Empathy in healthcare settings

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Declaration:

I declare that the work presented in this thesis is my own

Signed.....

Helen Scott

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Abstract

Empathy is an important concept associated with positive outcomes for healthcare practitioners and their patients. In order to identify the best methods to develop and sustain empathy in healthcare professionals there is a need for greater understanding of the antecedents and behaviours involved in empathic responding towards patients.

This thesis used a multidimensional model of empathy as a guide for research aimed at understanding the antecedents and behaviours involved in empathic interactions between patients and healthcare professionals. Studies one to three were cross sectional and quantitative in design. Studies one and two investigated relationships between self-reported empathy, personality and emotional intelligence. Findings suggested that (1) perspective taking and empathic concern were closely associated with agreeableness and extraversion, and also loaded on to the single factor of emotional intelligence (2) fantasy was associated with openness to experience but not emotional intelligence, and (3) personal distress was positively related to neuroticism and negatively related to emotional intelligence. Study three went on to investigate the relationships between emotional intelligence, propensity to empathise and empathic behaviour among doctors. Propensity to empathise was positively related to observer ratings of empathic behaviour, but not when doctors had qualified in a different country. Finally, study four qualitatively examined empathy in the healthcare context, from patients' perspectives. Situational and patient characteristics were also identified as antecedents to empathy, further relating to employee engagement

and work design. The specific behaviours associated with empathy as judged by patients included helping and prosocial behaviours. Implications for the development of empathy are discussed in terms of possible training, development and work design interventions. Finally, areas for future research are identified.

Chapter 1 - Introduction

"Some patients, though conscious that their condition is perilous, recover their health simply through their contentment with the goodness of the physician".

Hippocrates 460-380 BC

The importance of the doctor-patient relationship has been recognised throughout the history of medicine. In a systematic review of the literature, Di Blasi, Harkness, Ernst, Georgiou and Kleijnen (2001) found that those physicians who adopt a warm, friendly and reassuring manner are perceived as more effective than those who keep consultations formal. Empathy has been identified as facilitating improved outcomes for both patients and doctors (e.g., Carmel & Glick, 1996; Hardee, 2003; Hojat, Mangione, Nasca, Cohen, Gonnella, Erdmann, Veloski & Magee, 2001), and an important trait for other healthcare professionals including pharmacists, nurses and care staff (Lilja, Larsson, Hamilton & Issakainen, 2000; Reynolds, Scott & Jessiman, 1999). Yet despite the fact that empathy is recognised as a crucial component of helping relationships, it remains a difficult concept for researchers to study and practitioners to develop, not least due to continuing debates about its definition and measurement. This chapter presents a rationale for conducting research on empathy in healthcare professions. It begins by examining why empathy is important by exploring potential outcomes and consequences for the patients and healthcare professionals.

1.1. Patient satisfaction

The extent to which a healthcare professional demonstrates empathy is assumed to have an impact on the patient experience, and patient satisfaction is one of the most frequently used outcome measures to evaluate empathy and communication (e.g. Kaplan, Ware & Greenfield, 1998; Mercer & Reynolds, 2002). In the US, patient appraisals are used as part of performance related pay schemes, and account for as much as 20% of a doctor's pay (Kolata, 2005). In Scotland the CARE Measure (Consultation and Relational Empathy Measure: Mercer & Reynolds, 2002; Mercer, Maxwell, Heaney & Watt, 2004) of patient satisfaction has been accredited as a method for appraising General Practitioners (GPs), and in the U.K. there has been a strategic move within the NHS to acknowledge the patient perspective and develop doctor-patient partnerships (Department of Health, 1996). The rationale for such approaches derives from the large number of studies that have linked empathy and communication skills to patient satisfaction across a wide range of healthcare settings including: paediatrics (Wasserman, Inui, Barriatua, Carter & Lippincott, 1984); stroke units (Pound, Gompertz & Ebrahim, 1995); diabetic clinics (Hornsten, Lundman, Selstam & Sandstrom, 2005); rehabilitation facilities (McGilton, Irwin-Robinson, Boscart & Spanjevic, 2006), and eating disorder clinics (Ramjan, 2004).

