of not admitting older patients to hospital in cases when the hospital environment may actually worsen their health.

Generally, the lack of aggressive and active treatment in cases involving very ill older patients was described as unfortunate but necessary. However, one participant expressed a belief that this passive treatment of older patients was ageist and unfair, causing him great concern. This participant believed that older patients are too easily placed on an end-of-life care pathway (where it is believed that the patient is not likely to survive and efforts are therefore focused on ensuring their death is comfortable). Once on an end-of-life care pathway, patients are denied medication and treatment for the illness and are instead given pain relief. The belief that older people are explicitly and unfairly denied treatment due to ageism, however, was only described by one participant:

> *"I think many older people - because of ageist policies of doctors, ageist state of mind and nurses, they're put on end of life pathways and they die and I think many of them don't deserve to die, they should be treated actively, many of them have treatable problems... I think that also troubles me."*

Participant 6, Consultant Doctor

This doctor was clear in his own disagreement with the denial of treatment that some older patients receive. He explained that he was aware of cases where he believed the patient should be treated, but was denied treatment due to "ageist decision making". He also reported that he had noticed older patients being denied treatment and that he saw this happening "all the time". His disagreement with the end of life pathway policies that denied treatment to some individuals, who were considered to be dying, was also described. The end of life pathway is intended to give patients dignity at the end of life, but this participant described how he struggled to come to terms with its use:

> *"…when somebody is put on the pathway they are deprived of everything, no IV fluids, no medication, then they're given injections like for pain or morphine to keep them comfortable or haloperidol or midazolam or these kind of drugs or hyoscine to reduce secretions. These medications expedite death because they suppress your breathing, they have lots of side effects, they suppress the cerebral activity, but most people hide behind the assumption that we are keeping him comfortable… When somebody is put on palliative care you are inadvertently or subconsciously expediting their death by giving them medications and denying them the treatment they need, like if somebody has an infection and you want to give them antibiotics, you say 'oh because he's on the pathway no antibiotics for him', 'giving him injections is very undignified'… So older people are denied treatment when they should be treated."*

Participant 6, Consultant Doctor

5.3.4.2 Negotiating with relatives and others about treatment

Another area for managing the complexity associated with older patient care concerned dealing with the relatives of the patient. In some cases, the relatives have very different expectations of care to that of the older patient, and participants found that managing this situation and negotiating the best care for the patient can be difficult. Mostly, participants described having to deal with differences of opinion over patient care and treatment where the older patient and the relatives had different views on the best course of action. Some participants found these situations particularly difficult, because it is their duty to serve the older patient as opposed to their family:

> *"… even if sometimes we think yes it may be a little bit on the risky side, but if you've explained the risks to the patient and they still want to do it and you've put in as much safety nets as you can then you have to send them home. But the relatives don't always agree with that and say 'Well if anything goes wrong it's your fault, doctor', and all this kind of stuff."*
>
> Participant 13, Consultant Doctor

In some cases, the older patient's carer, who was often their spouse, did not want to be left alone at home and was eager for the patient to be discharged. Again, this required the doctor to have a difficult conversation with the patient's partner if the doctor believed the patient was unsafe at home. One participant described how the difficulty of dealing with relatives was often driven by the fact that the relatives or carers believed they were the main advocate for the older patient, even if the patient did not suffer from cognitive impairments and was able to make care decisions for his or herself. As a result of this, discussions with the older patient's family can be more difficult with the potential for the family or carer to become distressed.

Participants also suggested that expectations of the older patients themselves as well as others (such as the patient's families or other medical professionals), play a role in determining the appropriate level of treatment aggressiveness. A few participants described the relatives or carers having different agendas or expectations about treatment to the older patient or the doctor. Some also explained that a patient or the patient's family did not appear to want active or aggressive treatment because they believed that the illness was an inevitable consequence of old age.

Some participants described how specialists in other medical fields expected less active treatment for older patients, because the specialist doctor saw the illness as a consequence of ageing. Where this issue was brought up in the interviews, the expectations of others were in conflict to the participant, who felt active treatment was appropriate:

> *"… especially amongst older people and especially amongst surgeons, there's a big view that 'they're just old', you know, 'we are not going to do anything because they are old', and actually it is not age that is the problem, it's all their other comorbidities that are the problem. It is just you get a bit resentful of them saying 'Oh well how old are they?', 'Oh they are 80', 'Oh I'm not going to do anything'."*

Participant 18, Junior Doctor

5.3.4.3 Prioritising illnesses to deal with patient complexity

As highlighted earlier, older patients often have a number of illnesses and may be on multiple medications. If the older patient has multiple morbidities prior to hospital admission, they may also be on multiple medications which can interact and potentially be an underlying reason for the present complaint and hospital visit. In complicated cases such as these, where the

older patient has multiple illnesses, a few participants explained that the doctor often needs to establish a management plan to deal with and treat them. Many participants described how prioritising health complaints was an important part of the management plan for older patients. They explained that the doctor must try to identify all the possible reasons as to why the older patient needed to be admitted to hospital, and then prioritise each factor. In addition to this, the doctor has to determine which of the contributory factors can be addressed through medical care (rather than the patient's social care or the home environment). The management plan often becomes a list of the important factors that need to be treated and the particular order in which they are to be addressed:

> *"I was doing a medical registrar shift and I was asked to see a frail older gentleman who was on one of the orthopaedic wards who'd broken his neck of femur, who'd had an operative repair, had about 5 or 6 different pathologies, had decompensated post operatively, had never really been seen by anyone more senior than an SHO [Junior Doctor] apart from a Consultant orthopaedic surgeon…and had really deteriorated to the point where he was at death's door and I was able to come along and say 'well look, here are a list of all his pathologies, here are a list of all his other problems, here are a list of possible solutions, I would recommend the following 12 point action plan, and I will drop by tomorrow to see how he's doing'….I dropped by the following morning and he was doing much better"*

Participant 22, Consultant Doctor

Another participant explained that she had seen more experienced doctors making a problem list in order to treat complex older patient cases:

"One of the first things that I learnt when I started working as a registrar was when you do your ward round, make a problem list, find out what your problems are and then write what you're doing to make them better. So I think that's perhaps the approach that we have as a specialty and that means that you can make it manageable and make it sort of bite size as it were."

Participant 7, Trainee Specialist Doctor

5.3.4.4 The importance of treating the whole person

Participants described how treatment for older patients needed to be much more holistic in order to be successful. Due to the increased comorbidities, multiple medications, and vastly different functional and physical abilities, most participants described that successful care for older patients required treating the whole person rather than only focusing on the presenting problem (i.e. the main issue for which the patient is admitted). Participants consistently recommended holistic older patient care and gave examples of how older patients' health issues are often interrelated. In younger age groups, healthcare was described as often focused on, and specific to, the presenting problem. However, successful medical treatment for older patients required treating the whole person:

"It's not, 'oh this person's come in with a broken toe, let's wrap it up, wrap the bandage, let's send them home'. It's just 'right, what's going on at home? What's been going on at home? What's the reason this person broke their toe? Are they safe to go home? What do we need to put in place? What kind of carers can help them?'...It's just, just looking at the whole person, their environment, why it happened, as opposed to just looking at them from a medical perspective."

Participant 15, Junior Doctor

Participants often described the importance of holistic care of older patients in order to minimise the likelihood of readmission, particularly the readmissions that are as a result of a failure to address underlying psychological and social issues. Participants explained that treatment that was only medically focused, ignoring possible psychological and social issues, often meant that when older patients re-entered their previous environment or encountered that issue again, they may still be affected adversely and have to come back into hospital. As a result, holistic care was crucial for the future health and safety of the older patient:

> *"So I think it's spending more time on psycho-social aspects because if you don't address those, they're going to bounce back through a revolving door and it's almost a waste to kind of discharge. Not only detrimental to the patient's health and well-being, it also occupies unnecessary time in the hospital beds, expose them to infection and everything else associated with that."*

Participant 11, Consultant Doctor

5.3.4.5 Preventing complications or the worsening of patient health

Participants often described the most important part of older patient treatment to be the prevention of secondary problems and complications. Preventing older patients' health worsening in hospital was deemed crucial, because older patients tend to have more fragile health and suffer from faster deterioration in health when ill than those of younger ages. In preventing further decline, participants explained that they needed to be more accurate and careful when treating older patients as they typically have less physiological reserve to compensate should something go wrong. This

reduced physiological reserve and depressed immune function, both associated with older age, contributed to the fast decline and slower recovery reported in older patients. One participant described the fact that there are known complications which can be avoided but need to be managed in the older patient:

> *"… but I mean things I'm worried about are pressure areas, UTIs [Urinary Tract Infections], chest infections, aspiration, immobility, DVTs [Deep Vein Thrombois], sundowning, confusion and all those sorts of things"*
>
> Participant 21, Consultant Doctor

As a result, this participant explained that he was alert to, and aware of, managing these risk factors so they did not develop into complications:

> *"… there are checklists that I go through to make sure. Simple things like making sure the nurses have got a pressure mattress in, making sure that they are being fed, making sure that they are drinking water, making sure they're not aspirating, making sure that the medications they're on are not causing confusion."*
>
> Participant 21, Consultant Doctor

When deciding on the treatment, many participants described how preventing complications and the worsening of patients' health was incredibly important to the decision making process involved in the care of the older patient. One participant described their job as mostly 'damage control' so that the vulnerable older patient does not get worse from the illness they already have. Another participant described how they would think of every way in which the older patient could deteriorate in order to make a conservative and careful decision about appropriate treatment:

"If they've got a kidney injury, you don't know how much of the drug they can tolerate. You have to think about what it would do to them, if it's actually detrimental to their health rather than treating it. And if they've got underlying medical conditions as well, then some drugs are contraindicated and you can't really just give it out without thinking of every, sort of, possible thing that might go wrong with that whereas with a younger patient, they're probably not suffering from as many other medical conditions, and therefore you can, kind of, roll it out in a sense, the standard procedure"

Participant 14, Medical student

Participants who worked primarily in older patient healthcare settings described one of the ways to reduce worsening health was conducting medication reviews when the older patient was under their care. These participants described older patients as commonly on many medications which in some cases, had not been carefully reviewed for some time. They described how being on a number of different medications can cause interaction effects and make life more difficult for older patients. Therefore, medication reviews, which were often conducted by geriatricians, were described as another way to prevent future worsening of health by reducing older patients' medications to only those that are necessary:

"Often older people are on like 10, 15 different medications and being on so many medications, it is a risk factor for falling"

Participant 16, Junior Doctor

5.3.4.6 The problem of 'social admissions'

Participants also described what was termed 'social admissions'. These were admissions where an older patient had come to hospital because someone (such as a General Practitioner or a relative) had deemed them to be unsafe looking after themselves or living in their current environment. These appeared to be 'social admissions' because the patient did not appear to have an acute illness which precipitated this particular hospital admission. Whilst it was not debated that many older patients ended up in hospital in this manner, the meaning and utility of the terms associated with social admissions (including 'off legs', 'acopia' and 'can't cope') were debated. Participants who did not work on older patient wards tended to use these terms as if they were a diagnosis and often without noting that these terms may be deemed offensive:

> *"So sometimes the GP's will say, 'sorry we tried to sort this out with social care but we couldn't, can you just please keep them safe? Look after them'… Sometimes we'll have a patient with dementia who's normally looked after by the wife and then the wife's admitted to hospital so now he can't cope. So sometimes we end up admitting them for no other reason other than there's no support structure in the community, so that would be a purely social admission from our point of view because, there's no new medical input that was required."*

Participant 23, Consultant Doctor

The problem with a 'social admission' is that, as highlighted in the previous quote, some doctors see these admissions as requiring no treatment or medical input. However, other doctors, especially those working specifically in older patient settings, took issue with 'social admission' or 'acopia' as a diagnosis. Some of these participants reported that once an older patient has

been categorised as a 'social admission', some doctors stop investigating their symptoms and just accept what is essentially a non-diagnosis as a diagnosis. One participant who had trained in medicine in another country remarked on the peculiarity of this particular diagnosis, or lack thereof:

> *"And when I came to this country I'd never heard of the diagnosis 'off legs' before which is a nonspecific 'we're not quite sure, they're unwell but we don't know why' kind of non-diagnosis diagnosis. So it really struck me when I came here… that you could say 'I've got absolutely no idea but they're just not well' as a diagnosis."*

Participant 23, Consultant Doctor

The data continued to highlight the two perspectives. One perspective suggested a 'social admission' is just a hospital stay to ensure that the older patient is safe because they "cannot cope" and that "nothing is medically wrong with them". The other perspective saw this reasoning as flawed because by implying that nothing is wrong with the older patient medically, it excuses medical inaction, when in fact a number of things have gone wrong and put the patient at risk of harm. Essentially, these participants reported that a 'social admission' does require some level of treatment because the older patient is currently receiving inadequate care and help in their home environment, or community system, which has resulted in the older patient being put at risk of harm. Therefore, participants tended to differ on what a social admission meant for determining the treatment plan.

5.3.5 Organising a safe discharge and future rehabilitation needs

5.3.5.1 The necessity of multidisciplinary teams for safe discharge

Due to the broad spectrum of illnesses that can occur when dealing with an older age group of patients, caring for older patients was described as reliant on a multidisciplinary team of people. Each occupation played a role in the treatment and rehabilitation of older patients in order to ensure the best chance of a successful discharge:

> *"…there's lots of aspects of the management and the understanding the broader situation which the patient is operating at that really can be performed by other members of the team, you know, the nurse gives you lots of inputs and day to day care, the physio's gonna give you lots of stuff on mobility transfers, OT's [occupational therapist] gonna give you lots of stuff on how they're coping at home, the social worker will give you lots of the social support mechanisms."*

Participant 22, Consultant Doctor

Participants commonly described how decision making would be made in a group context with older patients. For example, discharge decisions would be made in a multidisciplinary team meeting (MDT) in which members of different occupations would discuss their own perspective on how and when discharge should be carried out. Participants who were senior in grade tended to explain the importance of the multidisciplinary team in good discharge decisions and maintaining a successful discharge. A few participants explained that younger patients are typically discharged soon after they are medically fit because it is assumed that the younger patient's social environment matches their functional abilities. In contrast, when dealing with older patients, information on the social environment is often required because older patients who are discharged to an environment in which they

cannot look after themselves, or be looked after, will have had their safety and health put at risk. Additionally, an unsafe environment at home frequently results in the older patient coming back to hospital. Therefore, team decision-making was used as a tool to ensure discharge decisions were well-reasoned and safe for older patients and their carers. Here, a doctor describes how the decision to discharge the older patient had to be collective and mutually agreed upon amongst members of the multidisciplinary team:

> *"… working in stroke, you cannot work on your own… I never make a discharge decision on my own because I see very limited aspect of the patient and I always discuss with others before I tell the patient they can go home. Because it's quite easy for you to go on a medical ward and say 'oh yeah, you're fine, you can go home', but then realise it's complete disaster when they go home because the environment is not suitable for them. Whereas when I do the ward round, I tell them, 'well, I think you're ok from my side, you can go, but I'll need to check with others'."*

Participant 11, Consultant Doctor

Working as a team also presented some disadvantages according to a few participants. A medical student reported feeling less important when working in older patient settings because she believed her lack of experience and expertise implied that she did not bring much to the team. She reported feeling "bottom of the pile". A doctor explained that in order to work successfully, it was important that team members understood their role and worked in a timely fashion or else it affected other members of the team:

> *"… because it is so dependent on dealing with many other people and being one cog in a wheel, if somebody is not doing their job very well or they're not maybe reacting or you know, you don't*

really think that they're assessment is a sound assessment then that can be very frustrating."

Participant 9, Specialist Registrar Doctor

5.3.5.2 The challenge of achieving a timely discharge

One of the most difficult aspects of older patients' care and treatment was often reported to be achieving a timely discharge of the patient from hospital. This theme was frequently mentioned, and when mentioned, the remarks were exclusively related to the difficulty and challenge of ensuring timeliness of a safe discharge. Participants described the process of discharging an older patient to be protracted and difficult. Older patients typically require more assistance when they get home from the hospital and sometimes need rehabilitation. As a result, the older patient often cannot leave the hospital until the medical team is confident that the home care needs of the patient will be met, otherwise the patient's health and wellbeing may be put at risk. Rehabilitation needs may involve dealing with occupational therapists, physiotherapists, or organising access to a residential care home or an intermediate care centre, such as a day hospital. Furthermore, participants explained that a safe and good discharge reduces the risk of avoidable readmissions of the older patient to the hospital.

Participants reported that in many cases the older patient would not be returning to a fully functional lifestyle and it was important to consider each individual case on merit to determine the best way to ensure the discharge is safe and that the patient's health and wellbeing is maintained for as long as possible. For younger patients, the discharge was described as often routine and straightforward. In contrast, older patients discharge was frequently complicated due to their complex health needs. Furthermore, the consequences of the hospital admission and discharge on the older patient's future health were far more uncertain:

"Discharge is very, very complicated especially because when they go home they will not retain the information that they have received, their physical abilities may be impaired so they may not be able to look after themselves, so their mobility could be suspect, they could fall down and do something serious to their hip or head or any other part of the body. They may not be able to come out of the flat or the house for fear of falling down, so they may neglect themselves, isn't it? They may not cook or eat food that they should be getting."

Participant 6, Consultant Doctor

Due to the complex nature of organising a safe discharge, older patients may spend long periods of time in hospital. Participants commonly described the wait for a social care package as long and dangerous for the health of the older patient. Older patients were described as having weakened immune function and prolonged hospital stays put the patient at increased risk of illness and infection. However, in order to organise a safe discharge, certain processes needed to take place prior to the discharge and these processes were often delayed. The contradiction of ensuring future safety at home whilst risking the older patient's health in the immediate future appeared to weigh heavily on many participants and this was commonly reported:

"A lot of patients wait for social work, so they're sitting on the ward completely healthy, but there's a lot of kind of, fences crossed before they're fit to go out, because they need to be safe so there's care packages that needs to be there, equipment that needs to be there and the care packages just take quite a long time…The pathways that the social workers have to take can be quite long…and it is quite frustrating because when patients are in hospital, they've got a decreased mobility, they've got an

increased risk of everything, of UTIs, of falling, they're in an environment they're not sure about"

Participant 15, Junior Doctor

Some participants reported that they knew of older patients who had waited for over a month for a care package to be organised in order for them to be discharged. During that time, the older patient had to wait on the wards despite the increased risk to their health. One participant described how keeping an older patient in hospital may also put their partner at risk if the patient is their partner's main carer:

"We have somebody with an older person who's been wanting to go home for the last four weeks and he should have gone home four weeks ago, his wife has some learning disability, he was the main carer for her, he's also got mild learning disability and we've not been able to arrange a care package for the last four weeks."

Participant 6, Consultant Doctor

A number of participants also described how waiting for social services to take care of their responsibilities in the discharge process was the main factor that appeared to delay older patients' discharge:

"… At any point we probably have half at least of our patients on the [geriatrics] ward that are medically fit and can go, but it is just a case of waiting for an assessment for nursing or waiting for an assessment for more carers or something and unfortunately these things just take a lot of time."

Participant 18, Junior Doctor

5.4 Discussion of findings

The descriptions of attitudes provided in this chapter constitute one of the first attempts to investigate the content of medical students' and doctors' attitudes toward older patients in UK NHS hospital-based settings. Analyses indicated that attitudes toward older patients could be subdivided into two groups: (1) mental and physical characteristics of older patients, and (2) older patients' healthcare needs. The first theme (Section 5.2) was entirely composed of cognitive information (e.g. beliefs and stereotypes) on older patients, some of which were described in positive terms (such as their tendencies to demonstrate gratitude, and their respectful manner) whilst some were described in negative terms (such as older patients' tendency for hostile or aggressive behaviour). These are considered to be cognitive information because they describe attributes or characteristics that older patients are believed to typically possess.

The second theme describing attitudes toward older patients relates to their healthcare needs (Section 5.3). The attitudes described in the second theme comprised of cognitive information (i.e. beliefs and stereotypes) about older patients' healthcare needs, and also included behavioural information. Examples of the cognitive information included reports that older patients commonly presented atypically and nonspecifically, as well as their tendencies to have multiple morbidities and be on multiple medications. The behavioural information described by participants addressed how they had typically behaved in the past with regard to older patients, or thought they needed to behave in the future, in order to address patients' healthcare needs. Examples included the need for clarity and brevity of speech, the need to prioritise illnesses in order to deal with older patients' medical complexity, and the necessity of working as a team to achieve a safe discharge.

The findings reported in this chapter were elicited through the use of the tripartite model of attitude structure (e.g. Rosenberg & Hovland, 1960). Specifically, the interview guide, used to elicit the findings described in this chapter, was constructed in line with the tripartite model of attitude structure. Participants were encouraged to describe cognitive information, affective information, and behavioural information relating to older patients and their care. It was interesting to note that participants did not tend to report affective responses when describing older patients and their healthcare needs and the findings consisted of cognitive and behavioural information. It is therefore possible that affective information was not salient in participants' attitudes toward older patients and their healthcare needs. However, it is also possible that participants were unaware of, or unwilling to, report affective information due to biases inherent in direct attitude measures (described in Section 2.4.2), such as social desirability biases. However, attempts to encourage honesty were made in the design of the study, such as making participants aware that their responses were confidential and that transcripts would be anonymised.

The findings reported in this chapter clearly indicate that the attitudes toward older patients and their needs were highly specific to the medical encounter. Participants did not simply describe their beliefs about older people in general. Instead participants described how older patients appeared to be, or tended to act, in the medical encounter and during their hospital stay. Participants rarely drew on examples of older people in general or older people in society. The findings presented in this chapter are therefore unique in the context of the research that has preceded it. Past research has often overlooked the need to elicit attitudes directly from medical students and doctors to describe older patients and has typically failed to classify attitudes according to the study findings. Instead, some aspects of attitudes have been assumed and overlaid onto results, as can be seen with the use of generic

questionnaires measuring attitudes toward older people (e.g. Kogan's Old People Scale). As identified in Chapter 3, previous research has sometimes assumed that attitudes toward older patients can be measured by questionnaires that were developed for measuring attitudes toward, and specifically referring to, *older people* (Kogan, 1961a; Fraboni, Saltstone, & Hughes, 1990). The findings presented in this chapter clearly demonstrate that the attitudes of medical students and doctors toward older patients were often highly specific to the medical status of the older patient, and the medical encounter between the doctor or medical student and the older patient. The extent that a generic older person questionnaire can capture the attitudes identified in this chapter is therefore questionable. The main strength of the findings reported in this chapter is that attitudes toward older patients were based on descriptions provided by doctors and medical students in a NHS hospital trust in the UK. Therefore the attitudes emerged from the data, reducing the possibility that the collection method constrained responses, as can occur with closed questionnaires. More detailed discussion of the overall study, as well as its limitations, are discussed in Section 6.5, after the remaining findings of the present study are described.

5.5 Chapter summary

This chapter presented part one of the findings from the second study of this thesis. The findings presented in this chapter had two underlying themes; mental and physical characteristics of older patients, and older patients' healthcare needs. The remaining findings of this study (part two) address providing care for older patients as described by doctors and medical students. These findings are presented in the next chapter and conclude the findings of Study 2.

6. STUDY 2: ATTITUDES STUDY FINDINGS PART TWO.

ATTITUDES TOWARD PROVIDING CARE FOR OLDER PATIENTS

6.1 Chapter overview

This chapter includes a description of the themes relating to participants' attitudes toward providing care for older patients, with a focus on the facilitators and barriers to providing care within the social and organisational environment. Whilst Chapter 5 had a focus on describing older patients and their care needs, this chapter details the actual experience of providing that care as described by participants. This chapter includes three main themes: (a) knowledge and skill development through training (Section 6.2); (b) emotional responses to caring for older patients (Section 6.3); and (c) sources of satisfaction and dissatisfaction (Section 6.4). Each of these main themes includes a number of subthemes. All subthemes are described in this chapter and examples from the interview transcripts are provided. The chapter concludes with a discussion of the main findings. The strengths and limitations of Study 2 are provided in the discussion included in this chapter.

The content of attitudes toward providing care for older patients, organised by the themes, subthemes and nodes presented in Table 10, are described in this chapter.

Table 10.