If empathy can have a positive effect on patient satisfaction, then it follows sensibly that a lack of empathy should have a negative effect on patient satisfaction with treatment. For some time now, legal experts have argued that medical malpractice litigation is commonly due to problems arising from

interpersonal skills of doctors (Avery, 1985), with investigations by medical professionals in the 1990s providing support for this assertion. For example, Frankel (1995) found that communication breakdowns played a key part in litigation across a range of specialties including general surgery, gynaecology and radiology. In a qualitative study of malpractice cases in the US, Beckman, Markakis, Suchman and Frankel (1994) found evidence of relationship problems between the doctor and patient in 32 of the 45 cases reviewed, with the most common themes including devaluing patient or family views, delivering information poorly, and failing to understand the patient's or family's perspective. Although empathy was not the subject of investigation in these studies *per se*, it was identified as a key issue, with the authors concluding that "Doctors who can't communicate are more likely to end up in court" (p.1365).

1.2. Patient adherence to treatment

While satisfaction with treatment is regarded as a valuable outcome of empathy, perhaps more important are those studies that find actual improvements in patient health. As Kaplan, Greenfield and Ware (1989) point out, patients may be satisfied but this may not necessarily lead to the best healthcare outcomes or the behaviour change required for treatment success. One possible reason for improvement in patient health (or the lack of this) is the patient adhering to the treatment prescribed by a doctor. Squier (1990) noted that "patients' adherence to treatment advice is generally necessary for maximum benefit to occur" (p.329), with benefits resulting from greater sharing of concerns and motivation to get better. In fact, several major reviews over the last three decades (e.g., Becker &

Maiman, 1975; Becker & Rosenstock, 1984; Garrity, 1981) have concluded that empathy is related to treatment adherence. Evidence has been found using a range of methodologies, for example, in a qualitative study of the doctor-patient relationship Frankel and Beckman (1989) identified that doctors who do not attempt to identify with patients, or understand their reasons for non-compliance, are more likely to appear frustrated and judgmental, rather than empathic and supportive. The study also showed that feedback to the doctor on this issue can have a positive impact on communication style as well as improved health outcomes for patients. This finding is supported by quantitative research from Winefield, Murrell and Clifford (1995). They analysed transcripts from 210 GP-patient consultations and found that patient satisfaction after the consultation predicted patients' subsequent compliance with treatment. Patients who admitted non-compliance with treatment were also more likely to complain that the doctor has not listened to their perspective or treated them as an equal during the consultation.

1.3. Improved health outcomes

A step on from adherence to treatment, other studies have directly investigated the link between empathy and health outcomes. Empathy from a healthcare professional can be a facilitator of motivation and support for patients (Kaplan, Greenfield & Ware, 1989). By communicating this empathy to build patients' perceptions of personal care, professionals have the power to influence patient behaviour and also change their patients' perceptions of their health status (Tarrant, Windridge, Boulton, Baker & Freeman, 2003). Of 21 studies conducted

between 1983 and 1993, Stewart (1995) found that 16 reported a positive relationship between improved physician-patient communication and health outcomes, including emotional health, symptom resolution, improved day to day functioning and physiological measures such as blood pressure and pain control. In nursing, La Monica, Madea and Oberst (1987) found less anxiety, depression and hostility among clients being cared for by highly empathic nurses. For patients with a variety of illnesses, physician empathy has also been linked to decreases in patient anxiety, positive physiological effects, and improved health outcomes (Frasure Smith, Lesperance & Talajic, 1995; Rietveld & Prins, 1998). In their detailed analysis of physician communication behaviours associated with improved health outcomes in patients with chronic disease, Kaplan, Greenfield and Ware (1989) concluded that increased patient control and greater expression of emotions by physicians and patients were consistently related to positive health outcomes. This was found to be the case whether the outcome measure was a subjective perception of health or an objective physiological measure such as blood pressure or blood sugar levels. Such physiological outcomes have also been reported in investigations of positive nurse-patient relationships (Reynolds & Scott, 2000).