Attitudes toward providing care for older patients: Themes, subthemes and nodes

Theme	Subtheme	Node
Knowledge and skill development through training	Becoming a good doctor to older patients	The underrepresentation of older patient care issues in the traditional medical curricula
		Developing compassion and patience
		Whether dealing with complexity is a teachable skill
		Learning to hone in on the most important aspects of illness
		The changing training focus and performance standards for medics
		The importance of teachers and senior doctors
	Becoming a geriatrician	Getting through the geriatrics rotation
		The unique skillset and expertise of geriatricians and the difficulty of describing it
		Lack of appreciation for geriatricians' expertise
		Historically unpopular and uncompetitive specialty
		Lack of future earning potential
		Unexciting and slow-paced work
Emotional responses to caring for older patients	Fear and anxiety	Not doing enough or knowing enough
		Anxiety about interacting with patients
	Sadness and compassion	Experiencing patient deterioration and death
		Witnessing patient loneliness

		Thinking about the person behind the illness
Sources of satisfaction and dissatisfaction	An imperfect system for older patients	Underserving older people Exclusion in policy and research The extended wait for discharge Staffing levels Bed pressures Time and efficiency pressures
	Dealing with a highly complex patient group	Dealing with communication difficulties Perceived mismanagement of care Less opportunity to cure patients Intellectual challenge Variety of work Working as a team
	Improving the patients quality of life	Getting the patient out of hospital safely Supporting the patient and their family Providing a good death Social justice

6.2 Knowledge and skill development through training

This theme consisted of two subthemes: (a) becoming a good doctor to older patients, and (b) becoming a geriatrician. Both subthemes concerned education and skill development factors that helped or hindered participants in providing care for older patients. However, the first subtheme described these factors as they related to older patients throughout the hospital. The second subtheme described knowledge and skill development, specifically related to the geriatrics settings and treating the geriatric patient. Doctors training in, or trained in, geriatrics, described a different social and organisational environment with regard to knowledge and skill development and therefore different subthemes and nodes emerged. The nodes described in these two subthemes mainly consisted of cognitive information and behavioural information.

6.2.1 Becoming a good doctor to older patients

6.2.1.1 The underrepresentation of older patient care issues in the traditional medical curricula

Participants reported that their medical education had failed to provide them with realistic information about the expected proportions of older patients in hospital settings. All participants, regardless of speciality background and level of training, estimated more than 50 per cent of their patient load comprised of patients over the age of 65 years. A few medical students, and doctors who had recently qualified, reported that it was through practical experience on the wards that they had realised that the majority of hospital patients they would treat would be older patients:

> *"I think medical students, and I would be including [myself] way back when… will not have an appreciation for how many older people are in hospital and… if you remain in hospital or even if*

you become a GP… how much of your workload or your day to day job will be around caring for older people."

Participant 9, Specialist Registrar Doctor

Across participants, there were general reports that medical school had failed to prepare them for the reality of caring for older patients. Many doctors described the problems of not focusing on older patient health issues in the medical school curriculum, to the level and extent that is required in order to be an effective doctor later on in one's career. These participants expressed the belief that the prevailing medical curriculum encourages medical students and junior doctors to see and expect that patients will have a single illness, which may be cured entirely, and that this is often not true in the case of older patients:

"People are wanting to have this sort of rather Victorian medical model of intervening and curing and saying goodbye."

Participant 4, Consultant Doctor

The problem with this view, or "medical model of illness" as it was referred to in some interviews, was that the reality of hospital medicine did not fit this model. In practice, the majority of patients are older than 65 years and many have complex and concurrent illnesses or chronic conditions, of which some illnesses may be incurable. One participant, a consultant in respiratory medicine, estimated that 90 per cent of his patients were over the age of 65 years. This participant went on to explain that high numbers of older patients with chronic conditions affects all medical specialities. However, he believed that this was not reflected in the curricula at medical school, and he described how the chronicity of older patients' illnesses was not taught or received well in medical school education and training:

"It's an issue of disproportion. The sorts of problems they will meet in medical practice both in hospitals and in I think the community have a far greater element of older peoples and chronic disability work in them than most people anticipate. Actually that goes in quite a lot of specialties. So it's actually the same problem that I'm dealing with a lot of the time. If you do rheumatology it's not all fancy immunology, it's people who are horribly disabled with their rheumatoid arthritis. And the same with lung disease, the same with heart disease and I don't think most people who go into medicine have that view. But that's the reality."

Participant 4, Consultant Doctor

6.2.1.2 Developing compassion and patience

This theme was described almost exclusively by doctors, from junior to consultant level, presumably because it involved greater time and experience with older patients. Despite the fact that the cross-section of doctor participants came from different specialties and had different years of experience, they all treated older patients to some degree. Participants typically reported that the more time they spent caring for older patients, the more patient they became with them. Patience was reported as a skill doctors need to exhibit when dealing with older patients because these patients may be slower in their communication or be forgetful. In fact, a few participants reported an experience in which they tried to rush an older patient due to time pressures, and this only served to make things worse by distressing or irritating the patient or their relatives. Developing patience and compassion, two separate skills, were often mentioned together and went hand-in-hand:

"I think you feel like you've got more time for patients even though you might not, but the time you spend is more of a quality time picking up on the bits that you need to and I feel I'm a bit more sympathetic because it's my job to kind of sort people out."

Participant 7, Trainee Specialist Doctor

A few participants described feeling more compassionate after their training as a junior doctor. During the training, the emphasis seemed to be on the ability to be efficient and progress through the various stages of training with evidence of competence. Upon completion of the medical school and junior training years, a number of doctors reported a change in their reaction to, and empathy for, older patients. There appeared to be a movement away from seeing the older patient as a number of medical illnesses or diagnoses that needed to be treated to allow for their discharge, and toward seeing the older patient as a person. One participant had identified a change in her level of compassion for older patients with more experience, but she did not know why this change had occurred.

Seeing the patient as a person and thinking about their feelings, their history and their family, was mostly mentioned by doctors and rarely described by medical students. One participant, a doctor specialising in geriatrics, described an incident in which a medical student training under her supervision needed prompting to think of an older patient as a person. The participant described a situation in which an older patient required a PEG tube to be fed intravenously. The medical student had to describe the ethical complications of this medical care decision as part of their coursework, but approached the participant for help because she could not think of any ethical issues. The doctor described trying to make the medical student see the patient as a person with the right to choose care rather than a diagnosis that needed to be treated:

"I think it's just the way that medical students think. One of the students said to me last week, she said 'oh I've been given this chap who's just came to hospital and he's had a PEG put in and I don't really know what to write about"… and I was like 'well what are the ethical considerations that you would want to consider? What's his disease process that's led to him not being able to eat? What problems is this process going to have functionally and on falling and on continence? And did he have capacity? Who decided he should have a PEG tube and what problems has he now got now he's in hospital?' She was like 'oh God, hadn't really thought of that', and after that her face lit up and off she went."

Participant 7, Trainee Specialist Doctor

6.2.1.3 Whether dealing with complexity is a teachable skill

A few participants, mostly consultant doctors, explained how they believed the skills needed to treat older patients effectively, cannot be taught. These participants described the complexity that doctors have to deal with, when treating older patients, and generally defined this complexity as including the effects of multiple morbidities and multiple medications, communication difficulties, and having limited time. One of the participants claimed that dealing with these complex problems requires "on the job training".

Another participant expressed the belief that medical school education cannot, in principle, prepare individuals to be good doctors to older patients. More specifically, this participant claimed that medical education only taught students typical prototypes of illness which are very much theoretical. In actual practice, older patients present atypically or unusually because of the complicated interaction of factors affecting symptoms, such as the type and severity of their illness, their medication status, and their biological and functional age. There are also possible complications and challenges arising

from the social and communication difficulties that can affect most aspects of history-taking and treatment decision-making with older patients. Therefore, this participant expressed the belief that only practical experience as a doctor to older patients can prepare or equip doctors with the skills needed to effectively and successfully treat this patient group. Essentially, consultant doctors who predominantly worked with older patients, tended to agree that it was practical experience with older patients which best taught doctors how to deal with complex problems. Specifically, these complex problems included atypical prototypes of illness and uncertainty in decision-making, which are more common in reality but rare in medical textbooks:

> *"Whatever you read in the books got nothing to do with what you see in the patient. Books are very good and are there very clearly black and white whereas it's almost all of them [older patients] are shades of grey..."*
>
> Participant 11, Consultant Doctor

The idea that dealing with complexity was learnt on the job, rather than during medical education, appeared to be a common belief of the more experienced doctors. When explaining why she took this view, one participant stated that as a doctor, unlike as a medical student, problem-solving is an important part of the job and "there isn't an option to give up and go and ask someone else". She implied that the development of this skillset depended on the autonomy and sense of urgency that comes with the job of being a doctor. Another consultant doctor similarly reported that a good doctor is created from reflection on practical day-to-day problems and extending one's theoretical medical knowledge through adaption and change, in line with real-world presentations of health and illness:

> *"So I think it's the knowledge base that they have and then it's the training and the experience where they're able to actually*

reflect on what they've learnt using the practical problems… And so it's that literal flight, adapt, change that gets better over time with experience and only time can do that. I don't think… any amount of time spent in medical college or medical school is going to give you that expertise."

Participant 12, Consultant Doctor

In contrast, one consultant doctor claimed that teaching medical students and junior doctors how to deal with the complexity often seen in cases involving older patients is possible, but was not taught well at present. This participant explained how he considered dealing with complexity to be a specific skillset which could be taught by the right educators. He also explained that the doctors competent in dealing with complexity, especially geriatricians, use deductive reasoning to determine their actions regarding older patient care, and they need to teach students and doctors how they do this. Essentially they would have to communicate the steps they take and illustrate the logic that underpins their decision-making in older patient care decisions:

"… the very best geriatricians, the very best trainers, will teach me how to assess someone who's off legs or how to assess someone with visual impairment. They're skills that can be learnt. There are problems that you can have a deductive reasoning to work out. But that deductive reasoning is not taught that well in medical schools."

Participant 21, Consultant Doctor

6.2.1.4 Learning to hone in on the most important aspects of illness

A few doctors reported that with experience, they have gained greater ability and confidence in determining what to treat and what not to treat with regard to older patients. Typically, older patients have more concurrent illnesses than younger patients and the determination of which symptoms and illnesses need to be prioritised was deemed to be a crucial part of their effective treatment:

> *"… with experience you'll probably learn… where [to] prevent, where you need to palliate, where you just have to say you know your hands are tied and you can't do anything"*

Participant 12, Consultant Doctor

Another participant explained that with experience, she learnt to see how the issues affecting the older patient's health were interlinked and how social and psychological issues can affect the medical health of the older patient. By seeing these relationships, this participant explained that she could deal with the root cause of the hospital admission rather than dealing with the medical symptoms which had resulted in the hospital admission:

> *"I think the more senior you become you go, 'well actually this medical problem isn't new or different, the actual problem is that they need an extra hour of home help at home.' … I think you just get better at working out what the issue is rather than investing all this energy and stress into the medical stuff. I think you become more aware of everything else that could be interplaying to get them here."*

Participant 9, Specialist Registrar Doctor

6.2.1.5 The changing training focus and performance standards for medics

The training focus for medical students and doctors was mentioned by a range of participants. Doctors in more senior grades described positive and negative aspects of current training standards. Training in patient-centred care and communication skills with patients of all ages had improved over the years which participants credited to the increased emphasis on doctor-patient communication (for all patients). One participant explained that the pressure on doctors to decide their specialty choice very soon after completing medical school was a bad influence on the individual's education and learning. He expressed the belief that medical school education should be about learning medical and clinical sciences, rather than deciding which specialty to work in as a future career.

Similarly, two other doctors of senior grades also stated that the current training standards did result in a narrower breadth of medical knowledge. These two participants also attributed this to the relatively recent requirements to specialise or decide a specialty as soon as possible. Both of these participants also described their own experiences of having tried and considered a few specialties, before committing to the specialty that they eventually became a consultant practitioner in. They both described their experiences as useful and positive and that it was unfortunate that in recent years, medical students and junior doctors do not have such an opportunity to broaden their perspectives and further their medical knowledge in the same way. For example:

> *"I think that's a shame because I was very lucky. Not only did I do six or seven different medical specialties but I spent six months doing anaesthesia, which really broadened my horizons in terms of my medical skills, knowledge and outlook on life. And they haven't got that ability to do it anymore. They can't dive in and out of specialities."*

Participant 21, Consultant Doctor

One medical student explained that she felt pressured to know what specialty she wanted to work in which contrasted with the training her parents, who were both doctors, had received. As a result, she felt this had implications on her medical knowledge and clinical skills:

> *"I know with my parents, when they were training, they got a lot more hands on time, and they needed that to become better doctors. But because we've got, like, the European Time Directive now, we can only work a certain number of hours a week… and as they're…, asking us to specialise earlier, it's leaving us with a very limited knowledge of a person or a patient or problems, and things like that. So, if you did go into something like health care of the elderly, say, then you might not have much of, as much a broad knowledge, as someone else that trained, you know, 20 years ago"*

Participant 14, Medical student

6.2.1.6 The importance of teachers and senior doctors

There was a tendency for participants, regardless of seniority or specialty, to describe the influence senior doctors and consultants had on them when participants were medical students or junior doctors. In most cases, participants who had chosen to specialise in geriatrics claimed that they were influenced by an inspirational teacher or role model who had been involved in their medical school education or junior doctor training. For example:

> *"I worked for Consultants who were very thoughtful, very methodical, very intellectual, clearly cared a lot about their patients and clearly found them intellectually challenging but also*

emotionally rewarding to work with. And it was impossible in that context not to get swept up in the excitement and the enthusiasm and the brilliance of what geriatric medicine was able to deliver to these patients."

Participant 22, Consultant Doctor

Two participants, consultant doctors from different specialities, explained that role models or inspirational teachers are very important to junior doctors. They reported that the ability to deliver good care is learnt from watching senior doctors. Both of these participants claimed that they could identify parts of their current practice that they had picked up from inspirational teachers during their medical school and junior doctor training. The long-lasting effect of role models and inspirational teachers was reported across a variety of participants, with a number describing the importance of role models in determining future career specialty. A number of medical students reported being undecided about whether they wanted to specialise in surgery or medicine. There were some reports that these future career choices were directly affected by the amount of interest or enthusiam other doctors expressed in them.

Specifically, inspirational teachers were described as the doctors who were passionate about the speciality, kind and sensitive toward the patients, clinically knowledgeable, and had values that the participant shared. Across the different medical specialities, participants commonly reported being interested in a particular specialty, but changing their mind after some experience in that field because they did not identify a suitable role model. This did not appear to be specific to older patient care, but generic to choosing a future specialty:

"… what you are looking for is a role model of someone who wants what you want out of life and has found it in that

profession, and therefore, you can see it's possible. That's what I was looking for with oncology and I didn't find a female oncologist that fitted that and was that role model for me. So I think that probably was quite a bit contributor to why I didn't want to do it."

Participant 19, Junior Doctor

One consultant doctor reported changing this future specialty choice after not getting along with a senior doctor, further emphasising the importance of senior influence. In short, the power of role models and inspirational teachers was well summed up by a consultant doctor when he was describing why he changed his specialty choice after experience in that particular specialty:

"And even when you're a doctor in training, your consultant and your registrars are, they're role models… They're who you want to be in another 10 or 15 years."

Participant 22, Consultant Doctor

Another participant, a medical student, described her difficulty in finding a suitable role model. She explained that she did not like the personality and communication style of the female consultants, especially female surgeons:

"I think there's some… complex there about them, they have to be… three, four times better than their male counterparts to actually get noticed. So, they become quite blunt and cut-throat… They're very sure of themselves, very confident, but they do belittle people."

Participant 14, Medical student

6.2.2 Becoming a geriatrician

6.2.2.1 Getting through the geriatrics rotation

Many participants had completed a rotation in geriatrics as part of their medical school or junior doctor training. A few medical student participants reported that they had been dreading the geriatrics rotation because they expected it to be difficult and demanding, mainly due to the complexity of older patients' medical conditions as well as the challenges associated with communicating with this patient group. The negative media attention that plagues older patient care in NHS hospital settings was also mentioned as a reason as to why a medical student was not looking forward to her geriatrics rotation. Participants described having preconceptions that working on a geriatrics ward with very old and frail patients was going to be unappealing:

> *As a medical student you go "oh God, health care of the elderly it's smelly, it's difficult, there's lots of stuff going on, it's boring."*
>
> Participant 3, Medical student

Some participants did report feeling very unhappy during their geriatrics rotation. One senior geriatrician explained how he was almost put off the whole speciality based on his experience as a junior doctor:

> *"Interestingly, if you'd asked me as a second year SHO [Senior House Officer, i.e. junior doctor] whether I wanted to be a geriatrician I would've said I would probably have rather left medicine than be a geriatrician. I had a very negative experience of it as a medical student, when I was asked to do geriatrics as part of my SHO rotation, I threatened to leave the training rotation I was on and resign my post and my training program director essentially bullied me into doing geriatrics."*
>
> Participant 22, Consultant Doctor

It appears that negative experiences of working with older patients tended to concern the work environment, colleagues, and the quality of training, rather than relating to the older patients themselves. One participant, expressing dissatisfaction about her practical experience during her medical school course, blamed the design of the training and the way in which there was little hands-on training. As a result, when she worked as a junior doctor with older patients, she felt she had been inadequately prepared and struggled in the role:

> *"… you're petrified because you haven't seen this form… I didn't even know how to dose warfarin because and so because I'd never seen a Warfarin dosing chart… they're [medical students] coming for ward rounds, but they don't know the patients, so it's just completely pointless. It's just a load of people talking about things that they don't understand."*
>
> Participant 15, Junior Doctor

Two participants described their recollection of doing the coursework required for the geriatrics rotation at medical school, which was their main focus. One recalled thinking he must "just get through it". Neither participant could recall experiencing much ward-based practical tasks:

> *"I remember my healthcare in the elderly attachment [i.e. geriatrics rotation] was three weeks and you had to do… a project on two cases and I very rarely got involved in the other stuff that was going on in the ward because you think 'right in order to pass this I've got to do a brilliant case presentation, let's do that' and I don't really feel I've got much out of it in terms of other learning and other experiences."*
>
> Participant 7, Trainee Specialist Doctor

Generally, the reactions to the practical experience were mixed, with some reports of learning quickly and developing clinical skills and this contrasted with those who found it difficult, pressured and had no intention to work in the specialty again. Not one medical student or junior doctor participant reported an interest in specialising in geriatric medicine as a future career. Senior participants commented that whilst trainees may find geriatric medicine to be better than they might have conceived it to be prior to the experience, the short rotations in medical school were simply not enough time for medical students to develop an interest in geriatrics. This is due to the demands and pressures that they will suddenly be faced with in the speciality. A few participants claimed that learning to enjoy this speciality and overcoming some of the pre-existing negative attitudes associated with it, may take longer and require more practical experience than other specialities.

6.2.2.2 The unique skillset and expertise of geriatricians and the difficulty of describing it

Participants, both in and out of the geriatrics specialty, had great difficulty describing the skills and expertise of geriatricians. The skills needed to deal with older patients, and the typical illnesses that they present with, were described as abstract and subtle skills which are not immediately obvious to more junior medical staff, such as medical students and junior doctors. One participant explained that these skills are often difficult to physically see in action, difficult to teach and, as a result, difficult to appreciate by those outside the specialty. A few of those specialised in geriatric medicine explained that even the geriatricians themselves have difficulty in describing their job and skills to others:

> *"But I think geriatricians have great difficulty in describing what it is exactly that they do. But there is an increasing recognition that there is something that we do that is specifically related to the*

care of older people that seems to work and improve their care. I think if we can't define it I think it's very difficult to expect other people to understand it."

Participant 9, Specialist Registrar Doctor

The participant quoted above also went on to explain that other specialties have the benefit of having a bodily organ which they are the expert on, as well as a range of interventions which they commonly conduct. Therefore, many of their skills and expertise can be seen or witnessed. Geriatricians, however, have a specific skillset unique to them which less often involves physical interventions and acute emergencies and is therefore seen as more abstract.

A consultant Geriatrician remarked that some of the confusion surrounding their job role may be related to their specialty name 'geriatrics' being somewhat of a misnomer. He explained that 'geriatrics' or 'elderly care' implies that specialists in this field are better equipped to deal with older patients. However, being older is simply a matter of chronological age and it is not chronological age which is relevant to their speciality, but frailty and multiple morbidities. As such, chronological age is used as a proxy for complex care needs, but it serves to confuse others:

"I tend to think of myself not so much as an expert in older patients per se, in that old age just reflects a chronological number of years on this planet, there's no reason really that I should be any more expert dealing with someone that's been on this planet for 90 years and someone who's been on this planet for 55. But it's more to do with frailty so I would say that geriatrics in lots of ways are misnomer, and that what we're really experts in is not age but experts on frailty, or experts in comorbidity or experts in comorbidity plus frailty and it just so

happens that the incidents of frailty comorbidity increases as the patients happen to get older. So age to me is in many ways an irrelevance."

Participant 22, Consultant Doctor

Multiple participants pointed out that geriatricians do have specialist knowledge, despite the stereotype that they are general physicians based in hospital settings. Their specialist knowledge was described as relating to the ageing process, comorbidities and multiple morbidities, communication, and issues of consent. One participant explained that those specialised in geriatrics have enough knowledge and expertise to confidently move away from traditional guidelines in treating older patients and that this is where their knowledge and skills lay. Typically, the general guidelines for the treatment of illnesses tend to assume that patients have one illness. As a result, recommended treatment for the illness, such as a specific drug regime, is made under this assumption. In contrast, older patients often have complex medical and drug histories and therefore the application of the general guidelines, which have been developed under the assumption that a patient has one underlying acute illness, may actually prove detrimental to the older patient. Therefore, the geriatrician uses their expertise to recognise and treat a complex picture of multiple simultaneous illnesses, and identify the safest course of treatment on a case-by-case basis.

A few geriatricians believed that their own skillset primarily included being able to manage uncertainty and hold different viewpoints simultaneously. These participants explained that care and treatment decisions in geriatrics are often not straightforward, and the results of treatment decisions may be uncertain or unpredictable. Consequently, the geriatrician has to keep in mind all the options and deduce which is the most appropriate one, and remain aware that any decisions or treatment strategies may need to be adjusted or abandoned. When one option or decision is unsuccessful, the

geriatrician must have a contingency plan. These examples highlight the management of uncertainty that can arise at every stage of the care and treatment provided by geriatricians.

Geriatricians appear to have unique knowledge regarding the ageing process and the management of complex comorbidities. When describing the unique expertise of the geriatrician, however, a number of geriatricians described their skillset rather than their knowledge base. These included descriptions of "looking at all the multidimensions", "rationalising decisions", "arranging" and "coordinating" a discharge, "making plans" and "discussing" care with the patient or family. A consultant in acute medicine suggested that geriatricians are not always aware of their unique expertise and believe that they are just practising good general medicine, when in fact they have a special and unique knowledge base from which to draw upon:

> *"They had a very brief trial of Gods [laughs], Geriatricians Of the Day coming to see their patients. But I think in a way they almost take the view that what they [geriatricians] do is general medicine and they just do a thorough general medicine assessment and they feel that we should be able to do that too… I'm not saying they don't think they have special skills because obviously they do… Sometimes I get the impression that they think we're lazy or not thorough and that's why we're not doing it, so if they just told us to do it then that would be a better solution than them coming for specialist input. Whereas I don't agree with that…"*
>
> Participant 23, Consultant Doctor

There was a tendency amongst the junior participants, such as medical students and junior doctors, to describe geriatric medicine as a "soft" specialty. When defining the meaning of soft, participants differed in their

interpretations. A medical student explained that she believed that decisions in the soft specialties, which she thought included psychiatry, geriatric medicine and general practice, were very subjective and less scientific because there was often uncertainty regarding illness, diagnosis, and the best course of treatment.