1.4. Professional satisfaction

In addition to recognising the importance of empathy for patients, researchers have pointed out that professionals also need to recognise the benefits of adopting empathic approach for themselves, in order for an empathic style to be sustained. Moscrop (2001) argues that empathy with patients provides

professionals with greater understanding of the meaning and importance of their work. Indeed, such positive relationships between empathy and professional satisfaction have been established. For example, in a study of continuing care nurses in Canada, McGilton, Irwin-Robinson, Boscart and Spanjevic (2006) found that those nurses who reported having developed closer relationships with their patients also reported higher levels of job satisfaction. Conversely, an absence of a therapeutic relationship has been linked to a struggle for understanding and control (Ramjan, 2004).

1.5. Sustaining and developing empathy

Yet despite mounting evidence that empathy in healthcare professionals can have an important impact on patient care and professional satisfaction, surprisingly little progress has been made in efforts to develop interventions capable of sustaining or significantly improving the levels of empathy demonstrated by professionals. In fact, somewhat worryingly, it has been found that whilst empathy usually increases with maturity, it typically declines over the period of medical education and early stages of the medical career (Bellini, Baime & Shea, 2005; Bellini & Shea, 2005; Woloschuk, Harasym & Temple, 2004). Hojat, Mangione, Nasca, Rattner, Erdmann, Gonnella and Magee (2004) found a particular decrease in compassionate care during these early years.

Although there have been efforts to focus more on developing empathic behaviour, Squier (1990) points out that compared to increased investment in technological and pharmaceutical methods of treatment in the U.K., the

development of relationship building skills is usually given lower priority due to pressure on finances within the NHS. Similarly in the US the Association of American Medical Colleges states that a key learning objective for medical education should be that "physicians must be compassionate and empathetic in caring for patients". Yet according to Carmel and Glick (1996), whilst compassionate-empathic physicians who focus on the welfare of patients by 'curing and caring' are desired by patients they are rarely found in medical settings. Again, Sparr, Gordon, Hickam and Girard (1988) found that medical students became more negative in their attitudes to the doctor-patient relationship over the course of training, with bureaucratic pressures and experiences with difficult patients cited as reasons for attitude changes. There is also comparatively little evidence to suggest that changes in nursing education and practice have had an impact on reported low levels of empathy in nursing (MacKay, Hughes & Carver, 1990; Reynolds & Scott, 2000).

In attempts to "stop the rot" (Spencer, 2004), training interventions focused on developing empathy have become more common and medical education has begun to re-emphasise the doctor-patient relationship, with models of communication and empathy included as a key component (e.g., Makoul, 2001; Suchman, Markakis, Beckman & Frankel, 1997). Even with this renewed focus, however, evaluations of training interventions designed to improve empathy and communication skills have produced mixed findings. Stepien and Baernstein (2006) found that only seven out of 13 articles reporting evaluations of empathy interventions reported a significant increase in student empathy post-intervention, although only three of the 13 studies reviewed gave a clear

definition of empathy. It seems that after more than a century of research on empathy, most articles still begin with a discussion of the meaning of the term. At best, discussions take a broad approach and encompass many elements, at worst they are conflicting. Interestingly, very few researchers in the medical field have sought to develop an integrated theory of empathy based on empirical research, but have relied instead on reviews of literature conducted in a range of contexts. According to Squier, "the essence of good practitioner-patient relationships lies in the presence of empathy" but there has been "little attempt to integrate diverse perspectives into a systematic theory" (1990, p.326).

A basic premise of this thesis is therefore that greater understanding is required of how empathy can be developed in patient-healthcare professional interactions in order to foster the development of more effective training and development. This chapter has considered why empathy is important in the helping professions. Chapter two continues with a review of the existing literature concerned with theories and models of empathy and empathic behaviour.