Other participants described how the challenge of medical care provision to older patient groups lay mainly in the management of people. This included communication with the patient and their relatives as well as liaising with others including support services and social services. As a result, geriatrics required "soft skills" such as that of people management and communication. Multiple doctors who were not in the field of geriatrics explained that geriatrics was a soft specialty, in part, because the characteristics of the geriatrician need to be soft. This therefore related to aspects of their personality, such as their capacity for patience and tolerance:

> *"I think to be a geriatrician you need to have a slightly softer side to your character"*
>
> Participant 21, Consultant Doctor

> *"I think the problem with geriatrics is… that to be a good geriatrician you do need to be patient, tolerant, calm."*
>
> Participant 17, Trainee Specialist Doctor

Whilst the unique expertise and skillset of the geriatrician was difficult to describe, even by those in the discipline, some participants noted that doctors from other specialties were beginning to appreciate the difficulty of geriatrics and the job of the geriatrician. One participant explained that recent trends have seen hospital-based specialities becoming increasingly more specialised, in that there are greater subspecialisations (a specialty within a specialty). This "superspecialisation" of other specialties was said to

result in other doctors being less equipped to deal with frail older patients, who typically have multiple concurrent illnesses. In contrast, geriatric medicine still maintained a broad focus, with geriatricians needing to maintain broad clinical and medical knowledge to deal with the range of health problems which may affect older patients. Here, a consultant geriatrician explains that doctors in superspecialised disciplines are beginning to realise that they do not have the expertise to care for complex older patients:

> *"I increasingly find that the more I go to meet other specialties… the more I go to show them what Geriatrics can contribute to their workload, they seem to completely welcome the contribution with open arms…. Because they have, almost every other single ward and specialty has become very superspecialised. It's almost as if the last 5, 10 years has been a dawning in colleagues' heads that they no longer have the body of expertise they need to look after these patients."*

Participant 22, Consultant Doctor

Another participant suggested that geriatric medicine does not have high-profile illnesses that attract funding, and this may contribute to the lack of recognition of how complex and difficult the field can be. The typical work of a geriatrician involves a large number of simultaneous, smaller illnesses that interact to cause a major problem for patients and their health. Therefore, those outside the field may not really know what geriatricians do, and what battles they face:

> *"I don't think even a lot of my physician colleagues give the credit for how complex it is. Because the difference is if you're a specialist in some speciality, you have big named illnesses which has got the advantage of attracting funding and resource and*

everything. Whereas when you're looking at care of elderly kind of patients, a number of them are quite small ones but then all of them put together becomes superadditive. The sum is more than the parts."

Participant 11, Consultant Doctor

6.2.2.3 Lack of appreciation for geriatricians' expertise

When describing why they did not want to specialise in geriatric medicine themselves, some medical student and junior doctor participants explained that older patients are pervasive across most of the hospital disciplines. A doctor can expect older patients to comprise the majority of their patient load in most specialties (even general medical specialties), with the exception of paediatrics. In most general and acute wards, participants described how over half of the patients are likely to be over the age of 65 years. As a result, these participants claimed that they did not have to specialise in geriatrics because they will most likely be seeing older patients most of the time regardless. They therefore did not need to restrict themselves to only older patients, as a geriatrician would. Furthermore, if a participant went into another specialty, such as a particular subspecialisation of surgery, they can learn to deal with older patients as well as learning surgery, rather than simply learning to treat older patients. In summary, multiple participants described how their lack of interest in geriatric medicine was related to their ability to apply their learning during medical school rotations (approximately three weeks), or junior doctor rotations (approximately six months) in geriatrics to whichever specialty they pursue in the future:

"… you can apply a lot of the principles that you've learnt from it [geriatric medicine] to other specialities… So I guess that might be a reason why other people would not consider geriatric

medicine because they can see it being applied in their own career path."

Participant 8, Medical student

This suggests that many medical students and junior doctors feel that the three week or six month rotations in geriatric medicine are sufficient to develop their skills with older patients. This is therefore indicative of an underlying lack of appreciation of the skills and expertise of those in the specialty.

Interestingly, the idea that geriatricians are not the only doctors uniquely qualified to treat older patients was put forward by a consultant geriatrician. He explained that many doctors may see themselves as experts in older patient care because older patients may make up a considerable proportion of their patient load. He used this explanation as a reason for why medical students and junior doctors may not value the discipline; because they think that geriatricians are not unique in their expert qualifications to treat older patients:

"So you can't say that we are the sole repository of either expertise or experience when it comes to older people. If you ask general practitioners they would say, 'yes it's absolutely core to what we do', you know, 'what do they know in hospital?...we see people throughout their life cycle so we have an even better view on this sort of thing'… if you're an orthopaedic surgeon you can't just say that, 'I'm a younger persons orthopaedic surgeon'… the people who break all sorts of things are old. That goes for a lot of things. You know, the people whose hearts stop working are predominantly old. People who can't see are predominantly old… They [doctors in other specialties] know about mobility problems,

getting people into clinic and communication problems and so on and so forth, you know."

Participant 4, Consultant Doctor

6.2.2.4 Historically unpopular and uncompetitive specialty

The devaluation of geriatric medicine regarding geriatricians and the work they do, was typically expressed in the ideas that the field was uncompetitive, unpopular and lacked prestige. These beliefs appeared to be widespread and long-lasting given that they were reported by medical student participants as well as consultant doctor participants who had begun their specialisation into geriatric medicine decades earlier. Some participants pointed out that, historically, geriatric medicine has been unpopular as a specialty choice, and this resulted in a less competitive entry process. Interestingly, the unpopularity and lack of competitive entry into geriatrics was described by those in geriatric medicine as well as those not in the field. For example, one of the geriatrician participants explained that this specialty was not the one he originally wanted to work in:

"I was from overseas, so you wouldn't get into a speciality of your choice and geriatrics was the easy option to get into"

Participant 6, Consultant Doctor

Another participant, a consultant geriatrician, described the effect of working in a specialty which was traditionally unpopular and deemed uncompetitive. He described how he could identify, over time, the doctors who intended to work in geriatrics and the doctors who ended up in the specialty because they could not get into their first field of choice:

"Historically, there were two types of people that were into geriatric medicine in the past… There were the people that were

in geriatric medicine for the right reasons that wanted to do it, that were the missionaries… then there were the ones that got into it because they couldn't do anything else. And that distinction used to historically exist. And there are still some of those Physicians kicking around and if I think of any Geriatricians that I know of who have taken early retirement due to stress or who have become disillusioned or who are bad role models, they're generally the people that got into it for the wrong reasons."

Participant 22, Consultant Doctor

This participant also noted that the divide had a considerable negative impact on the specialty of geriatrics, and he expressed the belief that working under a geriatrician who is not enthusiastic about their job may have driven junior doctors away from the specialty:

"I started working in NHS about 17 years ago… A lot of people went into geriatrics by default because they couldn't get into anything else. And that was nearly destroying the speciality…. there were pseudo-cardiologists, pseudo-respiratory physicians, who were doing geriatrics. And if you're going to work for somebody like that, you're never going to follow that speciality."

Participant 11, Consultant Doctor

Many participants tried to explain why geriatrics was an unpopular specialty, even in the present day. Participants reported not knowing many people who wanted to work in the specialty:

"… a lot of my friends wanna be GPs but then I've got a lot of friends who wanna pursue surgery.... but it is interesting that I don't know a single person that says 'I wanna be a geriatrician'."

Participant 1, Medical student

A few participants also expressed a lack of understanding as to why a junior doctor would choose to specialise in geriatrics. For example:

> *"… because for me it seems, I didn't completely understand why you'd want to choose to do that specifically."*

Participant 10, Medical student

Participants who were currently working in geriatric medicine often reported that the field was not as unpopular and uncompetitive as it has been in the past. However, they stated that it had not yet achieved parity with some of the disciplines considered more prestigious and competitive, such as respiratory medicine, cardiology and gastroenterology. Reflecting on why geriatric medicine was still suffering from a lack of interest from medical students and junior doctors, a few participants suggested that those studying medicine today will most likely still hear portrayals of the field in legacy terms, as uncompetitive and unpopular. This is especially so if they are discussing it with senior doctors, doctor relatives, or encountering its portrayal in the media. They generally suggested that geriatric medicine has not yet shaken off its past image.

6.2.2.5 Lack of future earning potential

Another reason mentioned for the unpopularity of geriatric medicine was the lack of private earnings as a future source of income. Geriatric medicine was typically described as not being a particularly lucrative career in that geriatricians do not make large amounts of private income, should they want to work outside of the NHS:

> *"But they [medical students] don't see it as something that has much kudos or private earnings… I'm not the one with the*

Mercedes, you know the McLaren Mercedes down in the consultants' car park… those are not being driven by Geriatricians so it is true that Geriatricians don't make a lot of private income. So the medical students are right about that, if they're in medicine for the private income, they should not choose geriatrics end of story, 'cause they're not gonna make the money."

Participant 22, Consultant Doctor

6.2.2.6 Unexciting and slow-paced work

A number of participants described their stereotypes regarding the nature of the work in geriatric medicine. Specifically, the work was expected to be boring, unglamorous and lacking in excitement. In relation to other specialties, such as emergency medicine or surgery, geriatric medicine was reported as slow-paced and lacked opportunity to cure patients and save lives. This particular stereotype of the nature of the work was most commonly reported by medical students and junior doctors who did not have any substantial or extended experience of the specialty. Typically, when asked to describe an 'exciting' role, participants reported specialties in which they believed doctors could intervene in an acute situation, often with a practical procedure, and had the opportunity to save a patient's life. Typically, working with older patients required careful methodical medical care and did not often involve acute situations. One participant described older patients as often presenting with an accumulation of common illnesses which were neither particularly rare nor exciting to treat:

"… there's a lot of ordinary illnesses in elderly care… The idea of 'oh this patient's here because they've had constipation for how many days'. There's just stuff like that... Boring, as in it's not something new. Its ordinary things…"

Participant 24, Junior Doctor

The chronic health complaints typical in older patients were also mentioned by junior participants who had no intention of specialising in geriatric medicine in the future. There were many descriptions of the chronic progression of disease in the older patient in conjunction with the accompanying feeling that the doctor has not fixed or treated the patient's illness. Participants contrasted this to more practical specialities which involved more hands-on procedures, interventions and treatments. The perceived lack of practical procedures or acute emergencies in geriatrics was mentioned as a reason for not wanting to specialise in the field. It appeared that medical students and junior doctors were unsure of what geriatricians did to improve the care of older patients if they did not focus on interventions and procedures.

Additionally, junior participants reported the requirement for geriatricians was to be careful, thoughtful and delicate when delivering medical treatment due to older patient fragility and the risk of complications. One participant reported that the gentle and cautious care required for older patients may conflict with students' and junior doctors' preconceived beliefs that being a doctor is fast-paced, exciting and dramatic:

> *"… with geriatricians, they're just sitting there being careful. I guess, to put a sporting analogy onto it, being a geriatrician's a bit like being a chess player whereas being a surgeon's like a footballer. Which would you rather be?"*

Participant 10, Medical student

Another participant expressed the belief that because caring for older patients was typically slower-paced and involved being cautious, there was an

assumption that the geriatrics field was popular with lazy doctors. This participant described this as a stigma around working in geriatrics:

> *"I think people perhaps perceive it as being quite slow paced… a lot of the patients are in for a long time and there's probably a bit of a stigma around it. I think because a lot of doctors are quite competitive, specialties like healthcare of the elderly, psychiatry, GP, there's a bit of a stigma around, thinking its lazy people who go into that kind of thing…"*

Participant 20, Junior Doctor

There was a tendency for doctors, across the specialties and seniority levels, to compare older patients to children, explaining that the two groups can present similarly and may involve performing ordinary and boring tasks. Despite these similarities, it was suggested that children can be more rewarding to treat because they are more engaging and uplifting:

> *"A lot of children may present with similar things as adults, as elderly care, but children are cute and people smile at them. They make you laugh. With older people you just think… 'they're old and getting towards the end of their life' kind of thing."*

Participant 24, Junior Doctor

It was suggested by those working in geriatrics that doctors in other specialties, such as surgical-based specialties, may see themselves as responsible for the most challenging part of the medical care. They therefore feel they require their hospital beds to be freed up to allow them to continue their highly valued medical work with other patients. As a result, multiple participants, working in and out of the geriatrics specialty, claimed that geriatric wards were sometimes seen as a place to put older patients in order to take them off beds in more fast-paced specialties. Whilst there, the

geriatrician can organise the social package and safe discharge of the older patient, defining the geriatric ward as an intermediary area of care between specialist medical attention and discharge:

> *"… I think geriatricians are looked down upon to a certain extent and it's kind of a bit of a dumping ground. You know, 'Oh please take this old person 'cause I just, you know, I couldn't be bothered to try and sort out all their millions of problems.' It's kind of the geriatrician is the 'oh well they'll just take that person off but they don't…they're not specialised in anything' like say the cardiologists or the whatever else."*

Participant 13, Consultant Doctor

6.3 Emotional responses to caring for older patients

This theme consisted of two subthemes: (a) fear and anxiety, and (b) sadness and compassion. This theme exclusively drew on affective information and most of the emotions and feelings described were negative in that they are emotions individuals generally seek to avoid. The nodes within each subtheme describe the source of the emotions experienced.

6.3.1 Fear and anxiety

6.3.1.1 Not doing enough or knowing enough

Participants predominantly described negative emotions as the feelings they most commonly experienced when working with older patients. Junior doctors described feeling self-doubt, anxiety, and guilt, when they witnessed the older patient's health deteriorate. Older patients' decline and death sometimes led to participants' questioning whether they had done enough for the patient, and whether the death was natural or caused by a knowledge deficit on the part of the doctor. Typically, these feelings of self-doubt were

only described by junior doctors. Medical students did not make patients' treatment decisions and generally only offered a supporting role whilst they completed their medical school course. However, junior doctors were responsible for making decisions and looking after patients directly. It appeared that this role sat uneasily with them at first, because they were aware of their limited medical knowledge when compared to more senior members of the team. This consultant doctor described how he felt witnessing death when he was a junior doctor:

> *" At that time you know you always have that guilt. Have I done enough for the patient? Have they died because of my knowledge deficit?"*

Participant 12, Consultant Doctor

Junior doctors also reported the anxiety they felt about missing diagnoses and making inaccurate diagnoses when evaluating older patients. One participant described junior doctors as constantly worrying about missed diagnoses generally. The participant described how this anxiety was highest with older patients because of the communication issues typically associated with this group of patients.

A few of the specialists in geriatrics or stroke medicine explained how they sometimes noticed junior doctors appeared uncomfortable with older patients because of an underlying fear of making errors or being uncertain of how to proceed with care. Furthermore, this fear manifested in negative reactions which the junior doctor may not be aware of:

> *"And I think that a lot of doctors do find frail older patients terribly intimidating, but you wouldn't necessarily get them to admit to that, you'd get them all sorts of other abhorrent reactions from them like, 'why bother, they're going to die*

anyway, they're at the end of their life, it's a hopeless case, there's nothing I can do', and I think that these things are often abhorrent reactions, sort of manifestation of fear or uncomfortableness or difficulty. So yeah, I think they are afraid but they wouldn't necessarily acknowledge that, and I think that when I was a junior doctor I was the same."

Participant 22, Consultant Doctor

6.3.1.2 Anxiety about interacting with patients

Medical students and junior doctors provided examples of feeling anxious when interacting with an older patient. A few medical students reported feeling "in the way" and uncertain about interacting with some older patients. Here, a medical student comments on her peers' anxiety at the beginning of their ward experience:

"I think a lot of medical students going onto the wards for the first time, it is very daunting… especially like the younger medical students, they're just completely floundering… it's almost as if they forget how to talk to another human being… I think people can panic when they go onto the wards if they've had no experience talking to elderly people who are ill, or people who may be dying, then it can be very daunting and I think you can flounder and be like 'what do I do? What do I say? Should I interact with this person differently?'"

Participant 3, Medical student

A junior doctor explained that she still felt concern about the doctor-patient encounter, especially regarding the older patient's impression of her. She

described the need to earn the respect of the patient, as opposed to a consultant who she assumed would already have it:

> *"I think that's because I'm quite worried about how the patient feels about me, whereas I think a consultant has that respect and feels like they don't need to earn it anymore."*

Participant 19, Junior Doctor

6.3.2 Sadness and compassion

6.3.2.1 Experiencing patient deterioration and death

Much of the emotions experienced as part of caring for the older patient appeared to be negative. A common emotion was sadness, and often the explanation given involved witnessing an older patient's deterioration and, sometimes, death. This was often reported by medical students and junior doctors and was sometimes accompanied by remarks alluding to their feelings of helplessness and hopelessness for the older patient and his or her health. Many participants explained that the source of their sadness was watching the decline of older patients and not being able to prevent it:

> *"I personally can find health care of the elderly wards quite depressing because there's lots of sick people…I mean, obviously there's lots of sick people in hospital but lots of these people are very ill and some of them are dying and are going to die and that can be quite sad and you know that there's very little that you can do to help them sometimes and that's pretty awful."*

Participant 10, Medical student

Interestingly, a junior doctor reported she had never experienced a patient's death during her medical school training. During her junior doctor training on

a geriatrics ward, however, patients under her care had died and she reported the sadness and difficulty of dealing with these deaths:

> *"High mortality, which has been quite difficult to come to terms, I've never really known a patient to die as a medical student and several have died whilst I have been working as a doctor. It's been difficult getting to know the patient and then coming in on the Monday morning and they have passed away over the weekend."*
>
> Participant 20, Junior Doctor

Sadness at witnessing older patients' decline in health or death was not often mentioned by those who had more experience of practicing medicine in hospital settings. A medical student reported noticing how senior doctors appeared to cope well with decline and death. She believed this was because experienced doctors may have developed coping mechanisms to deal with death and decline which she had not yet developed:

> *"I think that maybe there's a balance. I think maybe more people are more academic about it, but I think the really kind of empathetic and understanding doctors have maybe experienced the hopelessness but found a way of dealing with it."*
>
> Participant 2, Medical student

This view was supported by the comments of a more senior participant who described how, with experience, the feelings of sadness diminish because doctors become more knowledgeable and more realistic about what can and cannot be done in the provision of medical care for the older patient:

> *"Yeah, as a medical [student]… it's always hard to deal with death, even as a first year junior doctor it's difficult to deal with death because it's almost as though you've failed. But I think*

with experience you think really there's only so much you can do. You can cure people, you can palliate people but you can't prevent death."

Participant 12, Consultant Doctor

6.3.2.2 Witnessing patient loneliness

Some participants found caring for older patients saddening because older patients often appeared to be lonely and lacked family support or visits from relatives. As a result, sadness at seeing the older patient's decline and death was compounded by witnessing the loneliness and isolation of the patient through this journey:

"The saddest thing for me anyway is just when you see a really lonely older person. So someone who doesn't have the social support around them anymore 'cause maybe people have passed away or they don't have the family and you just, often someone says that they don't wanna leave hospital and… it does make you feel, just a bit like, just sad for their situation."

Participant 1, Medical student

One participant spoke about her sadness on witnessing the loneliness that seems to accompany growing older and how this made her think about her own ageing process in a negative light:

"And I think… that I don't want to be old just because there seems to be a lot of loneliness and people just out there that have no contact with other people. And you know when they come to clinics, again they may not have talked to anybody for a long time and I think that's desperately sad."

Participant 13, Consultant Doctor

6.3.2.3 Thinking about the person behind the illness

A few participants described thinking about the person behind the illness. They spoke of seeing the older patient as a person with a family and a home which served to personalise the patient, and appeared to foster empathy and compassion in the participant:

> *"… but it really helps you to remember that actually in the middle of all this there's still a person, and that they have a life and a history and a family and a home"*

Participant 3, Medical student

A few of the participants who did this explained that they would intermittently remember that the older patient was in the same age bracket as some of their loved ones, such as their parents or grandparents, which made them feel more compassionate toward the patient:

> *"A lot of the people you know are elderly, your parents are starting to get older, you may think back to your grandparents, you may even look at yourself and go 'I'm going to be elderly one day'."*

Participant 3, Medical student

6.4 Sources of satisfaction and dissatisfaction

This theme consisted of three subthemes: (a) an imperfect system for older patients; (b) dealing with a highly complex patient group; and (c) improving patients' quality of life. In this theme, participants tended to describe cognitive information (i.e. beliefs and stereotypes), or behavioural

information, as well as tying in their emotional and psychological reactions (affective information) to these beliefs or behaviours. As a result, it consisted of all three components of attitudes: cognitive, behavioural and affective information. Therefore, whilst many of the nodes included descriptions of the social and organisational factors that help or hinder provision of care, the nodes also contained the affective judgements of participants to these factors (i.e. how these factors made participants feel).

6.4.1 An imperfect system for older patients

6.4.1.1 Underserving older people

Some participants described the limited value that society places on its older people in general, not just older patients. Older people in society were described by a few of the participants as being relatively voiceless and underserved. This resulted in inequality and disadvantage for older people, and as a result, older patients, who are a subsection of the older people group. A few participants suggested that due to the relative lack of power older people have as a collective group in society, health services and resources for them can be reduced without much resistance and complaint. Another perspective was that the allocation of limited resources to older people was somehow considered a waste:

> *"I think that's possibly the worst of the presumptions and you know, there's a sort of undeservingness. People think of older people as a drain on our precious resources and so on."*

Participant 4, Consultant Doctor

This participant described what he thought was a dominant societal belief; that effort, time, and money spent on younger people was considered to be a more worthwhile endeavour. He explained that when an issue affects the standard of care for younger people, there is more likely to be societal outcry

which successfully drives improvement of these services. However, the same does not happen with concerns which affect only older patients:

> *"The people we deal with tend to be the most disadvantaged because they are relatively voiceless. The pressure to improve services is less. Given the choice between a young mother with breast cancer wanting Herceptin and a number of older people in a care home, the young mother's always going to win."*

Participant 4, Consultant Doctor

When identifying the source of this apparent bias, some participants mentioned the entertainment media and the news media, suggesting that older people are either not represented in the media or are portrayed badly. A few participants mentioned that ageist comments or beliefs were sometimes expressed by older people themselves as if they agreed with, or had internalised, societal perceptions of those in their age bracket. There was also the suggestion that younger individuals tend to avoid the subject of older people because it makes the idea of growing old salient and they would rather not think about the topic:

> *"… no-one wants to think about getting old. Old is not sexy, it's not advertised, it's not in society, even though our society's getting older, the population as a whole, older population, don't have as much of a vocal voice."*

Participant 21, Consultant Doctor

Some participants described the importance of personal and familial beliefs in the value an individual ascribes to older people in general. Participants reported that some of their beliefs about older people derived from their family and cultural background and their relationships with older relatives. It was also suggested that change in older patients' services needs to be

accompanied by societal and cultural change whereby families take on greater responsibility in looking after their older members:

> *"… there should be a social, cultural change among families, you know they should start looking after older people, so I think that needs to happen as well and we are struggling."*
>
> Participant 6, Consultant Doctor

6.4.1.2 Exclusion in policy and research

Some participants, mostly consultant doctors from different disciplines, commented on the lack of medical research involving older patients and a general disinterest in involving older patients in the improvement of health service design and delivery. Possible reasons for this included participants' beliefs that researchers held misconceptions or stereotypes (i.e. cognitive beliefs) of older patients which may not be true. Examples of these stereotypes included the belief that older patients may be challenging to work with, or may not understand or comply with research instructions. The additional complication of obtaining ethical approval to research a population of which a proportion will have mental capacity issues, affecting their ability to consent, was mentioned by a few participants. These participants suggested researchers may therefore exclude older patients in medical research to make it is easier to obtain NHS ethical approval.

One participant, a consultant surgeon who conducted clinical trials with older patients, described the underrepresentation of older patients in medical research in great detail. He suggested that the barriers to including older patients in medical research was not simply a case of active discrimination, but a more subtle lack of interest by scientists and researchers in matters relating to the older patient population. He described his experience of failed recruitment of older patients to a trial, which he believed was a result of

other researchers' lack of interest in older patient health care matters, rather than their active discrimination:

> *"So for example if I want to run a study, they would not be a barrier to say, 'Oh don't recruit any patients for these studies because they are for older people', they won't do that. Most people don't. The barrier could be that… things would be just forgotten completely because they have no interest."*

Participant 25, Consultant Doctor

This participant believed that a great barrier to researching issues relevant to the older patient population was the doctors and researchers themselves. This participant then described examples of studies investigating older patient treatments that he and his research team had obtained ethical approval for, yet they had to close them as they failed to recruit enough participants. He explained that the doctors who were recruiting for the study did not believe in it and therefore failed to recruit for it. This was despite attempts to teach the doctors that the study was trying to address an as-yet-unanswered question about the best type of cancer treatment for older patients:

> *"… we invited an expert in psychosocial oncology to come to talk to us… And she could see from the body language of the clinicians actually they weren't believing [in] the trial. So therefore the way that they talked to patients would have been different. So they don't believe that we should use nonsurgical treatment… And so my feeling is that one of the barriers is us, rather than patients actually."*

Participant 25, Consultant Doctor

This participant also described how the drive to treat everyone the same could be negatively affecting older patients because older patients are different. It may therefore be inappropriate to treat them the same as younger patients. He claimed that older patients tend to have illnesses and disorders that are more likely to affect them than a younger person, as well as different social and rehabilitation needs. As a consultant surgeon, he also pointed out that cancer in the older patient can be medically and biologically different to that in younger patients. As a result of these differences, this participant believed the key to better care was different treatments for older patients, and he advocated researching personalised treatment for older patients. However this was in conflict with the NHS's cultural drive to treat everyone the same. He expressed the belief that until doctors and researchers accept and recognise the differences between older and younger patients, older patients will not receive the most appropriate care.