Chapter 2 - Literature Review

Chapter one identified a need for greater understanding of empathic processes in healthcare roles. Most discussions of empathy in healthcare open with a debate about the nature and definition of the concept (Hardee, 2003). Chapter two therefore provides a review of definitions and models of empathy, drawing from both healthcare and psychology literature. Early approaches to defining and understanding empathy will be discussed before presenting more recent multidimensional models of empathic processes.

2.1 Empathy: An Overview

The term "empathy" first appeared in the psychology literature in Titchener's translation of the German word "einfühlung" literally meaning 'feeling into' or the ability to perceive the subjective experience of another (1909). Since then, empathy has been investigated in many fields of psychology including developmental (e.g., Baron Cohen, 2003), social (e.g., Eisenberg, 1987), and forensic (e.g., Blair, 2005), with research focusing on diverse topics such as: relationships and marriage; violence and sexual offending; childhood development, and autism. Within occupational psychology there is an emerging interest in empathy relating to leadership and sales (e.g., Kellett, Humphrey & Sleeth, 2002; Plank, Minton & Reid, 1996), and empathic processes in relationships with clients and colleagues (e.g., Silvester, Patterson, Koczwara & Ferguson, 2007). Studies of empathy in healthcare also span 50 years, with early research undertaken by Aring (1958) in the medical profession, Peplau (1952) in

nursing and Rogers (1957) in counselling. The focus of this chapter is predominantly on theory and research from healthcare and psychology.

2.2 Defining empathy

Bachrach (1976) argues that "we know what we mean" (p.35) when we think of empathy in a medical context, but as with many other psychological concepts, there has been much debate over its definition, with articles often beginning with a discussion of the exact meaning of the term (e.g., Ohmdahl, 1995). Early researchers tended to differentiate between cognitive and emotional definitions, although more recently efforts towards a more integrated approach have resulted in the development of multidimensional models (e.g., Davis, 1996; Larson & Yao, 2005). In broad terms, however, four dimensions of empathy have been identified in healthcare research: an emotional (or affective) dimension; a cognitive dimension; a moral dimension, and a behavioural dimension of empathy (Morse, Anderson, Bottorff, Yonge, O'Brien, Solberg & McIlveen, 1992; Stepien & Baernstein, 2006). Each of these is reviewed briefly below.

2.2.1 An emotional dimension of empathy

Many psychology researchers have used an emotional definition of empathy in their studies. For example, Feshbach's early studies of conditions facilitating empathy in young children defined empathy as a vicarious affective response to another's emotion (Feshbach & Roe, 1968). Strayer (1987) adopted a definition of empathy as "the self's feeling into the affect of another person" (p.236), and

from a psychoanalytic perspective, Greenson (1960) suggested that "to empathize means to share, to experience the feeling of another person" (p.418). These definitions refer to empathy as shared affect, a temporary state of identifying emotionally with another person. Proponents of the emotional perspective define empathy as the process of vicariously feeling another person's emotional experience, which in the medical context has been identified as similar to sympathy, defined as "feeling with the patient or feeling similar emotions that the patient feels" (Mehrabian & Epstein, 1972, p. 1563). However, it has been argued that sympathy is not appropriate in clinical contexts as it can "interfere with objectivity in diagnosis and treatment" (Hojat *et al.,* 2002, p.1563).

An alternative view of emotional empathy that has emerged more recently suggests that merely to experience similar emotions to those of a target will not lead to an observer being considered fully empathic (Batson, Fultz & Schoenrade, 1987; Zahn-Waxler & Robinson, 1995). Rather than the sharing of affect, these researchers define empathy as experiencing emotion that is congruent with, but not identical to, the emotion of another person (e.g., Batson & Shaw, 1991). Vreeke and van der Mark (2003) note that genuine empathy that is effective in comforting the target is likely to involve the experience of compassion and caring. In support of this argument, Davis (1996) also emphasises the notion of congruent affect, as not all emotional reactions may be perceived as empathic. Taking the example of frustration experienced by a target, an observer who is perceived to share that frustration may be perceived as less helpful by the target than an observer who expresses sympathy or compassion.

Shared affect and sympathy have been distinguished experimentally, by asking participants to watch video clips of two different scenarios. Gruen and Mendelsohn (1986) found that while there are situations in which both empathy and sympathy are aroused, sympathy can be present without shared affect. They found that emotional empathy was more consistently linked to personality traits associated with affiliation and putting others' needs first, while sympathy was more situation-specific.

Although reviews by Morse *et al.* (1992) and Stepien and Baernstein (2006) both emphasise the importance of emotional engagement between the healthcare practitioner and patient, the exact nature of the emotional response has not been specified. Also, there are conflicting views such as those suggested by Hojat *et al.* (2002) that an emotional response interferes with the objectivity of the practitioner and reduces the effectiveness of diagnosis and care. However, no test of these assertions has been made, and very few studies involve patients in their methodologies. The emotional labour literature raises another issue with respect to emotional empathy. Whereas surface acting emotional empathy can refer to the appearance of care and concern that is not necessarily experienced, deep acting empathy involves the actual experience and subsequent expression of these emotions (Grandey, 2003). These are important issues to consider in efforts to develop and sustain clinical empathy due to their potential impact on both the practitioner and the patient. Whereas surface acting empathy might protect the practitioner from becoming over-involved and emotionally exhausted (Maslach, 1978), it may not be perceived by patients as genuine. Conversely, while deep acting emotional empathy might be perceived as more genuine by the patient,

potential negative consequences might include over-involvement, decreased objectivity and emotional exhaustion (Larson & Yao, 2005). These issues may also be important in understanding factors that influence the maintenance of clinical empathy over time (e.g. Hojat et al., 2004; Spencer, 2004).

2.2.2 A cognitive dimension of empathy

Although early researchers conceptualised empathy as a predominantly affective process, it was suggested as early as 1929 that empathising involved *understanding* of another person, by viewing and interpreting their actions, movements and physical cues (Kohler, 1929). One of the most widely known researchers to adopt this perspective was Hogan (1969) who defined empathy as 'the intellectual or imaginative apprehension of another's condition or state of mind *without actually experiencing that person's feelings*' (p.308, italics added). Cognitive definitions therefore conceptualised empathy as adopting another's perspective in order to understand that person's thoughts, feelings and actions.

However, it has been suggested that healthcare professionals need more than the objective understanding or 'detached concern' advocated by some medical educators (Halpern, 2001). Morse et al. (1992) and Stepien and Baernstein (2006) argue that without some emotional engagement, the healthcare practitioner will not be perceived by the patient as genuinely empathic. The importance of both cognitive and affective components of empathy is recognised in more recent research. For example, occupational psychologists have identified the importance of perspective taking in empathising with clients and providing

helpful customer service. Axtell, Parker, Holman and Totterdell (2007) asked 347 agents from two UK call centres to complete self ratings of perspective taking and emotional empathy. Both of these significantly predicted manager ratings of helping behaviour. A similar result was found in a study of manufacturing employees in helping internal customers, suggesting that the results of the study may be generalisable (Parker & Axtell, 2001). These two studies provide evidence that perspective taking is an important part of empathy in an applied, emotional labour role. But as Hynes, Baird and Grafton (2006) argue cognitive processes can still have an emotional focus. They identified the separate aspects of emotional and cognitive perspective taking: emotional perspective taking (EPT) is concerned with making an emotional attribution with regards to another person's behaviour or experience, whereas cognitive perspective taking (CPT) involves making an attribution that requires no emotional understanding. EPT but not CPT is deemed to be empathy. This is in line with the studies previously discussed in which ratings of perspective taking involved agents rating the extent to which they imagined their customers' perspectives and thought about how they would feel in a customer's situation (Axtell et al, 2007; Parker & Axtell, 2001).