A few participants, all consultant doctors, commented on the vested interest from organisations which serve to prioritise other groups of people over older patients, due to the monetary advantages of doing so. The pharmaceutical industry and support groups funded by pharmaceutical companies were identified as influencing public opinion in a way that is beneficial for their products and their profit. They argued that if a particular group does not engage in public debate or influence public opinion on where public spending should be allocated, will be left at a greater disadvantage:

> *"I think during the decade during which older people, mental health and learning disabilities were termed priority services, the proportion of spending on those three actually went down. So, you know, the vested interest within the system always seem to find a way to get themselves prioritised, you know. That's what, you know, interest and advocacy groups are there for, you know, diabetes, cancer, heart disease, you know, they're all fighting*

their corner for public attention and public sympathy. So, I suspect we're always going to be fighting a losing battle. And another aspect of the interest of the job is to try and engage in those battles. If you just sit back and do your job you're liable to be left out, left behind disadvantaged."

Participant 4, Consultant Doctor

6.4.1.3 The extended wait for discharge

Amongst participants, across the levels of seniority and specialty background, one of the most commonly mentioned sources of frustration and dissatisfaction pertaining to the hospital care of older patients, even in general settings, concerned older patients' extended wait for a safe discharge. Once a doctor or medical team had completed their medical care and the older patient was deemed medically fit for discharge, the patient sometimes needed to wait for a care package to be put in place to ensure his or her safety upon leaving the hospital. During this time, the older patient had to remain in hospital as it was deemed unsafe to go home and this was sometimes referred to as a 'delayed discharge'. Typically, putting a care package in place took weeks, and in some cases, months, and participants commonly reported frustration for a number of reasons, including the risk to the older patient's health by keeping them in hospital. Additionally, the patient is taking up a bed which the hospital could use to treat other patients:

"Every single day it is more frustrating. You get patients that have been medically fit since the day after they came in and have been there for a month and then they get pneumonia. It's not only frustrating for us but it is dangerous for patients"

Participant 18, Junior Doctor

Three consultant doctors reported that slow discharge arrangements were the result of a fragmentation between the Health Service and the Social Services, which are separate and independent from each other. However, they are both reliant on each other to deliver older patient care:

> *"The frustration I think comes from the fact that we are so dependent on each other; first of all the resources we have, but also on other agencies and possibly the fragmentation in the system. You know we're working in a relatively small part of a very big system that involves primary care and social services and care homes and so on that we have been progressively excluded from, I think over 20 years or so."*

Participant 4, Consultant Doctor

The resulting divide between the services that were responsible for providing care for older patients, namely, primary care, secondary care and social services, is evident in cases of the older patient who may have to remain on a hospital ward for one month waiting for a care package to be put in place. One of the consultant doctors explained that caring for older patients in hospital settings is frustrating because the doctor is powerless to improve discharge arrangements, yet has to deal with the consequences when discharge is slow:

> *"Let's say if you take an older person who you want to try to get home or they need to get into, they need to go to a nursing home, you've been through the process and it turns out they actually need special care. Then you have to wait for somebody to come from that nursing home to assess them to say if they're very complex, for a nurse assessor to come in and say, 'yes they need nursing care', you're like, 'I know'. Then that process takes a*

couple of days. Then you have to wait then for a nursing home to be found. All this sort of time delay that seems unnecessary."

Participant 9, Specialist Registrar Doctor

The delays in discharge and the reliance on other services were often described as most extreme on geriatric wards or stroke wards, but regularly occurred on general medical wards as older patients make up most of the hospital population in general medical specialties. It was explained that some other specialties, such as surgical specialties, do not need to engage so heavily with other services and therefore the medical care they provide is more autonomous:

"… if you were a surgeon and you were on your ward round and you were told that this person is waiting for a nurse, you're just, 'I don't wanna hear about it. It's not my problem. Sort it out, tell me when it's done'. Whereas we feel that that is part of the process and we engage on that, probably the consequence being the frustrations that come with bureaucracy."

Participant 9, Specialist Registrar Doctor

Many participants blamed the social care system (social services) for the slow and inefficient services which resulted in delayed discharges on the hospital wards for older patients. Participants generally reported that social services were too understaffed to conduct their work in a timely fashion. One participant described her frustration with having to encounter the effects and pressures relating to delayed discharges when they were not responsible for holding up the system in the first place. Therefore, if social services took a long time, it was often the doctors who had to deal with the consequences and stresses caused by the delay, rather than social services:

"I think making them [social care services] a bit more responsible for patients who are sitting here just waiting for carers because I think they don't have to deal with the patient or the relatives or the patient getting sick while they're waiting for a care package 'cause they've picked up an infection in hospital, or the fact that we're getting emails to say 'there's been 200 people in ED [Emergency Department] today, please try and discharge as many people as you can'. So we're getting pressure from up on high but yet we can't get these people out of hospital and they don't need to be here, and I don't think social care see that or maybe they do but just don't seem to be unduly bothered by it."

Participant 13, Consultant Doctor

Interestingly, medical students and junior doctors expressed confusion about social care processes involved in discharge arrangements for older patients. One participant described knowing the terms used as reasons for a delayed discharge but did not really understand what the terms meant:

"I think for us junior doctors, I don't know if it's just the case for me but I find I'm very hazy about the knowledge of what happens in terms of that social care… the reason why things are being delayed, the reason why orders needs to be sorted before the patient can go home, because 'social sorting' is just a term in my head. I mean I don't know the full details of it. So in that way I think as junior doctors we do need a bit of education in terms of why older patients can have delays in their care."

Participant 24, Junior Doctor

6.4.1.4 Staffing levels

Participants typically expressed dissatisfaction with staffing levels in the hospital, and claimed that this directly affected the care they could offer to

older patients. A few participants noted that the number of older patients coming to hospital is increasing and set to increase further, but the resources assigned to the care of older patients, even in general settings, do not appear to be increasing at the same levels. It must be noted that those who described the lack of staff often reported that geriatric wards seemed to have the most disproportionate resource allocation. One participant described the understaffing of the geriatric wards compared to other specialties:

> *"The wards are very badly staffed in terms of junior doctors, so if you would look at a respiratory ward, for example, you might have 28 patients and you might have two registrars, you might have two SHOs [senior house officers/junior doctors] per team and you might have two house officers [junior doctors] which equates to probably eight doctors on the wards and here we've got three, sometimes four. So you're running at half capacity because the illusion is that there's less work to do if people are elderly, but that's certainly not the case. Often we're stretched to capacity, we're running around like headless chickens."*

Participant 7, Trainee Specialist Doctor

Participants who commented on the limited staff in geriatrics settings tended to specify that there were also not enough members of support staff, such as nurses, specialist nurses, physiotherapists, occupational therapists and cognitive therapists. These were all described as being understaffed in the hospital, in favour of allocating resources to the management of the hospital:

> *"There's far too little spending resources for services like occupation therapy and cognitive therapy, far too much expenditure on things like management. And that's basically the biggest problem base in the NHS in general but that particularly pertains to the older patient."*

Participant 17, Trainee Specialist Doctor

The dissatisfaction with staffing levels appeared to stem from the stress and frustration that participants faced, due to the resource allocation decisions of others, such as those in management or in government. Doctors and other members of the medical team are left with the stresses and strains of managing older patients in very difficult and resource-limited circumstances. Despite these factors, it is often the individuals caring for older patients in hospital who get blamed when older patient care is deemed substandard:

> *"It is exceedingly stressful. Sometimes… the frustrations are internal to the organisation. So for example shortly before you came in, a senior nursing colleague came in expressing a great deal of frustration about staffing levels and how we can cope with some very disturbed patients at the moment without bringing in additional staff to help look after them, that the organisation is saying it can't afford… We all know the sort of the regulatory, the press environment, the dignity and nutrition audits that CQC are doing, all the scandals. You know the whole thrust of those is that it is bad individuals that are driving them. Well I can tell you that it's not those bad individuals, its individuals trying their best usually within highly constrained and inadequate systems. The deceit or the dishonesty is to try to blame the individuals rather than the choices around resource allocation and so on."*

Participant 4, Consultant Doctor

One senior doctor explained that being understaffed meant that she often had to do the work that was typically done by more junior members of the team in the past, and this was an unfortunate waste of her expert knowledge. Another senior doctor explained that being understaffed left him with a large

administrative burden which was an inefficient use of his time and expertise. A trainee specialist in geriatrics described the frustration of working in the discipline, which was chronically understaffed at her hospital, as being so difficult that it made her question her specialty choice:

> *"…this is like my tenth day in a row having worked… So I feel broken, I get home at the end of the day, I feel like I've had a crap day, feel frustrated and it makes you want to do other things sometimes. You know what else can I do that will give me an easier life like GP, dermatology, what could I do? But I know that at the end of the day I enjoy what I'm doing so I wouldn't change, but it does, it (a) makes you question what you do and it (b) makes you very frustrated and it makes you bring work home."*

Participant 7, Trainee Specialist Doctor

This participant also explained that due to the understaffing of the geriatrics ward, she not only worked many hours in the week, but this negatively affected her career and training because she spent so much time on the wards:

> *"… very often I am here where I probably shouldn't be. I probably should be doing other things to further my career and my training… Whereas I think in other specialties if you've got much more support, more junior staff, more senior staff then it means you can be free sometimes to go off and do other things without feeling that you're neglecting the ward."*

Participant 7, Trainee Specialist Doctor

6.4.1.5 Bed pressures

A few consultant geriatricians reported the steadily decreasing bed allocations for older patients in geriatrics settings over the last five decades, despite the fact that the older patient population is increasing as people are living longer. The problem of how beds are utilised was mentioned more often than the number of beds available. Due to the long process of safely discharging an older patient from hospital, the patient may have to wait in hospital for weeks. In these cases, the older patient has been declared medically fit for discharge but needs to go to a safe environment. As the medical team wait for the social care package to be organised, the patient will stay on the hospital bed, which some participants referred to as 'bed-blocking'. A consultant doctor described bed-blocking:

> *"I think there's two types: there's the people who need rehabilitation who genuinely should come to a geriatric service, then there's people who don't need any rehabilitation, they need to leave the hospital. So bed blocking is those people who are waiting for a nursing home or a care package who just need to leave the hospital… some of the specialists would say 'well she's eighty, could the geriatricians not take her off and free up my surgical bed so I can have somebody else in'. But that would be wholly inappropriate because that person doesn't need to be in a hospital bed, so it doesn't matter where you sent her it would still be the wrong thing to do."*

Participant 13, Consultant Doctor

The main source of frustration appeared to be having healthy older patients using a bed that an unwell patient could be using:

> *"It's very frustrating because you have a lot of hospital beds used up when other unwell patients could be using them, and it's*

frustrating when patients become unwell when they are medically fit and waiting to go home, because in theory, they shouldn't be in hospital anyway."

Participant 19, Junior Doctor

6.4.1.6 Time and efficiency pressures

Most participants described the challenge of dealing with time pressures at work, which were attributed to the job requirements of admitting and discharging patients as quickly and efficiently as possible. In the case of the older patient group, this time pressure was often reported as far greater because of the time-consuming processes involved in their medical care and the long delays inherent in a number of stages of older patients' admission and discharge. The complexity of older patients' health, multiple morbidities, and cognitive impairments and communication difficulties, often meant that most stages of providing medical care for the older patient took longer. Many participants described the challenge of providing adequate care for older patients whilst also trying to deal with the time pressures that arise from governmental time targets (such as ensuring patients presenting to the Accident and Emergency department are seen within four hours). This is as well as any additional efficiency requirements internal to the organisation, such as from managers or executives of the NHS trust. When discussing time pressures in the NHS generally, one participant reported that the emphasis on efficiency was the main experience she remembered of her time as a junior doctor:

"… my lasting memory of being an intern is just it's about efficiency, it's about having the extras done, making sure the person is down to x-ray, making sure the blood's gone off. If they haven't happened, making sure that you do them, you know, making sure the drug cards are rewritten and the prescriptions

are written. It's not about standing at the end of the bed and going, 'what's going on here' and working through a diagnosis."

Participant 9, Specialist Registrar Doctor

A few medical students reported some instances in which they had spent a long time taking a history from an older patient, only to later realise that efficiency was valued above detailed and accurate history-taking:

"I remember as a medical student… seeing a patient and taking the history and I spent absolutely ages with them and I think this guy was deaf and couldn't lip read, so I literally had to write out every single question and I came away from that feeling that he'd really benefitted just from someone taking the time to listen… And then I remember, like, I think presenting the history to a registrar or something, and they were like… "why did waste your time doing that?'"

Participant 16, Junior Doctor

Some participants provided context to the need to be efficient and deal with time pressures, beyond that of meeting government targets. The reality facing medical staff was that time spent with each patient needed to be limited in order to ensure equality of care. Spending a long time with one older patient may mean that others do not receive the same quality of care:

".. they've got to an efficient A&E department and one of the things they said to us was, 'If you spend an hour with every patient, then you've got to think about it as…you're not spending time with other patients. So even though you're giving them a very good service, you're giving other people a very poor service'. So you've kind of gotta spread yourself more thinly than that. And as with everything, the NHS has only a finite amount of doctors,

of money, blah blah blah, so you do have to, as I said before, you can't spend an hour with every patient, trying to get a history out of them."

Participant 16, Junior Doctor

A number of participants reported that time and efficiency pressures meant they could not provide the standard of care for older patients that they would like to, or expect of themselves, as doctors or future doctors. This resulted in them feeling that they had not satisfactorily completed the job to their own standards, leading to a sense of dissatisfaction. Participants who were specialised in geriatric medicine typically reported that the time and efficiency pressures that affect older patients' care in most medical specialities are exaggerated for those working in geriatrics. She explained that the time pressured environment, coupled with resource challenges in geriatrics, serve to make this line of work even more challenging.

6.4.2 Dealing with a highly complex patient group

6.4.2.1 Dealing with communication difficulties

Dealing with older patients who have a higher incidence of communication difficulties was mentioned as a challenge and source of frustration. A typical difficulty involved not being able to get appropriate or useful answers to questions relating to the symptoms or medical history of the older patient. This could still occur even if the patient's carer was present during the medical encounter as there is only so much that can be answered on behalf of the patient:

"… certainly when people have got dementia, it's, it's frustrating. You've got all the questions in your head that you want to ask, to try and elicit why they've fallen and you can't. And because

there's only so much you can ask the carers, they can't tell you if that patient's had chest pain or symptoms of a water infection or whatever, so I think dementia is a really difficult thing to deal with."

Participant 16, Junior Doctor

Following communication difficulties with an older patient, a few participants also described the frustration of not knowing the best way to proceed with medical care and treatment due to a lack of medical information on the older patient. This was an unavoidable part of caring for older patients in hospital settings, because communication difficulties are part of illness symptomology. Nevertheless, it made the doctors life more difficult and was described in terms of a source of frustration:

"I think the frustration of not knowing what's…of where that patient is in their life… If there's communication difficulties or mobility difficulties you're never sure whether that's acute or chronic or whatever… When you haven't got that acute knowledge about what's happening, then your tendency is to overtreat or perhaps undertreat, if you make assumptions."

Participant 16, Junior Doctor

6.4.2.2 Perceived mismanagement of care

Some participants described great dissatisfaction and frustration at witnessing the mismanagement of an older patient's care by other doctors. This was mostly described by those specialised in geriatrics or stroke medicine, which may be attributable to the fact that these doctors are in the best position to identify the inadequate care and treatment of older patients, due to their expertise in complex care and frailty. These participants reported

feeling frustrated when they identified older patients whose care appeared to be mismanaged or inadequate at the hands of doctors working in different specialities:

> *"… when I worked [on] general medical on calls, I'd be called to the orthopaedic ward to see elderly people that have been operated on that were very ill and you can see the steps that have led to them getting ill. So, they've been given loads of fluid or they've not had their Parkinson's tablets or somebody's not noticed that their inflammatory markers are climbing or they're getting more confused and it's really frustrating"*

Participant 7, Trainee Specialist Doctor

However, mismanagement of older patient care could arise from outside the hospital setting. One participant described the frustration that she felt when an older patient came to hospital, having not had good quality care from a General Practitioner in the community. This participant was particularly frustrated when she encountered patients who had been prescribed large amounts of medications, which may have actually served to endanger their health rather than protect it:

> *"I think certainly something that I've kind of taken on board because I want to become a GP is that often older people are on like 10, 15 different medications and being on so many medications, it is a risk factor for falling, so I think that, it frustrates me sometimes when someone's 85 and they've got dementia and they're taking these medications and you just think, as a GP, their GP should have actually thought, 'Right, they've got dementia, it doesn't matter if their cholesterol is high. You know, let's just stop their cholesterol tablet'. And things like that."*

Participant 16, Junior Doctor

An important source of dissatisfaction regarding the perceived mismanagement of care in the older patient related to 'social admissions' or 'acopia', whereby the patient is considered to have issues relating to their social care (e.g. safety at home) rather than their medical care:

> *"The doctor disengages the brain as soon as they've attached that label to the patient. It also has some quite negative connotations in the respect that a social admission is somehow seen as an inappropriate admission, is therefore somehow seen as a lesser admission, is therefore somehow seen as requiring less careful thought and attention and I think that patients that get these labels attached to them often do end up receiving second-rate care."*

Participant 22, Consultant Doctor

This participant explained why he saw the mismanagement of some patients with 'social admissions' as ageism, because they suggest that illness and disorders are just part of being old, when sometimes these are signs of abnormal and pathological ageing:

> *"… to me that's a form of stark ageism because there are lots of medical things going on, it's just that because the doctor has assumed that because this patient is old, it's acceptable for them to have decreased mobility, it's acceptable for them to be incontinent, it's acceptable for them to have cognitive impairment, and for them not to seek to either understand or explain that and that to me is unacceptable"*

Participant 22, Consultant Doctor

Another source of frustration relating to perceived mismanagement in the care of older patients related to resuscitation decisions. This was described by one participant who explained that the governmental guidelines regarding resuscitation decisions state that if a patient has adequate mental capacity, he or she should be informed of their doctor's resuscitation decisions. However, this participant expressed the belief that this can cause unnecessary distress for older patients and that he did not agree with the governmental guidelines. Essentially, he appeared to believe that in order to follow recommended guidelines regarding resuscitation decisions, he is forced to mismanage the care of older patients who may have severe dementia or cognitive impairments. This participant felt strongly that this was poor care practice and explained that he sometimes ignored the guidelines:

> *"I mean the whole re-sus thing's [Do Not Resuscitate orders] become a major problem for us….So the guidelines changed a few years ago in that you're supposed to communicate your re-sus decision to a patient…. My practise and I think the practise of my colleague is often not to communicate that decision if it's so blindingly obvious that it's the right decision, because often it would cause distress."*

Participant 21, Consultant Doctor

The following excerpt indicates his frustration regarding the issue of resuscitation decisions:

> *"…let's say you've got a 96 year old who's in a nursing home with COPD [Chronic Obstructive Pulmonary Disease; i.e. has breathing difficulties] and doesn't see daylight and doesn't get out to the shops and they've come in with a chest infection, there's no way on earth that I'm gonna resuscitate him or her. Absolutely no way. And the guidelines would suggest that if they're compos*

mentis I should be discussing that decision with them. But I think that actually causes more distress. 'Cause even if they want that decision changing, I'm highly unlikely to do that."

Participant 21, Consultant Doctor

6.4.2.3 Less opportunity to cure patients

One of the most commonly reported sources of dissatisfaction associated with caring for older patients was reported as rarely being able to cure the patient. In fact, the best treatment often appeared to be the prevention of secondary problems or worsening of the patients' symptoms. Participants who spoke about the dissatisfaction of treating older patients tended to describe the main treatment focus as being the management of symptoms and the monitoring of chronic disease. This was reported as being frustrating for these participants. Essentially, caring for older patients often required doctors to ensure older patients' health did not worsen, as opposed to actively curing the patients' illnesses:

"… the rest of a patient's life is spent trying to prevent them having heart attacks and strokes and when they are nearing the end of their life it is much more based on keeping them comfortable, regardless of whether they are palliative or not, the aim is to make sure that they don't mix up their tablets and they don't fall over and bash their heads and…I think possibly that is quite frustrating if you have spent the rest of your medical life trying to prevent things."

Participant 18, Junior Doctor

Another participant stated that a doctor treating older patients may not always come to a satisfactory diagnosis and also may not be able to cure the

patient, which can feel frustrating. Even if you treat an older patient, their recovery may not be visible or dramatic:

> *"In hospitals, I don't get huge amount of satisfaction I think, from treating older people because yeah, they don't suddenly jump up and start running around again."*

Participant 19, Junior Doctor

Another junior doctor described older patients as difficult to treat because they may not get better, have multiple illnesses and keep coming back to hospital. She described these as "revolving door" patients. Many participants also commented on the inevitable decline and death of many older patients. However those commenting on the futility of caring for older patients tended to be medical students and junior doctors. A number of medical students and junior doctors reported that they did not get as much satisfaction from helping the older patient get better in comparison to a younger patient. For example, a medical student spoke about how he felt less is accomplished with older patients, in comparison to children, because children may live a further 50 years:

> *"Because I just didn't particularly like, well, maybe that's the wrong way of saying it…. with older patients you're helping them get better and then they'll go home and that's the plan, but ultimately it's fighting the inevitable I feel… in paediatrics, which is something that I think that I'd like to do, if you can make a small child better there's a very good chance that they'll go on and live 50, 60, 70 years longer and I think I'd feel like I'd accomplished more from doing that."*

Participant 10, Medical student

In stark contrast, doctors of a more senior grade described this matter very differently. These participants reported that they found greater satisfaction in treating older patients because curing an illness or effecting radical change in the older patient feels far more significant and rewarding than treating a younger patient. A few geriatricians explained that they were aware that many others, especially those not specialised in geriatric medicine, felt less is accomplished with older patients because they may not be 'cured'. However, geriatricians generally reported that getting the older patient back to their best health, or their functioning baseline, is akin to curing. One of these participants thought the idea that older patients often cannot be cured was short-sighted, and was generally a perception problem on the part of the person who subscribes to this view:

> *"… ultimately getting people back to baseline, sorting the problem out is the key… if you treated an older person with pneumonia they may still be doddering about, walking with a stick but be happy, you've cured her I think. So I think that's a short-sighted approach really. I don't think we should look at it that way."*
>
> Participant 6, Consultant Doctor

Interestingly, a consultant in stroke medicine explained that she was aware that doctors differed on the point at which they thought care was futile for older patients. However, she continued to provide older patients with the care they needed until she was confident that she had exhausted all the available options. This participant was senior to junior doctors and so could dictate the level of care. Nevertheless she was aware that, in some cases, junior doctors did not see the opportunity to make a difference to an older patient:

"And I know sometimes the junior doctors are thinking 'why are you doing this?' But I always think it's worth a try and see, and the doctor isn't going to say anything one way or the other to me… I think you can tell from their face that they don't necessarily agree with it, but I think you can never say something is futile until you've kind of exhausted all the possibilities."

Participant 13, Consultant Doctor

6.4.2.4 Intellectual challenge

In contrast to the description of the nodes outlined above, participants described the challenge of diagnosing and treating complex medical problems as a source of satisfaction when treating older patients. Many participants expressed the belief that those working in specialties in which older patients make up most of the patient load, such as diabetes and endocrinology, stroke medicine and geriatric medicine, tended to thrive on this complexity. Doctors working in general settings (where older patients make up approximately half of the patient load) often acknowledged the complexity and "academic challenge" of treating older patients. However, they tended to report that they did not want to do this kind of work exclusively:

"… it is a big challenge, as I said, with what we call polypharmacy and managing dementia and managing their social situation and all of that kind of thing… it's something I am interested in but… I couldn't do that all of my time."

Participant 16, Junior Doctor

Generally doctors working specialties such as geriatrics and stroke medicine (in which almost all of the patients will be over 65 years old) described the satisfaction they felt from the intellectual challenge of solving the complex problems that commonly present in older patients. Of these doctors, many

reported that complex care requires good clinical knowledge and problem-solving skills and many described the diagnostic challenge as detective work. The intellectual challenge in treating this patient group was an important source of their job satisfaction and an emotional reward to the work:

> *"…part of that reward is that the work in itself is intellectually challenging and is very, very complex and most Geriatricians I know get a… sort of kick out of complexity… That ability to sit down with a really difficult problem, work at it with a patient and a family and help to solve it. The complexity exists in lots of different levels… with Geriatric medicine you start off with a nonspecific presentation that diverges into multiple pathologies which are influenced by external factors like cognition and social things… it's less like a linear diagram and more like a spider diagram, lots of different influences. And the ability to make sense of that and to find a way through that, to navigate that is one of the things that I think really appeals about Geriatric medicine. So I think every single aspect of it is more complicated, that's part of the fun."*

Participant 22, Consultant Doctor

Another geriatrician remarked that the complexity and the analytical nature of treating older patients were important to his experience of job satisfaction:

> *"My job is never boring. If I was doing hernias all day every day or even cardiac catheterisation all day every day I would be bored, you know. So there is no way in which I am a technician or a glorified technician. What I like is I like the thinking, I like the detective work. I like the analytical work in unravelling problems and trying to find practical solutions. So that's the interest and the satisfaction comes from the interest."*

Participant 4, Consultant Doctor

Another participant, a consultant in respiratory medicine, described how geriatricians see the most challenging cases. This is because many of older patients admitted to geriatric wards have already been seen by community doctors who have not been able to address the underlying health issues and have, therefore, recommended the older patient for hospital treatment. In some cases, the patients on geriatric wards will have also been seen by acute medical physicians, such as those in the Emergency Department, who have also been unable to diagnose and treat the patient. As a result of this, older patients sent to geriatric wards typically have extremely complex medical health needs, which are challenging and complex to treat.

6.4.2.5 Variety of work

Participants' descriptions on the variety of the work when dealing with older patients in any setting, were polarised. Those specialised, or intending to specialise, in settings which they believed were not comprised of mostly older patients (such as surgical specialties), tended to remark on the unvaried and boring nature of working with older patients. A number of these participants reported that seeing the same presentations repeatedly had contributed to their perceptions that treating older patients was not varied or particularly satisfying:

> *"I think it's because it particularly depresses me in A&E, the number of old people I see that have had falls… It feels like I see more older people than I probably do, because every time I pick one up, I'm just like, 'Oh no, another old person with a fall'"*

Participant 16, Junior Doctor

In contrast to this view, doctors who had specialised in a branch of medicine in which older patients made up almost all the patient load, such as stroke

and geriatric medicine, described a completely different picture. These participants generally reported that the variety of their work was one of the benefits, as they were not limited to treating the issues associated with a single organ or biological system, which is often the case with most other branches of medicine. In fact, geriatrician participants tended to report that they thought other specialists' jobs appeared boring and lacking in variety in comparison to their own. This is despite the general reputation of many of these specialties as being interesting and exciting. Here, a geriatrician describes his perception of cardiology, a prestigious branch of medicine, as dull and unrewarding due to the lack of variety in the job:

> *"Cardiology, I looked at those guys and I thought 'crikey I wouldn't want to spend all day in a clinic seeing the same presentation all day, or very similar presentations all day', a chest pain clinic now I think would bore me to tears… I'm sure that the anatomy is very interesting but just doing multiple catheter lists day in day out. The idea of… spending lots of days in theatre doing very similar sorts of operations day in day out, and not speaking to my patient… But I'd just find it very dull I think."*
>
> Participant 22, Consultant Doctor

6.4.2.6 Working as a team

Participants across specialties reported that caring for older patients often required teamwork and team decision-making, which was frequently reported as being linked to older patients' tendencies to have multiple morbidities. As a result, specialties such as geriatric medicine and stroke medicine tended to have a teamwork ethos, because teamwork was needed to achieve the most appropriate care. Therefore, working as a team and engaging with other specialties were often mentioned as defining characteristics of geriatric and stroke medicine.

Those who spoke about increased levels of teamwork, when caring for older patients, tended to report it in positive terms. One junior doctor reported being able to liaise more with her superior when uncertain about whether an older patient should be admitted to hospital, or in assessing the older patient's ability to communicate and mental capacity. She explained that the teamwork ethos, that was encouraged when caring for older patients, resulted in her feeling comfortable in consulting her superior and asking questions. Usually, she reported that felt she should not ask questions as others may see her as a weak (i.e. not confident in making decisions) or unknowledgeable doctor.

The focus on teamwork seemed to inspire and motivate some participants. Reflecting on where she obtained her job satisfaction, one participant describes the influence and importance of teamwork in making the decision to specialise in geriatric medicine:

> *"I felt like I knew what was going on, I felt I connected with not only the seniors and the consultants that I was working with, but I connected with the OTs, the physios, discharge people and I felt really part of a team and I thought wow this is really what I'm enjoying, I get what this is about"*

Participant 7, Trainee Specialist Doctor

Another geriatrician explained how those working in geriatric medicine will fundamentally have to work as part of a team, and ideally, enjoy working in this manner:

> *"It's not the type of specialty that attracts your orthopaedic surgeon mentality is probably my best way of putting it. You know you fundamentally have to be a team player. You have to*

work as part of that team. You have to understand that what you contribute while important isn't everything."

Participant 9, Specialist Registrar Doctor

6.4.3 Improving older patients' quality of life

6.4.3.1 Getting the patient out of hospital safely

One of the most commonly reported sources of satisfaction when treating older patients, in any setting, was the reward experienced when participants felt that they had helped ensure older patients remained safe during their admission and after discharge. During the hospital admission, participants reported the need to monitor older patients closely so as to avoid complications and secondary illnesses. After this, trying to ensure that the discharge was safe and the older patient remained safe following discharge, was a way in which a number of participants derived satisfaction and emotional reward:

"It doesn't matter how long it takes but I think, you know, in the diagnosis and the treatment and getting them home safely that's surely job satisfaction"

Participant 13, Consultant Doctor

Trying to improve factors in the older patient's home environment was a frequently reported example of a way in which participants felt satisfied they had increased the safety of the patient. A number of participants reported the satisfaction of knowing that the older patient would be safer in the future as a result of the efforts made to improve social and environmental factors, some potentially dangerous, which may have contributed to their hospital admission:

"A good patient is somebody that you send home or back to wherever they are going, and they're safe and you know they are not going to fall over again and their family are completely aware of where their condition is up to."

Participant 18, Junior Doctor

6.4.3.2 Supporting the patient and their family

Supporting the older patient and their family was reported as involving, both, elements of satisfaction and dissatisfaction. Some participants felt that they could make a difference through good communication with the older patient and their family members, which they reported as rewarding. As previously described, older patients in hospital are at risk of becoming lonely and isolated and some participants found that they could relieve some of the boredom and isolation by interacting with them:

"I found it very rewarding to go and speak to my patient just because it clearly made his quality of life so much better because he was really, really bored and so even little things like that."

Participant 10, Medical student

Finding satisfaction in talking to older patients was commonly reported by medical students. This may have been because communicating with older patients is one of the few ways in which medical students can make a difference to older patients' lives, as they are not yet qualified doctors and so cannot dictate medical care:

"Especially as a med student, you don't always get to contribute that much... and so it's just a really nice feeling to know that… you've done something, even if it's just, you've listened to them

for 10 minutes, it's just, you can come away feeling quite happy with yourself."

Participant 1, Medical student

When patients had severe cognitive impairments, participants sometimes supported the older patient's relatives, rather than the patient themselves, but some also reported this as rewarding:

"… you kind of just get used to a different way of being good at your job. So again whereas originally you were fixing and you were doing… actually the difference that you make with your good communication skills and being able to talk to a family, makes just as much difference to the patient care"

Participant 18, Junior Doctor

In contrast to this, some participants described the difficulty of dealing with the older patient's relatives, especially those who had unrealistic expectations about the patient's health, treatment and discharge. In some cases, participants described relatives having different expectations to the older patient, which put the participant in a difficult position. In such cases, participants generally reported that they were duty-bound to respect the older patient's wishes, rather than the relatives, assuming the patient has sufficient mental capacity:

"But I think the relatives can have very different expectations from what say their parent [the patient] has and it's trying to match those up especially if their parent is able to make decisions for themselves and you have relatives who come along and say 'Oh there's no way they can go home, they wouldn't be safe at home', and don't necessarily want to listen to the parent or to the

hospital staff either. So I think the challenges can be dealing with difficult relatives."

Participant 13, Consultant Doctor

Another participant described dealing with difficult relatives as the main reason why she could not be geriatrician, because they often have to deal with older patients' relatives:

"I do enjoy it [geriatric medicine] but I couldn't do it, I am not built to be a Geriatrician. I find it very, very, very frustrating and it actually surprisingly the thing that is frustrating is not the patient. It is more everybody else's perceptions…It's very very difficult sometimes to get across what you are trying to say when the other person [the older patient's relative] isn't listening to you, and it's very very frustrating especially when the person feels that they are the only advocate for this patient which in some cases they are."

Participant 18, Junior Doctor

6.4.3.3 Providing a good death

Participants often described the reward they experienced in providing "a good death" for older patients, and a number of participants reported how this was completely unexpected. Participants generally reported providing a good death involved good communication with older patients and their family members, including explaining what to expect to the patient and his or her relatives. A good death also required the management of pain to ensure the patient is as comfortable as possible. Here, a consultant doctor reflects on how a good and dignified death is important for the older patient and his or her relatives, and as a result, is a rewarding experience:

"I mean, some of the most satisfying moments I've had in medicine are relieving pain or providing a good death. And keeping the family on board. … 'Cause we're all gonna die someday. And I can remember having conversations with older patients about their death and it being very frank and open and actually life-affirming for me."

Participant 21, Consultant Doctor

Doctors also have the responsibility to identify when an older patient is suffering from an acute illness or dying. Therefore, providing a good death involves identification of the cases in which older patients are not acutely ill and are not expected to recover. In such cases, the appropriate medical decision may be to put the older patient on an 'end-of-life care pathway' within an appropriate timeframe. One junior doctor reflected on an incident in which she believed an older patient was coming close to death and so organised the appropriate care, finding this to be a source of satisfaction:

"For me, one of probably the most rewarding things I do, that, well I have done, is to pick up, when I've noticed a patient has been deteriorating and to escalate that to a senior and say, 'Can you come and look at this person? I think they're going to die' - to assess them, and then they'll agree and maybe put them on the LCP, the Liverpool care pathway [an end-of-life care pathway]. When you know people are gonna die, and then when they do pass away, you think, 'Well because of me, I had some help in that because I helped ensure that person was comfortable when they passed away.'"

Participant 15, Junior Doctor

6.4.3.4 Social justice

Achieving satisfaction from a sense of social justice was exclusively mentioned by doctors who were, or were training to be, geriatricians. These participants noted that geriatric care was unpopular, understaffed, and full of complex problems. Multiple geriatricians reported that they achieved a sense of satisfaction in offering something to an area where other doctors may struggle, often due to the complexity of the health issues that affect older patients. Since other doctors tended not to want to specialise in geriatric medicine, a large and vulnerable population of older patients were left without doctors who wanted to care for them and so providing that care was rewarding:

> *"Here's something that I can do, that I'm good at, that I enjoy doing, but also that no other bugger wants to do as well. So I can make a difference…"*
>
> Participant 22, Consultant Doctor

The fact that older patients are deserving of good quality care was also mentioned and seemed to underpin the job satisfaction these participants felt. As such, geriatrician participants found satisfaction in making a difference in societal and social terms:

> *"… Whereas if you sort of approach it from a more sort of ideological or human rights position you're thinking how can we make sure that older people have access to good quality care and, you know, the intellectual underpinning of that is that doing things right makes a difference in terms of death and disability and experience."*
>
> Participant 4, Consultant Doctor

One of the geriatricians also described how those who wanted to work in geriatrics tended to have a charitable nature because they are helping those in need:

> *"… it's a little bit of the, little bit of the missionary, in a bit of the average Geriatrician I think, you know the wanting to go out and actually, why do you get into medicine, you get into medicine to help people that other people can't help, right?"*

Participant 22, Consultant Doctor

6.5 Discussion

This chapter presents three main themes related to doctors' and medical students' attitudes toward providing care for older patients, with a focus on the social and organisational barriers and facilitators of care provision. In the interviews, there was an opportunity for participants to describe providing care to older patients however they perceived and experienced it. However, the resulting data frequently included descriptions of the challenges and difficulties of care provision for older patients. It is important to note that participants had the opportunity to describe the provision of older patient care in positive terms, but these findings suggest that on the whole, care provision was difficult and challenging.

In the first theme presented in this chapter, knowledge and skill development through training (Section 6.2), participants described the knowledge and skills required to care for older patients. Participants commonly reported the belief that their medical training did not emphasise that caring for older patients was integral to the work conducted even on general wards. Furthermore, their medical education did not provide them with a realistic picture of the nature and extent of the older patients they will treat. Knowledge and skill

development appeared to depend on gaining practical experience and reflecting on that experience in order to improve as a doctor. Indeed, some participants questioned whether the skills needed to care for the older patient group can actually be taught. Whether appropriate skills can be taught or not, participants were generally in agreement that knowledge and skill development through formal education and training could be improved in some way. For example, a number of participants commented on having negative perceptions of older patients or working with older patients that were, in hindsight, due to having limited practical experience with older patients. This was reported as being due to the limited amount of time spent on providing students with an understanding of the health needs and care issues affecting the older patient group within the medical curriculum.

The work of geriatricians and the work typically undertaken in geriatric medicine were discussed by many participants and formed a subtheme of knowledge and skill development through training (Section 6.2.2). Attitudes toward the work accomplished in geriatric medicine were often described in negative terms. In fact, there was a general devaluation of many aspects of geriatric medicine, in comparison to other hospital-based specialties. Geriatric medicine was commonly reported to involve abstract skills without specific interventions and acute emergencies to deal with. Related to this, it was described as a 'soft specialty', historically unpopular with an uncompetitive entry process, and involving slow and boring tasks. There was also a lack of understanding of the role of geriatricians, even by participants who had completed a rotation in the speciality. In general, participants demonstrated a devaluation of geriatric medicine and indicated a reluctance to specialise in the field, in comparison to many other specialties of hospital medicine and surgery. Those in the geriatric medicine field reported awareness that their knowledge and skills were underrecognised by others. Participants who had chosen to specialise in geriatric medicine often spoke

about the attitudes toward the discipline in historical terms, whereby geriatric medicine was neither highly respected nor competitive. Those specialised in the field had chosen to specialise years or decades ago, and so there still remains the question of how this specialty is perceived by those making their career decisions within the current climate (such as junior doctors). The finding that many participants reported negative evaluations of geriatric medicine was an interesting finding. This finding raises two further questions: (1) whether any of these evaluations (e.g. geriatrics is unpopular, uncompetitive and boring) are actually linked to characteristics of the older patient group; and (2) whether these negative evaluations are present today in recently qualified doctors.

Due to the low numbers of junior doctors (those who have completed their medical school education and recently begun working as a doctor) in the sample, beliefs about specialising in geriatric medicine which are relevant today, could not be elicited. Had more junior doctors been included in the sample, it would be known with more confidence whether this devaluation of geriatric medicine is present today, and whether it actually relates to the nature of the job and work environment of a geriatrician. Whilst this study indicated that the devaluation of geriatric medicine was related to the job rather than the older patients, this study included a diverse sample of participants, with some having chosen their specialty two or three decades ago. Whether these nodes relating to the devaluation of geriatric medicine are present in recently-qualified doctors (as opposed to those who decided on their career specialty 10 to 30 years ago), is therefore still unknown. The other question that still remains relates to whether, in a recently-qualified sample, do any negative evaluations of geriatric medicine relate to the nature of the job and work environment or to older patients who are treated on geriatric wards? Specifically, geriatricians typically see the most frail and often oldest patients in hospital settings. Therefore it should be ascertained

with further exploration whether negative attitudes toward geriatrics, or the work of geriatricians, may uncover different attitudes (e.g. additional nodes) toward the types of older patients who are treated on geriatric wards. This will be further explored in the next chapter of this thesis.

The second theme presented in this chapter detailed emotional responses to caring for older patients. The emotional responses reported, such as sadness and fear, were generally described in negative terms; emotions one would prefer to avoid. These included sadness at witnessing loneliness and health deterioration in older patients, and fear of not knowing enough or doing enough for older patients. It is here that we can see the advantages of allowing doctors and medical students to describe emotions as part of their attitude, as well as providing contextual information about what may trigger these emotions.

There was a notable absence of positive emotions in the attitudes toward provision of care for older patients. However, the extent that this would be different for any other patient group being cared for cannot be determined. The emotions described when working with older patients do warrant further investigation; firstly, measurement of the nature and extent of positive and negative emotions at work using quantitative measures could provide greater confidence in the findings, and illuminate the issue further. Secondly, through the measurement of positive and negative emotions experienced when providing care for older patients, comparisons can be made with providing care for other patient groups (i.e. younger patients). This will help to determine whether these emotions are indicative of the job of being a doctor or a medical student in general, or relate uniquely to caring for the older patient group. Lastly, some measurement of emotions experienced in relation to the provision of care for older patients could be useful. This is in terms of developing a more detailed understanding of what these emotions are, in

what circumstances positive and negative emotions tend to occur, and what impact they may have on doctors and medical students caring for older patients.

However, positive psychological responses were described in the final theme; sources of satisfaction and dissatisfaction. Whilst satisfaction is not an emotion but a psychological response (i.e. it would still constitute affective information using the tripartite model), participants reported achieving satisfaction from some aspects of providing care for older patients. As a result, participants described positive affective information relating to providing care for older patients (i.e. satisfaction). Unlike the other main themes, sources of satisfaction and dissatisfaction featured a number of responses which were described in positive terms by participants and were therefore considered to be of positive valence. Participants reported satisfaction at improving the older patient's quality of life, either by getting them back to a safe environment or providing an older patient with a comfortable death. Providing care for the older patient tended to focus on dealing with complex health problems and social issues, and this was reported as dissatisfying by some and satisfying by others. Specifically, those who worked predominantly with complex older patients (such as those working in geriatrics or stroke medicine) found the intellectual challenges and variety and breadth of the work to be interesting and satisfying. In contrast, those who had not specialised in a specialty dominated by complex older patients (or had not yet specialised in any specialty), found the complexity dissatisfying, reporting that older patients are difficult to communicate with and often cannot be cured.

Most participants described an imperfect system for providing older patients with good quality care, which related to low staffing levels, time and efficiency pressures, and bed pressures. Although these are system-wide issues, participants reported that the effects of NHS pressures and targets are

exaggerated when treating older patients due to the unique and complex characteristics of this patient group. This was a commonly reported source of dissatisfaction in those who did, and those who did not, specialise in older patient care settings. This source of dissatisfaction was reported even in general and acute settings and so was not limited to only those dealing with highly complex older patients on geriatric wards. As most participants described dissatisfaction with how the prevailing system provides a barrier to the quality of care they can offer older patients, it is suggested here that this finding warrants future investigation. Again, the next steps should be to quantitatively explore the nature of job- and work-related satisfaction and dissatisfaction in doctors and medical students. This should be done with a larger and more representative sample of doctors and medical students, measuring job- and work-related satisfaction as it pertains to providing care for older patients. Specifically, the findings described here indicate the presence of emotions and psychological responses at work which participants experienced saliently enough to describe in the interviews. However, these findings do not indicate the extent of these emotions and psychological responses; instead they indicate their presence, albeit in a small sample. The next step for the development of this body of knowledge is the quantitative exploration and confirmation of these findings in a larger representative sample.

The findings of this study were elicited through the use of a tripartite model of attitude structure. By asking interview questions which allowed participants to describe their attitudes in cognitive, behavioural and/or affective terms, the present study is believed to have allowed for a more comprehensive and detailed description of attitudes toward older patients and toward providing their care. To have considered attitudes along a single dimension of positive to negative, as described in Chapter 2, would not have resulted in the detailed picture of attitudes reported in the findings of this

study. Overall, the findings suggest that attitudes toward older patients can include cognitive, affective, and behavioural information, but also suggest that the contribution of difference sources of information may vary. When participants describe older patients, they tended to report mostly cognitive information (i.e. beliefs and stereotypes). In contrast, when discussing older patients' healthcare needs, participants tended to report behavioural information, in addition to cognitive information, such as how the participant had typically acted with regard to older patients in the past, and how they intended to act in the future. It could be that in order to describe the healthcare needs of older patients, participants reflected on examples of their own behaviour and how these differed, or often needed to differ, for this patient group in comparison to others.

In stark contrast, the findings reported in this chapter showed not only a mix of all three components, but also that affective information was often described in relation to the provision of care for the older patient, rather than the characteristics of the older patients themselves. Participants described affective responses to the barriers and facilitators of this care in the social and organisational environment. Doctors and medical students frequently reported the frustration of not being able to provide the care that older patients needed. The nature and challenges of the job were often described in negative terms, whereas the older patients and their healthcare needs were not. The findings of this study indicate that negative attitudes tended to relate to the provision of care for older patients, rather than negative attitudes toward older patients themselves. It is possible that participants did not feel entirely comfortable sharing negative attitudes toward older patients, due to social desirability biases. However, the data stemming from the interviews did include negative attitudes and examples of behaviours which could be considered socially undesirable, so the extent that this bias affected responses was not deemed to be problematic. Furthermore, participants

were given the opportunity to describe the prevailing culture in their workplace or their perceptions of others' attitudes to allow them to share socially undesirable attitudes without identification of the individuals concerned (See Questions 11 and 12 (ii) in the interview guide, Appendix 6). On the whole, the findings presented in these two chapters indicate that there is a role for all three components of attitudes when exploring attitudes toward older patients and providing their care. However, these findings do suggest that the different components of attitudes may contribute differently to attitudes toward *older patients* and attitudes toward *providing their care*.

It is important to note that this study was conducted in a single NHS trust and it cannot be assumed that these findings are generalisable outside of these settings. Indeed, some of the findings, especially with regard to the organisational barriers to providing care, may be unique to this NHS trust. The participant group was obtained through non-probability sampling and it is likely that a self-selected sample may have characteristics different to members of the same population who did not volunteer to participate. The present study does, however, form an important basis from which to investigate attitudes in other NHS trusts.

A major strength of this study is that it addresses a gap identified in the research literature; this study represents one of the first known attempts to conceptualise doctors' and medical students' attitudes toward older patients and their care in a UK setting. Another important strength of the study was that it drew on a scientific framework of attitudes (the tripartite model) in order to investigate attitude content. By investigating affective, behavioural and cognitive information, a picture of attitudes that is rich in detail has emerged. Using a scientific framework to investigate attitudes means that the findings of this study are underpinned by a psychological theory of attitudes. Regardless of the choice of model of attitude structure, the use of

psychological attitude theory to investigate attitudes is an important departure from the previous literature which has typically ignored scientific attitude theory.

The findings from Study 2 serve to demonstrate that attitudes toward older patients and providing their care were highly specific to the medical encounter between the doctor or medical student and the patient. For example, attitudes related to the presentation of the older patient, the complexity of their health issues, their communication abilities, and the training and skills of the doctor or medical student to enable them to treat the patient. The findings from this study are unique to older patients rather than older people in general. Therefore, these findings suggest that attitudes toward older patients are highly specific to their health and illness status, and not simply related to being an older member of society (i.e. an older person in general). This finding calls into question the suitability of generalising results from questionnaires with an older people focus to the older patient population, which, as highlighted in the Study 1 (Section 3.6.1.5), has often occurred in past research. In terms of the implication of this finding, it is recommended that future research pertaining to attitudes toward older patients should use information specific to the medical encounter and use *older patients* rather than *older people* as the target of investigation in questionnaires and interviews.

6.6 Chapter summary

This chapter presented findings related to providing care for older patients, with a focus on the social and organisational barriers which serve to help or hinder doctors and medical students. Descriptions and examples of each node were provided, followed by a discussion of the main findings reported in this chapter. The discussion also included evaluation of the overall study and its unique contribution to the research literature. The subthemes relating to

the unpopularity and devaluation of geriatric medicine will be further explored in the next chapter. This is to determine whether these views are in response to the job and work of the geriatrician or in response to characteristics of the older patients on geriatric wards in a more recently-qualified sample of doctors.