To demonstrate this distinction, Hynes, Baird and Grafton (2006) asked participants to read scenarios which required them to imagine what a target was feeling (EPT), thinking (CPT), or neither (control). Use of functional magnetic resonance imaging allowed the researchers to show that only emotional perspective taking activated specific areas of the medial orbital frontal lobes known to be damaged in people with empathy dysfunction (Eslinger, 1998;

Grattan, Bloomer, Archambault & Eslinger, 1994). Physiological evidence that empathy specifically involves *emotional* perspective taking represents a refinement of the definition of 'perspective taking' generally used to refer to cognitive empathy. In the healthcare context, a cognitive dimension of empathy can therefore be described as the process of perspective (or role) taking to identify and understand patients' emotions and perspectives (Morse *et al.,* 1992; Stepien & Baernstein, 2006).

2.2.3 A moral dimension of empathy

The third dimension of empathy identified in medical and nursing reviews involves a moral component, defined as "an attitude of receptiveness, availability and presence" (Zderad, 1970, p.30) that drives someone to help their patient. The importance of this attitude or motivation is highlighted in the first stage of Barrett-Lennard's cyclical model of the phases of empathy (1993; see figure 2.1). Based on Carl Rogers' (1957) work on empathy in therapeutic relationships, Barrett-Lennard intended his model to be applicable to explaining empathy in the general population. P_A represents the observer, who is empathising with a target, $P_{B,}$ and in the 'pre-empathy' condition, P_A is required to actively attend to the subjective feelings and experiences of P_B. If P_A is not in an 'empathic set' the process will not begin. By attending to P_B in this way, P_A connects by recognising and interpreting the expressions of P_B and only if the motivation to attend to the needs of the patient is present in the 'pre-empathy condition' will the further stages of the model take place. By including this 'moral' motivation

as Morse *et al.* (1992) refer to it, empathy is seen as an altruistic rather than an egoistic concept.

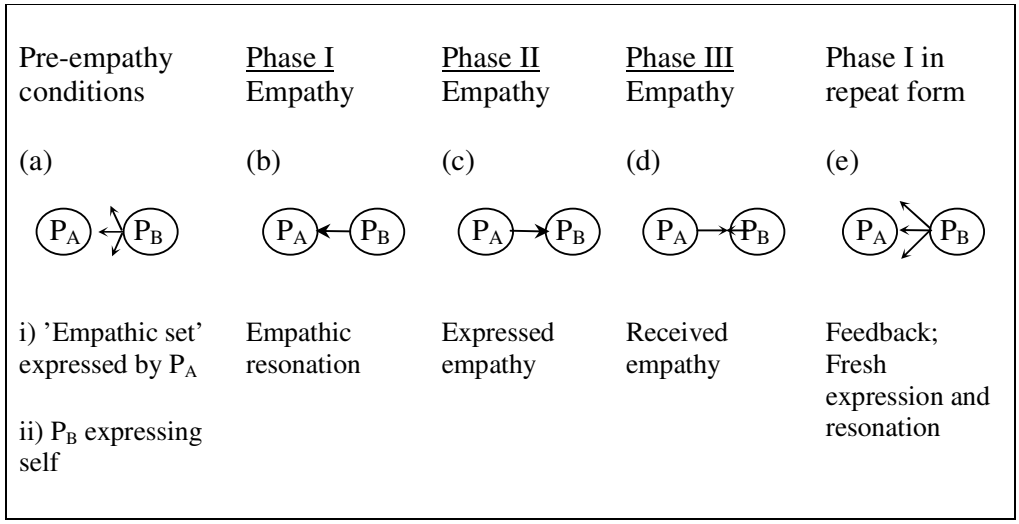

Figure 2.1: The 'cycle' of empathy (Barrett-Lennard, 1993)