7. STUDY 3: JUNIOR DOCTORS' INTEREST IN A GERIATRIC MEDICINE CAREER

7.1 Chapter overview

This chapter presents a study on junior doctors' beliefs about specialising in geriatric medicine. Study 2 indicated that geriatric medicine had long been considered an unpopular and uncompetitive speciality. The study reported in this chapter therefore explores factors relating to why junior doctors (recently qualified doctors) do or do not intend to pursue geriatric medicine as a future career. The aim was to further explore whether this decision was related to the perceived characteristics of older patients on geriatric wards or the nature of the job and work-related factors. The chapter begins by describing the study method (Section 7.2), followed by the three main themes found as to why junior doctors chose not to specialise in geriatric medicine (Section 7.3). A discussion of the study is then provided (Section 7.4).

7.2 Method

7.2.1 Study 3 objective

This study aimed to explore factors involved in junior doctors' decisions to pursue or not pursue geriatric medicine as a career choice. The study was designed to ascertain whether the low value ascribed to geriatric medicine, reported in Study 2, was related to attitudes toward the older patients who may be admitted and treated on geriatric wards, or the toward the job and working environment.

7.2.2 Recruitment strategy and participants

Twenty-two junior doctors participated in this study. Of these, 11 participants (50%) were in the first year of their foundation training (postgraduate training), referred to as an 'F1 doctor'. The remaining 11 participants (50%) were in the second and final year of foundation training, commonly referred to as a 'F2 doctor'. Nine participants were female (40.9%) and the remaining 13 were male. Participants were aged between 23 and 34 years, with an average age of 26 years. Forty-one per cent of the sample (*N* = 9) described themselves as 'White British'. All participants had been working as a doctor for between three months and one year and three months.

Interviews took place at one hospital site in the same NHS trust described in Study 2 (Section 4.5.1), where the total number of F1 and F2 doctors was 53 and 64, respectively. Therefore, this study sampled 18.8% of the junior doctors working at the hospital site. A list of wards to which junior doctors were assigned to was obtained. Wards were selected at random from this list and the researcher approached one F1 and one F2 doctor working on the selected ward to participate in the study. Twenty-nine doctors were then approached to participate in the study, of which 22 agreed and were interviewed on the same day or shortly after. Seven doctors agreed to participate at a later date but a convenient time and place was not found and these doctors were not interviewed. The overall participation rate was 75.9 per cent.

7.2.3 Procedure and Setting

All interviews took place in December 2012. Interviews took place in a private room on the hospital ward. Prior to the beginning of each interview, each participant was given a participant information sheet to read, time to ask questions, and a consent form to read and sign. The participant was then verbally reminded that the interview would be recorded on a digital voice

recorder. The voice recorder was then switched on and the interview commenced. Interview duration ranged from approximately eight minutes to 22 minutes, with interviews lasting 11 minutes on average. At the end of the interview, participants were asked to provide their ethnicity and age. The audio recordings were transcribed by the researcher and all transcripts were checked against the audio recording for accuracy.

7.2.4 Ethical considerations

This study was reviewed and approved by the University of Nottingham as part of the project protocol, and was part of the project which received NHS REC approval as described in Study 2. Participants were given a participant information sheet (see Appendix 7) and consent form to read and sign (see Appendix 8). The data from this study were transcribed by the researcher and anonymised. All other ethical considerations relevant to this study were described in the methodology chapter for Study 2 (see Section 4.5.5 for further details).

7.2.5 Data collection

The interviews followed a semistructured format as in Study 2 (see Section 4.3.3 for more detailed description) and were conducted by the researcher. None of the interview participants, or those approached for interview, were known to the researcher prior to the study. Participants were asked (1) whether they had considered, or were currently considering a career in geriatric medicine, and (2) why they did or did not want to pursue geriatric medicine a future career choice.

7.2.6 Data analysis

Data were entered into Nvivo (QSR International Pty, Ltd., Version 9, 2010) and thematically analysed by the researcher using the same stages of theme development detailed in Study 2 (Section 4.5.6). The coding framework was

checked by the research supervisor. Theme development was conducted in conjunction with the research supervisor and three main themes were found. These themes were named and given definition and scope for the coding framework. Once the three themes had been defined, all data were reanalysed to ensure that it fit the coding framework. The results of the second analysis were used.

7.3 Findings

Across the 22 participants, 14 reported that they had never considered, or could not remember considering, geriatric medicine as a specialty choice for the future. Seven participants reported that they were willing to consider geriatric medicine as a future career, and one participant intended to specialise in geriatric medicine. Descriptions as to why geriatric medicine did or did not appeal to participants were then explored and this resulted in three main themes. These three themes were coded as: (a) limited capacity of geriatricians to make a difference, (b) understaffed and overworked, and (c) being a generalist. A brief description of the themes and example excerpts are provided below.

7.3.1 Limited capacity of geriatricians to make a difference

Participants described various ways in which they thought geriatric medicine was futile or achieved less than other disciplines. Some participants expressed the belief that older patients often do not fully recover. It was explained that older patients often get well enough to be discharged to a different environment, but they may then come back to hospital at a later date. As a result, these participants did not feel the medical care they provided had achieved a great deal:

> *"I didn't enjoy it to be honest. It just seemed very drawn out… it didn't feel like much was being done. It was just sort of getting*

people back out into the community for them to come back in with another UTI [urinary tract infection] or another chest infection for us to treat for them to get back out again. It felt like a bit of a vicious circle. It wasn't really achieving much."

Interview 3

Some participants also described the limited power and opportunity to help older patients in geriatric medicine settings due to restrictions in how much care or treatment the doctor is able to offer them. One participant described how older patients on geriatric wards are not generally offered the same level of treatment as younger patients, in that they may not be fully investigated or offered the same medications as younger patients. As a result, he felt that he was restricted in the extent he could care for, and treat older patients and therefore did not want to specialise in geriatric medicine:

"it didn't attract me for one reason, it's that those elderly people are for some reason deprived from escalation of care, or, I mean the normal things you would consider for any young patient, you may not consider for an old one, especially giving drugs, going for an endoscopy, they end up having more scans but sometimes other specialists are less keen on operating on them, doing therapeutic procedures…. you are looking after the patient but you can't sort them out fully"

Interview 14

The limited capacity to help older patients in geriatric medicine was commonly linked to problems with social services, which participants reported as the main reason for delayed discharges. Participants often described the extent that the social care and social environment was so important to the older patient's health and future safety that their medical care might be secondary to the social care they received:

"… you might fix someone's immediate problem but at the end of the day if there's no… good social care in place in their day-to-day lives or core environment… there's not much you can do for them. So you'll be sitting with them for ages, waiting for them to go to a care home, or back home with a care package."

Interview 12

A number of participants described how they thought that older patients' medical care and treatment was secondary to their social issues, which put these participants off pursuing a career in geriatric medicine. Participants tended to describe how much time older patients spent on the geriatric wards waiting for social care packages, and how many patients were admitted because their home environment was unsafe.

7.3.2 Understaffed and overworked

Participants who had completed a geriatric medicine rotation as part of their junior doctor training often described how difficult it was. These participants typically described the understaffing of doctors on geriatric wards, resulting in junior doctors being overworked and having to work longer hours than they were contracted to:

"But I think the main reason is certainly, my experience here compared to a lot of the other specialties, you're far too busy and far too overworked. So ultimately it's not especially something to enjoy. When I look back at it, while I've learnt a lot here, I felt like I have been overworked and put under too much pressure here. And that's certainly not giving me a great impression of wanting to specialise in it in the future.

Interview 5

A few participants explained that having too few doctors on the geriatric wards often meant that more senior doctors were inaccessible because they were also overburdened. This lack of senior support was described as making the geriatrics job even more challenging. As a result, other specialties, which did not have understaffing problems, appeared to make more appealing career choices:

> *"It was massively unsupported, so it was myself, I was an F1 at the time, and there was an F2 and we were basically left to look after 28 patients every day. We had one consultant ward round a week, we had no registrar on the ward… had no idea what we were doing, there were no seniors around to sort of put ceilings of care on anything. So as far as we knew, we were resuscitating everyone, treating everyone fully, everyone was for escalation to HDU [High Dependency Unit] to ITU [Intensive Care Unit]… 'cause we as juniors can't say when to stop basically. It was just too busy, far, far, too busy for what it was. We were meant to finish before five, we never finished before seven on any given day. It got to the point where we preferred being on-call or on nights than being on that ward."*
>
> *Interview 10*

Another participant directly compared junior doctor staffing levels in different specialties at the hospital to demonstrate why working on the geriatric ward was difficult. In his opinion, this also explained why junior doctors are put off pursuing the specialty:

> *"If I compare, say, gastro [gastroenterology], there was seven juniors on a ward this size. On neuro [neurology], there were five juniors on a ward this size. On this ward, we're looking at three juniors… So you're generally overworked and very, very busy. So*

the experience of the speciality isn't really that great at the junior level."

Interview 5

One participant explained that due to understaffing problems, he found geriatric medicine had more temporary (i.e. locum) consultants on the wards. In his experience, these temporary consultants often did not appear to be very passionate about the specialty and were therefore uninspiring to work with.

Interestingly, the sole participant who wanted to specialise in geriatric medicine acknowledged that the specialty did not have enough resources or staff to address the current and future needs of the growing older population. However, he saw this as a career opportunity. He explained that he was willing to work long hours and work hard, and intended on becoming a consultant as soon as possible. The challenges associated with geriatric medicine presented an opportunity to him, because the field was unappealing to others. Furthermore, he believed funding and resources for older patients would increase in the future and create more jobs in the field of geriatric medicine:

"... most of the budget of the future health is going to be on the elderly people. I think there are more good scopes and good chances of getting more positions in care of elderly. So thats why I thought it's a future field actually, upcoming field."

Interview 4

7.3.3 Being a generalist

Some participants explained that geriatric medicine was often difficult due to

the complex nature of the health of the older patients who are placed on geriatric wards. Furthermore, participants explained that geriatricians have to remain very general in terms of their medical and clinical knowledge which they tended to report in negative terms because they saw this is challenging. As a result, doctors working in geriatric medicine have to know about all systems of the body and tend not to be specialists of a single bodily organ or biological system:

> *"…basically you are a general doctor who can sort out most things but you are not specialised in a system. You are specialised in seeing patients who are old. So you need to know about everything in older people."*
>
> *Interview 14*

Another participant explained that geriatric medicine is considered "vague" as a branch of medicine. Additionally, she explained that the geriatricians' remit is so large that other specialities and departments in the hospital can often justify sending older patients they do not want to deal with to the geriatrics ward:

> *"It's very challenging, in that you're not just a cardiologist dealing with just the heart and heart problems, you're dealing with everything. And you're expected to because that's your profession. The whole hospital technically is under your care if you think about the percentage of people over the age of 65 in hospital. It's probably 90 per cent. Whenever there's a problem – like, even on here, with an elderly patient, we'll just say 'refer to healthcare of the elderly'. Because it's the easiest thing to do. Everyone knows their [geriatricians'] job is hard. Everyone just thinks they can pone off [get rid of] any elderly patient to them. Because their branch is so vague, if someone's elderly and has a heart problem*

and cardiac don't want to take them then I know that I can pick up the phone justify getting healthcare of the elderly to come and take them."

Interview 2

7.4 Discussion

This study investigated the devaluation of geriatric medicine by asking junior doctors whether they intended to, or had considered specialising in this field, along with the factors they considered to have influenced this decision. Only one participant intended to specialise in geriatric medicine. The majority of those interviewed reported that they had not, or could not remember, ever considering specialising in geriatric medicine.

Three main themes were identified as to why participants did not want to specialise in geriatric medicine. The first theme described how participants tended to see the care that geriatricians provided as limited in its ability to make a difference to older patients' lives. These responses often linked the difficulty in arranging good social care packages as a barrier to making a difference to the lives of geriatric patients.

The second theme described the difficulty of managing the workload on geriatric wards due to staffing problems. Participants described the effect of not being able to consult senior doctors whilst on their junior doctor rotations, and not knowing how best to manage geriatric patients without senior guidance.

The final theme concerned how general the specialty of geriatric medicine often was. Participants reported that there was a wide range of organs and biological systems which a geriatrician would have to know about, and

therefore geriatric medicine was not specialised enough for these participants to want to pursue it. Geriatricians may see very complex cases, and their patients tend to have multiple simultaneous illnesses and be on multiple medications. Therefore, having to deal with an age group, rather than a biological system, requires geriatricians to be knowledgeable about a large range of health problems and illnesses. This was reported in negative terms by participants. In addition to this, participants also explained that as geriatric medicine is considered such a broad discipline, doctors from other specialties can justify sending their most difficult or challenging cases to the geriatric ward, which made the job of a geriatrician even more difficult.

Most commonly, participants gave reasons for not wanting to pursue geriatric medicine, which related to the nature of the job and working environment. In fact, participants rarely described the older patient group or the challenges of working with older patients. This confirmed and supported findings from Study 2 which linked the devaluation of geriatric medicine to the job and working environment rather than older patients. Furthermore, this study investigated this issue in doctors who had recently graduated from medical school and had recently begun working as doctors, but were expected to be presently considering their future career choice. By asking junior doctors about their intentions to specialise in geriatric medicine, and their reasoning behind this decision, this study demonstrated that geriatric medicine was not particularly popular, nor did it have positive evaluations, in this sample of recent graduates.

There were very few positive beliefs regarding the specialty of geriatric medicine that arose from the interviews. Most participants reported that they did not want to pursue, or could not recall even having considered pursuing, this specialty. The one participant who intended to specialise in geriatric medicine described career opportunities as his principle reason for

choosing this specialty. This participant reported how he expected that, due to the ageing population and the lack of doctors able to care for this population, he could expect to progress through his career, remaining in demand and employed. As such, he expected that his path to becoming a consultant doctor would be secure.

The findings of this study are in agreement with the reports from the participants in Study 2 that junior doctors do not see the geriatric medicine field as an attractive or popular career choice. The findings from senior doctors in Study 2 indicated that geriatric medicine is becoming more valued at the higher levels of hospital administration and amongst consultant doctors from other disciplines. However, they suggested that it was still devalued by junior doctors. This could not be explored further in Study 2 due to the small amount of junior doctors who participated. Therefore the present study was able to go some way in addressing this.

The second purpose of the present study was to determine whether the devaluation of geriatric medicine in junior doctors, which was described in the findings of Study 2 (Section 6.2.2), was associated with attitudes to the older patients who may be admitted and treated on these wards. On accounting for their lack of interest in the specialty, most responses related to the job, work, and responsibilities of the geriatrician. In fact, few participants reported their attitudes toward older patients, even when describing the job of the geriatrician. This therefore suggests that it is the factors relating to the job, and not the patients themselves, which make this an unattractive field to work in.

The present study was a small investigation into whether junior doctors, who are shortly to select their career specialty, could describe whether they had considered geriatric medicine. The overall findings suggest that geriatric

medicine was not highly regarded as a career choice and confirms the findings from Study 2, regarding the negative evaluations of geriatric medicine, in a group of doctors who have recently graduated from medical school. Many participants who gave reasons underlying their decision not to pursue geriatric medicine spoke specifically about their experience on a recent rotation, especially with regard to how difficult they found the rotation and a lack of support as a result of understaffing. Junior doctors did not tend to describe older patients (e.g. stereotypes of older patients), as a potential reason for the unappealing nature of geriatric medicine. Importantly, the study did not find evidence of negative attitudes toward older patients. Instead, the findings indicated that it was typically, work-, job-, or system-related factors that appeared to influence their career decision.

As the study was small in scale, it is not generalisable to a population outside of those interviewed. Participants were all recruited from the same NHS trust hospital, and the extent that findings would be similar in other hospitals is unknown. However, the study achieved a participation rate of 75 per cent from those approached to take part was achieved, and the resulting sample was approximately 19 per cent of the junior doctor population at one hospital site.

7.5 Chapter summary

This chapter described a study of junior doctors which explored reasons as to why they did or did not want to pursue a career in geriatric medicine. Findings indicated that participants' experiences of the job and the nature of the work on geriatric wards, as well as the difficulties resulting from the hospital system and its organisation, contributed to the lack of appeal of geriatric medicine. Indeed, the lack of positive responses regarding geriatric medicine indicated that it was not highly regarded by participants. Further

discussion of the strengths, limitations, and contribution of this work to the research literature is present in the next chapter of this thesis.

8. SUMMARY AND CONCLUSIONS

8.1 Chapter overview

This chapter begins by briefly summarising the contribution of each chapter to the overall findings of the thesis and to the research literature. The strengths and limitations of the present research are then discussed, and the unique contribution of this work to the research literature is described. The implications of the main findings and areas for future research are then outlined. The chapter closes with the conclusions of the thesis.

8.2 Summary of research findings

In Chapter 1, the motivation for investigating attitudes toward older patients in a UK setting was given. As discussed throughout the chapter, a large proportion of the published work on attitudes toward older patients in UK settings came from the grey research literature, such as reports on behalf of governmental (e.g. Abraham, 2011; Carruthers & Ormondroyd, 2009) and not-for-profit organisations (e.g. HAS 2000, 1998). It was proposed that there were two notable ways in which the grey research literature had not provided an adequate examination of attitudes toward older patients (in any healthcare staff population) for theory development. First, the reports published in the grey literature had generally failed to conceptualise attitudes, or measure attitudes, within any scientific framework of attitudes. Attitudes toward older patients were continually investigated through the use of anecdotal evidence, such as by investigating individual cases of complaints alleging unequal treatment and discrimination of older patients (e.g. Abraham, 2011). Second, reports tended to make general recommendations to address or change attitudes toward older patients, without providing

empirical evidence for these recommendations (e.g. Abraham, 2011; Carruthers & Ormondroyd, 2009; Department of Health, 2006; Grattan et al., 2002). A number of reports concluded that healthcare staff had negative attitudes toward older patients, but the reports offered a commentary on attitudes rather than empirical investigation (e.g. Carruthers & Ormondroyd, 2009; Department of Health, 2006; Grattan et al., 2002).

It was argued in Chapter 1 that repetition of the same techniques to describe attitudes toward older patients had resulted in the same problem being brought to our collective attention again and again. This refers to the accumulation of anecdotal evidence with little scientific framework or clear report of the study design. As a result of a failure to truly define the problem, we do not have the opportunity to define a solution. In the first chapter of this thesis, it was proposed that to move forward in the research exploring attitudes toward older patients (in any healthcare staff population), we need a detailed description of attitude content; essentially a conceptualisation of these attitudes. Most importantly, this description of attitudes content needed to be elicited through scientific enquiry. This means that these attitudes should be informed by a scientific framework and the study method should be described to allow it to be replicated and verified in future research.

In Chapter 1, the research literature on doctors' and medical students' attitudes toward older patients was then explored. A body of scientific research exploring attitudes toward older patients and their care in UK nurses and student nurses was identified (e.g. Higgins, Van Der Riet, Slater, & Peek, 2007; Hope, 1994; McKinlay & Cowan, 2003; McKinlay & Cowan 2006; McLafferty, 2007; McLafferty & Morrison, 2004). However, there was no corresponding body of literature for UK doctors and medical students and, instead, scientific literature had focused on measuring quantifiable indicators of ageism (age discrimination; e.g. treatment and service provision for older

versus younger patients). As a result, the body of scientific knowledge that has been accumulated mainly details worse levels of healthcare service provision and quality for patients aged over 65 years than those under 65 (e.g. Austin & Russell, 2003; Bond et al., 2003; Dudley & Burns, 1992; Grant et al., 2000). To clarify, age discrimination is the quantifiable behavioural response to a set of discriminatory or negative attitudes (ageism) toward people based on age (Levenson, 2003). Therefore, if age discrimination is identified in a population, a useful next step is to investigate the possible underlying attitudes from which discriminatory behaviours may stem (Levenson, 2003). This corresponding body of research investigating the mechanisms (e.g. ageism) by which age discrimination may occur was not identified in the scientific literature. Whilst the scientific literature indicates that there are differential levels of service provision and quality between older and younger patients, we therefore do not have a detailed understanding as to why these differences may exist, or the factors that have contributed to them. Regardless of whether attitudes were considered positive or negative, an exploration of doctors' and medical students' attitudes toward older patients in UK settings was needed.

The first research question outlined in Chapter 1 (Section 1.3) addressed how doctors' and medical students' attitudes toward older patients have been investigated in the scientific research literature to date. Although English-language scientific research on the topic was likely to come from other countries, this research question allowed this thesis to describe what has been found on the research topic, and how these findings have been elicited. Addressing this research question ultimately enabled the discovery of suitable methods of investigation for the advancement of scientific knowledge on this topic in UK settings. Essentially, the strengths and weaknesses from the worldwide scientific research pertaining to the topic was analysed to inform future investigation in UK settings.

Chapter 1 also introduced the second research question (Section 1.3) which addressed how doctors' and medical students' attitudes toward older patients and their care could be conceptualised in a UK setting. After consulting the grey research literature, it was clear that any investigations that would address this research question should make use of the scientific research on attitudes to inform study design. Specifically, research investigating doctors' and medical students' attitudes should endeavour to operationalise attitudes in line with a theory of attitudes in order to ensure these investigations are scientifically adequate (e.g. Eagly & Chaiken, 1993; Rosenberg & Hovland, 1960). Therefore, an examination and description of the dominant topics in the scientific research literature on attitudes was required. Attitude theory was discussed in the second chapter of this thesis.

Chapter 2 presented the main debates in the scientific research literature on attitudes, including the debate on attitude structure which exists to the present day. It was explained that, whilst some attitude theorists consider attitudes to be the level of favour or disfavour toward a target, which is known as the unidimensional model of attitude structure (Eagly & Chaiken, 1993), others have argued that attitudes are multidimensional (e.g. Breckler, 1984; Rosenberg & Hovland, 1960). The most common multidimensional view of attitude structure, known as the tripartite model (Rosenberg & Hovland, 1960), maintains that attitudes are comprised of three types of components: cognitive information, affective information, and behavioural information toward an attitudinal target. Whichever model is assumed, these three types of information are important to the elicitation of an individual's attitudes (e.g. Eagly & Chaiken, 1993; Breckler, 1984). Depending on the attitude theorist, the unidimensional model often assumes that the preference information, the single dimension ranging from positive to negative (considered to be the attitude), is based on these three sources of information (Eagly & Chaiken,

1993). However, the tripartite model assumes these three sources of information are the attitude itself (Rosenberg & Hovland, 1960). The debate on attitude structure was outlined in order to demonstrate the importance of these three sources of information, which are relevant whether the unidimensional or tripartite model is subscribed to.

In Chapter 2, three main arguments for the justification of the present work's adoption of the tripartite model of attitude structure were provided. First, the unidimensional model is based on preference for and against a target, which is conceptually very similar to the affective component of the tripartite model (Ostrom, 1968). Therefore, measuring attitudes along a preference scale (ranging from liking to disliking an attitudinal target) may simply be measuring a single component of what may be a three-component (tripartite) concept (Ostrom, 1968). It was therefore important that the present research did not constrain data by only investigating one component if three components may exist. Second, the view that an attitude can be captured as a single point on a favourability scale (as outlined in the unidimesional model), and that two different people with the same attitude measurement results have the same attitude, was deemed to be unrealistic (Diab, 1967). Third, the present research had a focus on exploring attitudes and generating theory. In keeping with previous studies designed to generate theory, which have traditionally assumed a tripartite view (Tesser & Shaffer, 1990), a multidimensional approach was therefore needed. In contrast, the unidimensional view is often favoured by researchers seeking to measure attitudes, which has been described as resulting from the ease and convenience with which unidimensional attitude measures can be employed (Triandis, 1967).

Having identified and outlined the attitude theory which informed the subsequent chapters of this thesis, Chapter 3 presented the first study; a

systematic search and review. This review was designed to answer the first research question: How have medical students' and doctors' attitudes toward older patients been investigated in the scientific literature to date? In order to answer the research question, the review needed to be broad and inclusive of varying levels of study design and quality, so that it may adequately represent trends in the scientific research literature to date. Sixty studies were included in the review. Results of the review indicated that these studies on medical students' and doctors' attitudes toward older patients fell into three themes. These themes address three different research questions relating to attitudes toward older patients: (a) whether attitudes improve after a geriatrics-related intervention; (b) factors which may be related to medical students' or doctors' attitudes toward older patients; and (c) the content of doctors' attitudes toward older patients.

The first theme included in the review comprised 27 studies investigating the effect of a geriatrics intervention on attitude scores. Results indicated that attitude change, from pretest to posttest, was associated with the content of the intervention. Interventions which included an empathy-fostering component, such as mentoring, informal contact with an older person, or an ageing simulation exercise, were more likely to show positive attitude change than interventions which consisted solely of knowledge-building content. Knowledge-building content often included a geriatrics-related training course or geriatrics rotation. It appeared that the use of a knowledge-building intervention was based on the premise that interaction with, or education about, older patients would promote positive attitude change. However, statistical analyses showed that knowledge-building interventions were not associated with changes in attitude scores postintervention.

The finding that empathy-fostering interventions were associated with positive attitude change has not been explicitly reported elsewhere in the

scientific literature. Arguably, such an effect was only evident due to the unique type of systematic review methodology employed in the present thesis. Specifically, the analysis of the content of interventions, and their categorisation into empathy-fostering or knowledge-building, by the present researcher, was novel. This is because it went beyond the traditional comparisons made in systematic reviews of interventions, such as intervention duration, sample size and measures used (e.g. Tullo, Spencer & Allan, 2010). The information traditionally used in systematic reviews relating to the implementation of interventions, such as their duration, was collected, analysed and reported in Study 1 (see Table 4), but was not found to be related to attitude change. As a result, this review uniquely contributed to the body of literature by identifying the need to examine the content of the intervention as a potential source of analysis in future attitude-focused interventions.

The findings presented in this theme of the review have two implications for future research. First, those designing geriatrics-related interventions should consider the content of the intervention to encourage attitude change, rather than simply the process and implementation factors such as the interventions' frequency and duration. Second, the design of interventions should include empathy-fostering exercises, such as ageing simulation exercises, to encourage positive attitude changes in doctors and students. The practical implications of this finding are that the use of empathy-fostering exercises, to encourage positive attitudes in medical students and doctors, may be applicable in real-world healthcare settings.

The second theme presented in the systematic search and review addressed the personal, demographic, educational and professional variables that might be related to attitudes toward older patients. Detailed analysis of the 31 studies examining these variables indicated a general absence of consistent

relationships, with one main exception. Doctors' and medical students' attitudes toward older patients were more positive in those reporting an interest in specialising in geriatric medicine in eight of the nine studies that investigated this relationship (Chua et al., 2008; Fitzgerald et al., 2003; Hughes et al., 2008; Lee et al., 2005; Leung et al, 2011; Reuben et al., 1998; Voogt et al., 2008; Wilderom et al., 1990). Due to the cross-sectional nature of these studies, no conclusions can be made on the direction of the relationship. With regard to an individual's interest in geriatric medicine and his or her attitudes toward older patients, this relationship would be better understood with longitudinal data to demonstrate with greater confidence as to whether, or how, these two variables may be linked. It is also recommended that future research incorporates the use of a social desirability measure, in addition to measuring attitudes toward older patients, in order to determine whether any associations have been masked or exaggerated. On the whole, the results from this part of the review indicate how many studies have sought to investigate demographic, personal, and professional variables associated with doctors' and medical students' attitudes toward older patients. However, very little conclusive evidence was found and this line of enquiry has not been particularly fruitful.

The third, and final, theme of the review presented findings that addressed the content of attitudes toward older patients. Only two studies investigated this topic, both originating from the USA and consisting of doctor participants (Laditka et al., 2002; Stevens & Pearlman, 1988). These two studies were exploratory in nature and attempted to describe attitudes using qualitative research methods. The method of these two studies were markedly different from the 58 studies discussed previously in the review as they carried out an exploration of attitudes (using qualitative methods) rather than their quantification or measurement. Both of these studies found doctors' attitudes toward older patients were highly specific to the medical context,

relating to the doctor-patient encounter, older patients' presentations of health and ill-health, diagnosis and treatments, and aspects of the work environment related to the provision of care. These studies did not commonly report attitudes that were only relevant to being an older member of society; instead they reported attitudes relevant to health and illness at an older age. The finding that attitudes toward older patients may primarily concern the medical context calls into question the assumption of a number of intervention studies and cross-sectional studies which have measured attitudes toward older *patients* by employing a general measure of attitudes toward older *people* (such as using KAOP; Kogan, 1961a). Items in questionnaires measuring attitudes toward older people typically contain items irrelevant to the medical context of care in healthcare settings (e.g. "older people have too much power in business and politics" and "most old people tend to let their homes become shabby and unattractive", Kogan, 1961a, p.46). Therefore, it appears that these questionnaires measuring attitudes toward older people may be inappropriate for measuring attitudes toward older patients.

The overall results of the review indicated that very little theory has been developed in relation to medical students' and doctors' attitudes toward older patients. Past research on the topic has focused on measuring attitudes whilst mostly bypassing the exploration of attitude content. As a result, it was often assumed that the methods and tools used to investigate attitudes toward older people were suitable to investigate attitudes toward older patients, without providing empirical support for this assumption (e.g. Beall et al., 1991; Belgrave et al., 1982; Cheong et al., 2009; Hellbusch et al., 1995). Additionally, these studies failed to provide reasoning or explanation as to why this assumption could be made without empirical testing. Given the results of the exploratory review (Theme 3), that doctors described older patients in terms of the health, illness and treatment, it is suggested that

general attitudes toward *older people* may be an inadequate method of capturing attitudes toward *older patients*. Further research is therefore needed to determine if attitudes toward older people are related to, or predictive of, attitudes toward older patients. However, the results of this review indicate how the literature in this area has typically used the terms interchangeably and without theoretical or empirical support. The methodological implications of this finding are that future research pertaining to older patients should seek to use measurement tools specific to older patients (e.g. including items related to health, illness, treatment and care), rather than simply using general measures designed to measure attitudes toward older people in general.

This systematic search and literature review (Study 1) answered the first research question presented in this thesis: How have medical students' and doctors' attitudes toward older patients been investigated in the scientific research literature to date? This was done by categorising, analysing and presenting the scientific research on medical students' and doctors' attitudes toward older patients. Six notable points that characterise previous scientific investigations were identified. First, the scientific research literature on medical students' and doctors' attitudes toward older patients had typically fallen into three distinct themes, which address three different research questions: (a) whether attitudes improve after a geriatrics-related intervention; (b) factors which may be related to medical students' or doctors' attitudes toward older patients; and (c) the content of doctors' attitudes toward older patients. Second, the scientific research literature was dominated by studies focused on the attitudes of medical students, with a lack of studies investigating doctors' attitudes. Third, studies often originated from the US, with very few UK-based studies. Fourth, there was an emphasis on measuring attitudes rather than exploring attitude content, demonstrated by the finding that 58 of the 60 studies attempted to quantitatively measure

attitudes. Fifth, studies tended to treat older patients and older people as interchangeable terms or constructs without empirical support for making this assumption. Sixth, the research literature suffers from a general absence of theory generation and development in relation to attitudes toward older patients. Most notably, there is a general absence of the operationalisation of attitudes in individual studies, as well a general lack of consideration of the scientific theory of attitude structure. Therefore, Study 1 provided a six-point answer to the first research question.

In answering the first research question, it was identified how most previous studies in this area had not reported investigations within a scientific framework of attitudes. Furthermore, research investigating doctors' attitudes in UK settings was largely missing from the research literature. As a result, the second research question (how can medical students' and doctors' attitudes toward older patients and their care be conceptualised in a UK setting?) required further examination through empirical research based on a scientific framework of attitudes. Furthermore, the second research question could not be answered by conducting similar research in the same way to that done before, because previous research was dominated by quantitative measurement of attitudes without an underlying conceptualisation of attitudes toward older patients. An exploratory study in UK settings, describing attitude content, was therefore required to conceptualise doctors' and medical students' attitudes toward older patients and their care.

In Chapter 4, the methodology and methods for Study 2 (attitudes study) was described and a detailed account of all the major decisions relating to the method was given. These were in line with the recommendations associated with the postpositivist theoretical assumptions underpinning this thesis. Postpositivists maintain there is objective truth, but we may only proximate truth and may be incapable of knowing objective truth because all our beliefs

are based on human conjecture (e.g. Kuhn, 1962; 1970; Popper, 1965; Alexander, 1995). As described in Chapter 4, a postpositivist theoretical framework entails that scientific discovery inherently includes assumptions and bias which can originate from the researcher, the research community, or the traditions associated with the discipline (all contributing to the research *paradigm* or *exemplar* within which the researcher is working; Kuhn, 1962; 1970). These assumptions or biases exist in the discovery of all scientific knowledge regardless of whether the researcher wishes to acknowledge them (Kuhn, 1962). According to this view, the discovery of scientific knowledge should be accompanied by a detailed description of the method and justification of the theory and methods used, so as to allow readers to make their own decisions regarding any scientific discoveries emanating from the work (Alexander, 1995). It is due to the adoption of this postpositivist view on the discovery of scientific knowledge that the decisions regarding how, and why, to investigate attitudes were described and justified in great detail within this thesis.

Chapters 5 and 6 presented the findings of Study 2 (attitudes study). This study was designed to answer research question 2: How can we conceptualise doctors' and medical students' attitudes toward older patients and their care in a UK setting? A thematic analysis of 25 interviews indicated how the findings could be broadly conceptualised as (a) attitudes toward older patients and their healthcare needs (described in Chapter 5), and (b) attitudes toward providing care for older patients (described in Chapter 6). A detailed conceptualisation of these attitudes is provided in Table 9 and 10, respectively. It is this information which conceptualises doctors' and medical students' attitudes toward older patients and their care, in a UK setting, which has been overlooked in the research literature to date. Importantly, the attitude content described across the two chapters incorporated affective, behavioural and cognitive information and was therefore conducted within a

scientific framework of attitude structure. This conceptualisation of attitudes toward older patients (see Table 9) and attitudes toward providing care for older patients (see Table 10) therefore provides an answer to the second research question posed at the beginning of the thesis.

The first set of attitudes found, attitudes toward older patients and their healthcare needs, comprised of mostly cognitive information (i.e. beliefs and stereotypes) and behavioural information (i.e. past behavioural tendencies and intentions to act in the future). Furthermore, this information was highly specific to the medical encounter and the health status of the older person as a patient, and not as an older person in general. This supported the findings of the two exploratory studies (Laditka et al., 2002; Stevens & Pearlman, 1988) analysed and described in the systematic search and review, which also found attitudes toward older patients to be highly specific to the medical context and the medical encounter. When describing their attitudes toward older patients and their healthcare needs, very little data related to older people in general. The characteristics of older patients that were described by participants related to their medical encounter, such as how patients tended to appear or behave during the hospital admission. This supports the argument, proposed earlier, that attitudes toward older patients may be distinct from attitudes toward older people. This research area would benefit from quantitative investigation to determine if the constructs are conceptually distinct.

Chapter 6 presented the second set of findings to Study 2: Attitudes toward providing care for older patients, in which participants described the barriers and facilitators in the social and organisational environment as well as their personal reactions to dealing with this environment. Participants spoke at length, and in great detail, about factors in the environment which helped or hindered their ability to provide good quality care for older patients.

Interestingly, most of the affective information described during the interviews related to the provision of care for older patients, rather than any characteristics of older patients or their healthcare needs. The emotions described by participants were largely described in negative terms, including sadness, fear and anxiety. In the context of the tripartite model of attitude structure, the emotions and the psychological responses reported (such as satisfaction and dissatisfaction) can be viewed as affective information. The finding that most of the affective information relating to older patients and their care was described in relation to providing care for older patients (rather than older patients themselves) is important. This indicates that the affective component of their attitudes may primarily relate to the provision of care, rather than the 'older patient' per se. The implications of this finding is that studies that investigate attitudes toward older patients without considering the social and organisational context of the care may miss the affective information and therefore not capture all components of the attitude.

Therefore Study 2 (attitudes study) demonstrated that when describing older patients and their care needs, participants tended to report cognitive information and behavioural information, and did not appear to draw on affective information. Much of the affective information related to participants' descriptions of their job, work and organisational demands. The implications of this are that future research on attitudes toward older patients should include questions that attempt to explore the organisational environment that individuals' encounter (such as the organisation's expected norms, rules and culture) as this may have an influence on their attitudes. In fact, it should be acknowledged that attitudes toward older patients may also be reflective of the organisational context in which they occur, rather than simply reflective of the person stating the attitude. These findings open up new possibilities for research in UK settings. This includes the opportunity to

quantitatively examine the social and organisational factors which relate to positive and negative attitudes toward providing care for older patients.

Importantly, this thesis uniquely contributes to the research literature by identifying the importance of the working environment to attitudes toward providing care for older patients. Examination of how, or whether, the working environment impacted upon doctors' and medical students' attitudes toward older patients and their care was generally not examined in the 58 quantitative studies reported in the review (Study 1). The importance of the working environment to doctors' and medical students' attitudes toward providing care for older patients is a novel finding. This may not have been identified previously for two reasons. Firstly, prior research has typically measured attitudes using measures which do not include items about the working environment of the doctor or medical student. For example, questionnaires regarding older people in general are unspecific to healthcare settings. Secondly, Study 2 consisted of interviews and, therefore, allowed participants to describe their experiences of working with, and caring for, older patients in their own words. It is plausible that these unique findings were discovered in Study 2 by avoiding the use of attitude questionnaires which could potentially constrain responses (Schwarz, 1996; Schwarz, 2007a). Essentially, past research may have not found this negative affective information because it did not search for it in the organisational environment of the individual. Instead, negative affective information was assumed to exist in the individual's attitudes toward older patients or older people. Indeed, examination of the working environment has been overlooked in the UK and worldwide literature relating to this topic.

It is proposed that the conceptualisation of attitudes toward older patients, outlined in Tables 9 and 10, could contribute to the development of UK-specific questionnaires measuring attitudes toward: (a) older patients and

their healthcare needs; and (b) providing care for older patients in hospital settings. Further work to ensure that the content of attitudes described in both chapters is relevant to other UK NHS Trust hospital settings is required. However, the findings to Study 2 mark an important step in the formation of UK-specific attitude measures to investigate doctors' and medical students' attitudes toward older patients and providing care for older patients.

Based on the findings of Study 2, it was deemed necessary to further investigate the devaluation and unpopularity of geriatric medicine. Participants in Study 2 discussed the historical unpopularity of this discipline, but current perceptions regarding geriatric medicine were unclear due to the limited numbers of newly-qualified doctors in the participant group for Study 2. Therefore, questions were raised as to whether the unpopularity of geriatric medicine, and its unattractiveness as a career choice, was related to the older patients treated in the discipline, or factors which related to the job and work organisation. The final study of this thesis (Study 3; career intentions study), presented in Chapter 7, therefore explored evaluations of geriatric medicine as reported by newly-qualified doctors.

In Study 3, 22 junior doctors were interviewed about their career intentions. Participants were asked whether or not they had considered specialising in geriatric medicine as a future specialty choice, and were also asked about the factors that contributed to this career decision. The majority of the sample reported that they did not want to pursue, or could not recall even having considered pursuing, geriatric medicine. Only one participant intended to specialise in geriatric medicine, describing career opportunities arising from the unpopularity of the discipline as his principle reason for choosing this specialty. There were very few positive reports about geriatric medicine across all participants. A thematic analysis indicated that participants' reports about the appeal of geriatric medicine could be organised into three

themes. All three themes related to the nature of the working environment, such as the job-, work-, or system-related factors regarding geriatric medicine. Many participants cited their experience on a recent rotation, especially with regard to the difficulty of the rotation and the lack of support due to understaffing, as a potential reason for the unappealing nature of geriatric medicine. However, junior doctors did not tend to describe the patients (e.g. stereotypes of older patients) as part of the lack of appeal of geriatric medicine. Therefore, Study 3 (career intentions study) indicated that the lack of appeal of geriatric medicine appeared to be related to characteristics of the working environment, rather than the characteristics of the older patient group. Therefore the findings of Study 2, in which participants described negative affective information as relating to the working environment rather than the characteristics of the older patients themselves, were supported in a recently-qualified group of doctors.

8.3 Main strengths and limitations

Study 1 comprised a systematic search and review which addressed research question 1: How have doctors' and medical students' attitudes toward older patients been investigated in the scientific research literature to date? An important strength of the review is that it was broad and inclusive of different study types and quality. This allowed the review to use configurative logic (see Section 3.3.1) to determine not only the findings of past studies relating to the topic, but also the quality underpinning these findings. Configurative logic in review methodology aims to make sense of disparate data, from different study designs and methods, rather than answering a narrowly defined research question by aggregating very similar evidence (Gough et al., 2012; Illot et al., 2010). Due to differences in study design and methods pertaining to the present research topic, a traditional systematic review based on aggregative logic was not feasible. In terms of the breadth of

coverage, Study 1 resulted in a review that included English-language studies from the worldwide scientific research literature with no date restrictions, except that of the electronic databases' inception. Both qualitative and quantitative studies were eligible. Studies were not required to meet high quality criteria beyond that of the basic reporting of the instruments used and results obtained. As argued in Chapter 3, strict quality limits may miss important data on the strengths and weaknesses of previous studies, as well as the identification of research gaps. For these reasons, the broad and inclusive nature of this review is considered an important strength of the present work as it allowed an overall picture of studies to emerge. This included the studies' findings and quality.

It should be noted however, that despite attempts to capture a broad picture of the research topic, it is likely that studies were missed. Due to the wide variety of terms used to describe doctors and medical students, it is possible that studies using different terms were not identified. Furthermore, the review was conducted entirely through the use of electronic journal searching and journals were not hand-searched. As a result, the review is limited to studies on electronic databases. Importantly, review decisions were made by the present author and therefore represent subjective decisions by one individual. However, detailed reports of decisions made and their justification were provided. Detailed information on search terms used, databases searched, dates searched, and descriptions of how quality was assessed are included in Chapter 3. This transparency is considered an important strength of the review, and was intended to allow other researchers to replicate the review method as closely as possible.

Study 2 (attitudes study) comprised 25 interviews with doctors and medical students exploring their attitudes toward older patients in a UK setting. This study was designed to address research question 2: How can doctors' and

medical students' attitudes toward older patients and their care be conceptualised in a UK setting? Arguably, the main strength of this study was that it encompasses one of the first attempts to examine and describe the content of doctors' and medical students' attitudes toward older patients in the UK. Importantly, the resulting conceptualisation of attitudes toward older patients and their healthcare needs (See Table 9) and attitudes toward providing care for older patients (See Table 10) can be used to move this research topic forward in the UK. Ideally, this conceptualisation can be drawn on to develop questionnaire items to measure these attitudes in UK settings.

Another important strength of the present work is that it made use of scientific theory on attitudes. This work assumed a position on attitude definition, structure, stability and measurement, as described in Chapter 2. The studies reported in this thesis were consistent with the stated theoretical positions on attitudes, yet as a result, the work is limited to the positions outlined. For example, it was assumed that attitudes are relatively stable and represented in memory, to some extent (Fazio, 2007), which was justified in Chapter 2 (See Section 2.3). Had an alternative position on attitude stability been chosen (e.g. Gawronski, 2007), the design and results or findings of the studies would presumably be different. The detail and justification of the theory and methods adopted, outlined in Chapters 2 and 4, was to allow the reader to be clear on all major theoretical and methodological assumptions made in the present work. The present work was a departure from previous studies, in that it outlined and subscribed to a model of attitude structure throughout. Therefore, the use of scientific theory to determine what, and how, attitudes should be investigated was a major strength of the present work, regardless of the future veracity of the attitude model and positions assumed.

The interview findings presented a conceptualisation of these attitudes in a way which is replicable in future research. Attitudes were elicited by interview questions which encouraged participants to draw on their cognitive, affective, and behavioural information, in line with the tripartite model of attitudes (Rosenberg & Hovland, 1960). The findings of Study 2 demonstrated that the tripartite model was suitable for the elicitation of attitude data.

The doctors included in Study 2 came from a range of levels of seniority, including junior, trainee specialist registrar, specialist registrar, and consultant doctors. Of the doctors who had already chosen their specialty, the participant group included those from hospital surgery as well as hospital medicine. Furthermore, the participant group also included individuals who intended to, or currently worked, in older patient settings (such as geriatric or stroke medicine) as well as those who did not want to specialise in older patient settings. Attempts were made to ensure that participants from different settings, specialities, and levels of seniority were included. This was done in order to ensure that any conceptualisation of attitudes toward older patients which resulted from Study 2 was based on the attitudes of participants from a range of backgrounds and experiences which was also a strength of the study.

As with other studies using self-report data, there is a possibility that findings are affected by socially desirable responding and other bias relating to participants' impression management (Schober, 1999; Schwarz, 1996). Efforts were made, in Study 2 and Study 3, to reduce these biases. Participants were ensured of confidentiality. Each participant was informed that if any identifiable information was shared, it would be removed from transcripts and that the recordings would be destroyed after transcription. In Study 2 (attitudes study), it was explicitly stated prior to each interview that the purpose of the study was not to measure attitudes and that the research was

not focused on finding negative attitudes. The findings demonstrated both socially desirable and undesirable attitudes toward older patients and providing their care. Therefore, it might be cautiously concluded that participants were generally frank and honest in their discussion during interviews.

It is important to note that some of the common criticisms of self-report measures typically relate to questionnaire measures (such as participants' difficulty with question comprehension, terminology or item meaning, which can result in guessing; Schwarz, 1996). Therefore some limitations of self-report measures were avoided in the present work as interviews were the selected method of investigation. In doing so, participants can clarify the meaning of questions with the interviewer (Schober, 1999), and interviewers can ask participants to clarify responses if they believe the question was misunderstood or the answer was ambiguous (Schober, 1999). Interviewers can also probe for further detail if required. These factors represent some of the strengths of interview methods and are, therefore, considered a strength of Study 2 and Study 3.

A limitation of Study 2 (attitudes study) concerned the sample and recruitment; this study used non-probability sampling (in which participants were self-selected), although attempts were made to include doctors at different levels of seniority and with different specialties and backgrounds. However, the fact that the study used a small, self-selected sample means that the generalisability of the study's findings to other samples is unknown. However, Study 2 was intended to be exploratory and descriptive at the cost to its generalisability. It is recommended that the generalisability of findings should be determined in future developments in the present research area, using quantitative measures and probability sampling with a larger sample. It is also important to note that the hospital population from which the sample

of Study 2 was selected (medical students and doctors based at the UK NHS trust hospital sites) varies from day-to-day, making random selection implausible. Whilst a medical student or doctor may be based at the hospital site (according to hospital administration), the individuals may not actually be based there. For example, medical students can take time off the wards to study for exams and coursework, and junior doctors can take time off the hospital wards to conduct research or work within a community setting. Additionally, the number of temporary (i.e. locum) doctors working at the hospital also varied from day-to-day, which also served to make random selection highly difficult.

As interviews for Study 2 (attitudes study) were in-depth and lasted an average of approximately 50 minutes, accessing participants in an applied setting was challenging and made even more so by the long and frequently unpredictable hours that participants tended to work. As a result, a pragmatic strategy of non-probability sampling was employed for participant recruitment for Study 2. In contrast, the sampling strategy employed in Study 3 (career intentions study) used probability sampling. Details of junior doctors based at one hospital site were obtained, and the study sampled approximately 19 per cent of all junior doctors working at this site, achieving a participation rate of approximately 76 per cent. This method of recruitment was possible in Study 3 because information on the wards junior doctors were assigned to, at the hospital, was available to the researcher. On the whole, recruiting to both studies was fraught with challenges typical to research taking place in applied settings. However, recruitment to Study 2 and Study 3 was carefully considered and it is argued that the most suitable strategies were adopted in each case.

8.4 Main implications for future research

There are three major implications for future research that arise from this thesis. First, the future investigation of attitudes toward older patients and their care should be carried out within a theoretical framework of attitudes drawn from the scientific literature. Second, regardless of the theory chosen, (e.g. unidimensional versus tripartite), future work should make use of the considerable and longstanding scientific research literature on attitude structure and measurement. Third, future research should explore systems factors as well as attitudes toward patients themselves as the present work indicated that, in a UK hospital setting, doctors and medical students described attitudes toward older patients quite distinctly and differently from attitudes toward the provision of care for older patients. Importantly, affective information almost exclusively featured in attitudes toward the provision of care rather than toward older patients themselves. These affective statements often involved the context of the work, the job and the organisational system as barriers or facilitators of care.

In practical terms, this work indicates that the decision to avoid working with older patients as a career choice, or the existence of negative attitudes toward providing care for older patients, may not necessarily indicate negative attitudes toward older patients, per se. Instead, negative attitudes toward providing care for older patients may indicate, or reflect, the individual's negative experiences with regard to their social and organisational environment, in addition to their personal reactions to this environment. In such cases, there may be a need to improve the individual's experience of working with older patients by altering this working environment, rather than attempting to alter the individual's attitudes toward older patients. Practically, if there is a need to increase the appeal of working with older patients, there may be a need to improve the working and organisational environment for doctors and medical students. This is by

reducing what these individuals consider to be the barriers preventing the provision of good quality care for older patients, and increasing the facilitators.

8.5 Conclusions

A review of the scientific literature on doctors' and medical students' attitudes toward older patients indicated that previous studies in this research area had commonly attempted to measure attitudes despite very little research on the content of these attitudes. As a result, this topic had acquired a large body and variety of measurement-focused studies, in the absence of theory generation regarding, or detailed descriptions on the content of, these attitudes. Previous research has often investigated attitudes toward older patients without operationalising *attitudes* and without using psychological theories of attitude structure. The present work used a three-component classification of attitudes, known as the tripartite model of attitude structure, to investigate attitudes toward older patients. This model of attitude structure posits that attitudes are comprised of affective, behavioural, and cognitive information. Using this scientific framework to investigate attitudes, this thesis presented a conceptualisation of attitudes toward older patients and their care in a UK setting. Specifically, these attitudes can broadly be conceptualised as attitudes toward: (a) older patients and their healthcare needs, and (b) attitudes toward providing care for older patients. A detailed conceptualisation of these attitudes was outlined, with descriptions and examples provided.

To the best of my knowledge, this work marks the first attempt to provide a theoretically-driven exploration of doctors' and medical students' attitudes toward older patients and their care in UK settings. It has addressed long-standing limitations in research on attitudes to older patients and has resulted in a conceptualisation of doctors' and medical students' attitudes

toward older patients and their care. The resulting description of such attitudes, where the affective component largely relates to matters other than the older patients themselves, indicates the power of incorporating the wider organisational and social context into such investigations. The findings have implications both for research and practice.

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Appendix 1

Example search strategy

Search strategy used for Medline, PsycInfo, Embase, Global Health Archive, Health Management Information Consortium, Allied and Complementary Medicine, British Nursing Index and Archive, CAB Abstracts:

1. exp physician/
2. (Doctor$1 or Physician$1 or Consultant$1 or Registrar$1 or Clinician$1 or hospitalist$1 or Internist$1 or surgeon$1).ab,ti.
3. (Gerontologist$1 or Geriatrician$1 or Psychogeriatrician$1 or Pathologist$1 or Psychiatrist$1 or Cardiologist$1 or Gastroenterologist$1 or Haematologist$1 or Hematologist$1 or Neurologist$1 or Oncologist$1 or Respirologist$1 or Rheumatologist$1 or Dermatologist$1 or Urologist$1 or Endocrinologist$1 or Hepatologist$1 or Nephrologist$1 or Neurosurgeon$1 or Ophthalmologist$1 or Physiatrist$1 or Anesthesiologist$1 or Anaesthetist$1 or Pulmonologist$1 or Otolaryngologist$1 or Immunologist$1 or Obstetrician$1 or Gynaecologist$1).ab,ti.
4. ((Medical or medicine) adj (student$1 or resident$1 or fellow$1 or professional$1 or specialist$1 or practitioner$1 or officer$1)).ab,ti.
5. (house adj officer$1).ab,ti.
6. ((associate adj specialist$1) or (general adj practictioner$1) or (family adj practictioner$1)).ab,ti.
7. 1 or 2 or 3 or 4 or 5 or 6
8. exp *Aged/
9. (old* adj (person$1 or patient$1 or adult$1)).ab,ti.
10. elder$.ab,ti.
11. (Frail* or ag?ing).ab,ti.
12. ((Aged or geriatric) adj (care or patient$1 or person$1)).ab,ti.
13. ((young or middle or old or very) adj old).ab,ti.
14. (old adj age).ab,ti.
15. Seniors.ab,ti.
16. (Senior adj (citizens or adult$1 or person$1 or patient$1)).ab,ti.
17. 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16
18. exp *Attitude/ or exp *"Attitude of Health Personnel"/
19. (attitud$ or belief$1 or ageis$ or discriminat$ or prejudic$ or preconception$1 or misconception$1 or stereotyp$ or attribution$1 or opinion$1 or stigma or label?ing).ab,ti.
20. (age adj bias).ab,ti.
21. 18 or 19 or 20
22. Ageis*.ab,ti.
23. 7 and 22
24. 7 and 17 and 21
25. 23 or 24
26. limit 25 to english language

Appendix 2

Data assessment form for quantitative studies, from Godfrey, Randall, Long, & Grant (2000)

STUDY OVERVIEW

Bibliographic Details

Authors
Year
Title

STUDY AND CONTEXT

The Study

What type of study is this?
What was the intervention?
What was the comparison intervention?
Is there sufficient detail given of the nature of the intervention and the comparison intervention?
What is the relationship of the study to the area of the topic review?

Setting

Within what geographical and care setting is the study carried out?
What is the rationale for choosing this setting?
Is the setting appropriate and/or sufficiently specific for examination of the research question?
Is sufficient detail given about the setting?
Over what time period is the study conducted?

Sample

What was the source population?
What were the inclusion criteria?
What were the exclusion criteria?
How was the sample selected?
If more than one group of subjects, how many groups were there, and how many people were in each group?
How were subjects allocated to the groups?
What was the size of the study sample, and of any separate groups?
Is the achieved sample size sufficient for the study aims and to warrant the conclusions drawn?
Is information provided on loss to follow up?
Is the sample appropriate to the aims of the study?
What are the key characteristics of the sample (events, persons, times and settings)?

GROUP COMPARABILITY AND OUTCOME MEASUREMENT

Comparable Groups

If more than one group was analysed, were the groups comparable before the intervention? In what respects?
How were important confounding variables controlled (e.g. matching, randomisation, or in the analysis stage)?
Was this control adequate to justify the author's conclusions?

Confounders

Were there other important confounding variables controlled for in the study design or analyses and what were they?

Did the authors take these into account in their interpretation of the findings?

Outcome Measurement

What outcome criteria were used in the study?
What outcome measures were used?
Are the measures appropriate, given the outcome criteria?
What other (e.g. process, cost) measures are used?
Are the measures well validated?
Are the measures of known responsive to change?
Whose perspective do the outcome measures address (professional, service, user, carer)?
Is there sufficient breadth (e.g. contrast of two or more perspective) and depth (e.g. insight into a single perspective)?
Are the outcome criteria useful/appropriate?
Are the outcome measures useful/appropriate?

Time Scale of Measurement

What was the length of follow-up, and at what time points was outcome measurement made?
Is this period of follow-up sufficient to see the desired effects?

POLICY AND PRACTICE IMPLICATIONS

Implications

To what setting are the study findings generalisable? (For example, is the setting representative of care settings?)
To what population are the study's findings generalisable?
Is the conclusion justified given the conduct of the study (For example, sampling procedure; measures of outcome used?)

Appendix 3

Data assessment form for qualitative studies, from Long and Godfrey (2004)

STUDY OVERVIEW

Bibliographic Details

Authors
Year
Title

Purpose

What are the research aims?

STUDY AND CONTEXT

Phenomena under Study

What is being studied?
Is sufficient detail given of the nature of the phenomena under study?

Theoretical Framework

What theoretical framework guides or informs the study?
In what ways is the framework reflected in the way the study was done?
How do the authors locate the study within the existing knowledge base?

Setting

Within what geographical and care setting is the study carried out?
What is the rationale for choosing this setting?
Is the setting appropriate and/or sufficiently specific for examination of the research question?
Is sufficient detail given about the setting?
Over what time period is the study conducted?

Sample

How is the sample selected? (For example, theoretically informed, purposive, convenience, chosen to explore contrasts)
Is the sample (informants, settings and events) appropriate to the aims of the study?
Is the sample appropriate in terms of depth (intensity of data collection) and width across time, settings and events?
What are the key characteristics of the sample (events, persons, times and settings)?

Outcomes

What outcome criteria are used in the study?
Whose perspectives are addressed (professional, service, user, carer)?
Is there sufficient breadth (e.g. contrast of two or more perspective) and depth (e.g. insight into a single perspective)?

DATA COLLECTION, ANALYSIS AND POTENTIAL RESEARCHER BIAS

Data Collection

What data collection methods are used to obtain and record the data? (appropriateness and availability for independent analysis)
Is the process of fieldwork adequately described? (account of how the data were elicited; type and range of questions)
Is the information collected with sufficient detail and depth to provide insight into the meaning and perceptions of informants?

What role does the researcher adopt within the setting?
Is there evidence of reflexivity, that is, providing insight into the relationship between the researcher, setting, data production and analysis?

Data Analysis

How were the data analysed?
How adequate is the description of the data analysis? (For example, to allow reproduction; steps taken to guard against selectivity)
Is adequate evidence provided to support the analysis? (For example, includes original / raw data extracts; evidence of iterative analysis; representative evidence presented; efforts to establish validity - searching for negative evidence, use of multiple sources, data triangulation); reliability / consistency (over researchers, time and settings; checking back with informants over interpretation)
Are the findings interpreted within the context of other studies and theory?

Results

What themes emerged?

Researcher's Potential Bias

Are the researcher's own position, assumptions and possible biases outlined? (Indicate how those could affect the study, in particular, the analysis and interpretation of the data)

POLICY AND PRACTICE IMPLICATIONS

Implications

To what setting are the study findings generalisable? (For example, is the setting typical or representative of care settings and in what respects? If the setting is atypical, will this present a stronger or weaker test of the hypothesis?)
To what population are the study's findings generalisable?
Is the conclusion justified given the conduct of the study (For example, sampling procedure; measures of outcome used?)

Appendix 4

Study 2 participant information sheet

[TRUST LOGO]

Participant Information Sheet

Title of Study: Attitudes to older patients and their care (Interview Study)

Researchers: Rajvinder Samra, Professor Amanda Griffiths, Professor Tom Cox & Dr. Simon Conroy.

We would like to invite you to take part in our research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. If you wish, one of our team will go through the information sheet with you and answer any questions you have. If you are uncertain, talk to others about the study and ask the research team if anything is still unclear.

What is the purpose of the study?
The purpose of the project is to explore doctors' attitudes toward older patients and their care, from the perspective of doctors themselves and a range of other healthcare professionals. This project is being undertaken as part of a PhD at the Institute of Work, Health & Organisations, which is a postgraduate institute of applied psychology at the University of Nottingham.

Why have I been invited?
You have been invited to take part because we are looking to explore the opinions of a range of healthcare professionals (e.g. doctors, nurses, healthcare assistants etc.) on this topic. We are inviting 15-20 hospital-based healthcare professionals, who are directly involved in the care of patients to attend a one-hour interview. You may or may not be a doctor, but the interview will concern your opinions regarding doctors' attitudes towards older patients and their care.

Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and asked to read and sign a consent form. One copy of the consent form will also be given to you to keep. If you decide to take part you are still free to withdraw at any time and without giving reason. This would not affect your legal rights.

Participant information sheet
Version 3.0. [13/01/2011]

What will happen to me if I take part?
After reading this information sheet, please indicate that you would like to participate by contacting the researcher (Rajvinder Samra) on the telephone number or email address at the end of this information sheet. She can answer any further questions about the study. You will then be contacted in order to schedule a suitable time for the interview to take place. The interview will last approximately one hour and will take place in a quiet empty room on the hospital site. The interview will explore your views on attitudes towards older patients and related topics, such as suitable training opportunities to facilitate patient care. The interviews will be recorded with your permission and will be written up as an anonymous transcript. You will be offered a copy of the final report should you wish sent by email. All data will be confidential and any names will be changed in any reports. Participation is entirely voluntary and you may withdraw from the study at any time. You may also refuse to answer any questions you find uncomfortable and terminate the interview at any time.

Expenses and payments
You will not be paid to participate in the research.

What are the possible disadvantages and risks of taking part?
You will be asked to give up one hour of your time to conduct the interview and this may be an inconvenience. Attempts will be made to make the interview as convenient as possible for you, in terms of scheduling times and dates. It is possible that the issues discussed in the interview may be difficult or distressing for you. If this is the case, please let the interviewer know you are distressed. The interviewer can move on to the next question or terminate the interview, as you require. If you do not want to discuss the issues with the interviewer and wish to talk to someone who is independent of the research, then staff support counselling is available to you; RightCoreCare provide counselling services for [NHS Trust] staff and can be contacted on 0800 111 6388.

What are the possible benefits of taking part?
You will have the chance to air your views about the topic area, as well as any ideas or thoughts you have to improve the working lives of healthcare professionals affected by the topic area. We cannot promise the study will help you but the information we get from this study will help guide and inform researchers in the healthcare field.

What if there is a problem?
If you have a concern about any aspect of this study, please contact Rajvinder Samra who will address any concerns that you have (the contact details are included at the end of the information sheet).

Participant information sheet
Version 3.0. [13/01/2011]

Will my taking part in the study be kept confidential?
All data will be kept confidential. In the rare event of suspected malpractice, confidentiality may be broken in order to discuss the issue with members of the research team and determine a suitable course of action (see question below). Data will be stored in a locked cabinet on secure premises at the University of Nottingham. Any electronic data will be password-protected and stored securely on the university network storage server. Only members of the research team will have access to the data. No one from your employing organisation will have access to the data. However, you will be offered the opportunity to volunteer an email address should you wish to receive a copy of the study results. Any personal comments from the interviews that are used in project reports, academic papers or feedback will be quoted anonymously and anything that might identify you will be removed. The interview recordings will be destroyed at the end of the research. The only contact information required will be either an email address or a mobile telephone number. Your name or contact details will not be stored on the interview transcripts. Only the PhD student (Rajvinder Samra) will have access to the original interview recordings and your contact details.

What if I disclose something about a member of staff which could be deemed as an example of malpractice or negligence?
In the event of suspected malpractice, your confidentiality may be broken if the researcher needs to discuss issues relating to bad practice with their academic supervisor, in order to determine the best course for future action. In such situations, the research team will discuss all possible options with you before deciding whether or not to take any action - any discussions such as these will occur with your knowledge. Malpractice is defined as anything which suggests that you or anyone else under hospital care are likely to be put at serious risk of harm. This is in order to comply with the University's and the hospital trust's procedures for safeguarding individuals and vulnerable adults. Please note that if you have a concern about malpractice, you should if you feel able, raise it first with your line manager. Where the allegation involves the line manager, the matter may be raised with the next senior person in the department. If you are unsure whether to use the procedures outlined above or if would like independent advice at any stage about this issue, you may contact (1) a member of staff of the Human Resources Department; (2) your appropriate union or professional association; (3) the independent charity Public Concern at Work on 0207 404 6609, helpline@pcaw.co.uk. Their legal staff can provide free confidential advice at any stage about how to raise a concern about serious malpractice at work.

What will happen if I don't want to carry on with the study?
Your participation is entirely voluntary and you are free to withdraw at

any time, without giving any reason, and without your legal rights being affected. If you do withdraw, your data cannot be erased but will not be used in the final project analyses.

What will happen to the results of the research study?
The study results will form part of a PhD thesis. The study may also be submitted to an academic journal. No individuals will be identified in any of the results and written reports.

What if I want to complain about the way the study is conducted?
If you have any complaints about the study or if you have had some adverse event as a result of the study, please contact the research team first so that we can try to resolve the problem (the contact details are included at the end of this information sheet). If you are still not satisfied you can contact Professor Kevin Browne, Head of Institute of Work, Health & Organisations, International House, Jubilee Campus, Nottingham, NG8 1BB (email kevin.browne@nottingham.ac.uk). Every **NHS organisation has a complaints procedure which is available to you;** details are available from the hospital **or on the Trusts' website.**

Who is organising and funding the research
This research is being organised by the University of Nottingham and is being funded by the Economic and Social Research Council.

Who has reviewed the study?
All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed by Nottingham Research Ethics Committee.

What if I have other questions before agreeing to take part?
If you have any questions about the study before agreeing to take part you can email the researcher Rajvinder at Lwxrs5@nottingham.ac.uk and she will answer your questions.

Further information and contact details:
Rajvinder Samra, Institute of Work, Health & Organisations,
The University of Nottingham, International House, Jubilee Campus,
Wollaton Road, Nottingham, NG8 1BB
Email@ Lwxrs5@nottingham.ac.uk Tel: 0115 846 6929

Academic Supervisors:
Professor Amanda Griffiths (E-mail: amanda.griffiths@nottingham.ac.uk)
Professor Tom Cox (E-mail: tom.cox@nottingham.ac.uk)

Thank you for taking the time to read this information sheet

Participant information sheet
Version 3.0. [13/01/2011]

Appendix 5

Study 2 participant consent form

[TRUST LOGO]

Consent Form

Title of Study: Attitudes toward older patients and their care (Interview study)

REC ref: 10/H0408/114

Researchers: Rajvinder Samra, Professor Amanda Griffiths, Professor Tom Cox, Dr. Simon Conroy

Please initial each box

1. I confirm that I have read and understand the Information sheet [version number 3.0, dated 13/01/2011] for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected. I understand that should I withdraw, the information collected cannot be erased but will not be used in the final project analyses. ☐

3. I understand that the data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group, and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential. ☐

4. I understand that the interview will be recorded and that anonymous direct quotes from the interview may be used in the study reports. ☐

5. I agree to take part in the above study. ☐

_____	_____	_____
Participant signature	Date	Participant name
_____	_____	_____
Signature of person taking consent	Date	Name of person taking consent

When completed: 1 copy for participant, 1 (original) for research team.

Participant consent form
Version 2.0 [13/01/2011]

Appendix 6

Study 2 interview guide

*changes made to questions, after the pilot interview, are included in italics

Background questions

1. Doctors: Can you briefly describe your job background – meaning your grade and any specialisations you have?
OR
Medical students: Can you briefly describe your course details – meaning your year of medical school, and which rotations you have completed?

2. How long have you worked on hospital wards?
**Changed after pilot interview to: Roughly, how long ago did you begin your experience on the hospital wards?*

3. If I asked you at what age a patient should be deemed elderly or an "older patient", what kind of age would you be thinking of?

4. How often do interact with older patients at work (65 years or over)?

5. On the general wards, can you roughly describe what kind of proportion of older patients make up the patient group you encounter?

For the rest of this interview, when I refer to 'older patients', I will mean those over the age of 65 years.

Questions about stereotypes and beliefs

6. How would you describe the way members of the older patient population tend to differ from younger patients?

7. (i) Do you think older patients have different care needs to other patients?
(ii) If so, can you describe the differences?
(iii) When did you become aware of these differences in your career?

8. (i) What would you say are the unique challenges related to caring for members of the older patient population, if you were to describe them to an outsider or to the non-medic?
(ii) Can you describe any recent examples of a challenge you experienced?

Questions about behaviour tendencies

9. (i) Do you feel you need to act, or behave, differently toward older patients to deliver good care? … If so, can you describe some examples?
(ii) Did you learn this through medical school or on the job training?

10. (i) Are there any differences in the way that you have to interact with older patients compared to other patients?...Can you describe any recent examples of a time when you had to interact differently with an older patient?

11. Do you see differences between doctors from different specialities in how they interact and deal with older patients?...In what ways?

12. (i) Have you noticed any ways in which you have changed how you deal with older patients as you have gained more experience on the wards?
(ii) Have you noticed changes in others that you work with, in how they deal with older patients as they gain experience?

13. Do you think that your own behaviour differs for elderly patients in comparison to younger patients, accidently or deliberately?...In what ways?

Questions about affect

14. Can you describe something you find enjoyable about working with older patients?

15. Can you describe something you find challenging about working with older patients?

16. Are there any emotions you experience when dealing with older patients, that were unexpected or you were surprised by?
** prompt added after pilot interview: can you think of anything that struck you as unexpected when you first gained experience on the hospital wards?*

Demographics questions:

**Explanation added after the pilot interview:*
This gathered so that I can describe the characteristics of the sample in the research so I can see if participants have a range of backgrounds.

17. What is your age?
**Changed after pilot interview to:*
To which one of the following age groups do you belong?
under 20, 20-29, 30-39, 40-49, 50-59, 60-69, Over 70

18. How would you describe your ethnic background?

**Added final question after the pilot study:*
19. Is there anything you want to ask, either about the interview, data, or the research in general?

Appendix 7

Study 3 participant information sheet

[TRUST LOGO]

Participant Information Sheet

Title of Study: Medical career intentions and attitudes (Interview Study)
Researchers: Rajvinder Samra, Professor Amanda Griffiths, Professor Tom Cox & Dr. Simon Conroy.

We would like to invite you to take part in our research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. If you wish, one of our team will go through the information sheet with you and answer any questions you have. If you are uncertain, talk to others about the study and ask the research team if anything is still unclear.

What is the purpose of the study?
The purpose of the project is to explore what factors are involved in doctors' career decisions. This project is being undertaken as part of a PhD at the Institute of Work, Health & Organisations, which is a postgraduate institute of applied psychology at the University of Nottingham.

Why have I been invited?
We are inviting 20-25 junior doctors to a ten-minute interview.

Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and asked to read and sign a consent form. One copy of the consent form will also be given to you to keep. If you decide to take part you are still free to withdraw at any time and without giving reason. This would not affect your legal rights.

What will happen to me if I take part?
The interview will last approximately ten minutes and will take place in a quiet empty room on the hospital site. The interview will explore your views on your future career direction. The interviews will be recorded with your permission and will be written up as an anonymous transcript. All data will be confidential and any names will be changed in any reports. Participation is entirely voluntary and you may withdraw from the study at any time. You may also refuse to answer any questions you find uncomfortable and terminate the interview at any time.

Participant information sheet
Version 1.0. [14/11/2012]

Expenses and payments
You will not be paid to participate in the research.

What are the possible disadvantages and risks of taking part?
You will be asked to give up approximately ten minutes of your time to conduct the interview and this may be an inconvenience.

What are the possible benefits of taking part?
We cannot promise the study will help you but the information we get from this study will help guide and inform researchers in the healthcare field.

What if there is a problem?
If you have a concern about any aspect of this study, please contact Rajvinder Samra who will address any concerns that you have (the contact details are included at the end of the information sheet).

Will my taking part in the study be kept confidential?
All data will be kept confidential. Data will be stored in a locked cabinet on secure premises at the University of Nottingham. Any electronic data will be password-protected and stored securely on the university network storage server. Only members of the research team will have access to the data. No one from your employing organisation will have access to the data. Any personal comments from the interviews that are used in project reports, academic papers or feedback will be quoted anonymously and anything that might identify you will be removed. The interview recordings will be destroyed at the end of the research. No identifiable information will be stored on the interview transcripts.

What will happen if I don't want to carry on with the study?
Your participation is entirely voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you do withdraw, your data cannot be erased but will not be used in the final project analyses.

What will happen to the results of the research study?
The study results will form part of a PhD thesis. The study may also be submitted to an academic journal. No individuals will be identified in any of the results and written reports.

What if I want to complain about the way the study is conducted?
If you have any complaints about the study or if you have had some adverse event as a result of the study, please contact the research team first so that we can try to resolve the problem (the contact details are included at the end of this information sheet). If you are still not satisfied you can contact Professor

Kevin Browne, Head of Institute of Work, Health & Organisations, International House, Jubilee Campus, Nottingham, NG8 1BB (email kevin.browne@nottingham.ac.uk). Every NHS organisation has a complaints procedure which is available to you; details are available from the hospital or on the Trusts' website.

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Further information and contact details:
Rajvinder Samra, Institute of Work, Health & Organisations,
The University of Nottingham, International House, Jubilee Campus, Wollaton Road, Nottingham, NG8 1BB
Email@ Lwxrs5@nottingham.ac.uk Tel: 0115 846 6929

Academic Supervisors:
Professor Amanda Griffiths (E-mail: amanda.griffiths@nottingham.ac.uk)
Professor Tom Cox (E-mail: tom.cox@nottingham.ac.uk)

Thank you for taking the time to read this information sheet

Participant information sheet
Version 1.0. [14/11/2012]

Appendix 8

Study 3 participant consent form

[TRUST LOGO]

Consent Form

Title of Study: Medical career intentions and attitudes

REC ref: 10/H0408/114

Researchers: Rajvinder Samra, Professor Amanda Griffiths, Professor Tom Cox, Dr. Simon Conroy

Please initial each box

1. I confirm that I have read and understand the information sheet [version number 1.0, dated 14/11/2012] for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected. I understand that should I withdraw, the information collected cannot be erased but will not be used in the final project analyses. ☐

3. I understand that the data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group, and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential. ☐

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5. I agree to take part in the above study. ☐

_____	_____	_____
Participant signature	Date	Participant name
_____	_____	_____
Signature of person taking consent	Date	Name of person taking consent

When completed: 1 copy for participant, 1 (original) for research team

Participant consent form
Version 1.0 [14/11/2012]