Evidence for altruistic empathy has been provided by Batson and colleagues (e.g., Batson & Coke, 1981), who argue that only if the motivation to help is selfless and altruistic and can it be considered as genuine empathic helping. To demonstrate this, Coke, Batson and McDavis (1978) played a radio broadcast of a person in distress to 144 undergraduate students. Results indicated that participants who offered more help to the target in the broadcast were those who reported greater empathic concern for others on a self report measure but not higher personal distress. This led Coke *et al.* to conclude that empathy is an altruistically motivated concept, including an emotional component. If empathy were egoistic, those who reported greater personal distress would have also offered help in order to reduce their own distress. However, there are concerns with the ecological validity of this scenario as it is likely that real incidents that

would produce empathic concern may also produce personal distress. For example, witnessing the distress of someone with whom one shares a close relationship would produce not only concern for that person but also personal distress due to the feeling of 'oneness' with the target (Cialdini et al., 1997). Also, the study does not consider individual differences in motivation, such that some people may be motivated to act by personal distress whereas others may be more motivated by empathic concern. Despite some limitations, findings suggest that an altruistic motivation may lead to people being more likely engage in helping behaviour. Indeed, altruistic concern to help relieve patient distress is seen as a defining attribute of nurses (Odom-Forren, 2007).

2.2.4 A behavioural dimension of empathy

The final dimension of empathy identified as important for healthcare practitioners relates to the behavioural or communication aspect of empathy. Barrett-Lennard's (1993) cyclical model presented above conceptualises empathy as an active interpersonal process that involves communication and behavioural interaction between the parties (see Figure 2.1). Observers' perceptions of the target are given prominence in the model. Provided the altruistic empathic set is present, in Phase II P_A then expresses an empathic response. According to Barrett-Lennard, this 'expression' could be intentional or automatic, verbal or non-verbal, but for the expression to constitute empathy it needs to convey that P_A understands P_B. The Phase II expressed empathy then makes it possible for P_B to receive this empathy in Phase III and the cycle repeats following further expression from P_B. If all conditions are satisfied ongoing and

meaningful communication between the two parties will result. This experience of being both heard and understood is proposed to bring about feelings of relief, of being helped, connected or less alone. In research terms it would be of value to know which methods or styles of expression are more impactful in bringing about an awareness of being understood in P_B and in an early exploration of this phase, Mansfield (1973) videotaped initial interactions between psychiatric nurses and patients to investigate empathic communication. Open communication as well as non-verbal behaviours which demonstrated compassion were identified as important. However, the study focused on single initial interactions between nurse and patient when relationships were not established, consequently information gained may not be generalisable across other roles or more extended relationships. In addition, a study by Silvester, Patterson, Koczwara & Ferguson (2007) found that doctors' discussion of personal topics and sensitive responses to patient cues predicted higher judgments of physician empathy from observers. Other than this, very little has been done to understand how empathy is communicated to patients and Morse *et al.* (1992) concluded that there is an urgent need for more empirical research to identify the behaviours perceived by patients as empathic.

2.3 Multidimensional models of empathy in healthcare

Following research evidence to support the existence of the four dimensions of empathy identified as important in nursing and medical reviews, more recent work concerned with understanding empathy in healthcare settings has focused on developing multidimensional models of empathic processes. These

encompass factors (patient and healthcare professional) that can lead to empathic experience, demonstration of empathic behaviour and ultimate outcomes of empathy for the different parties involved. Several multidimensional models of empathy in healthcare roles have been developed. The three that have had most influence are Squier's (1990) multidimensional model of medical empathy, Davis' (1983, 1996) multidimensional model of empathy, and the process model of clinical empathy (Larson & Yao, 2005). Each of these is reviewed in more detail below.

2.3.1 The multidimensional model of medical empathy (Squier, 1990)

Squier (1990) developed his multidimensional model of medical empathy from a review of existing literature (see Figure 2.2 for an adapted version). The central theme of the model is that the healthcare practitioner needs to engage in both emotional and cognitive empathic processes in order to maximise health benefits for patients. Cognitive empathy facilitates the practitioner's full understanding of the patient's health problems, but communication of this understanding allows the patient to understand their illness and proposed treatment. Additionally, emotional empathy on the part of the healthcare professional is seen as the main predictor of stress reduction and increased patient satisfaction, which impacts on the patient's motivation to get well. The model provides a useful link between the psychological process of empathy and patient outcomes, although these pathways have yet to be fully tested. Indeed, no research has been located which has directly tested Squier's model and sixteen years after the model was

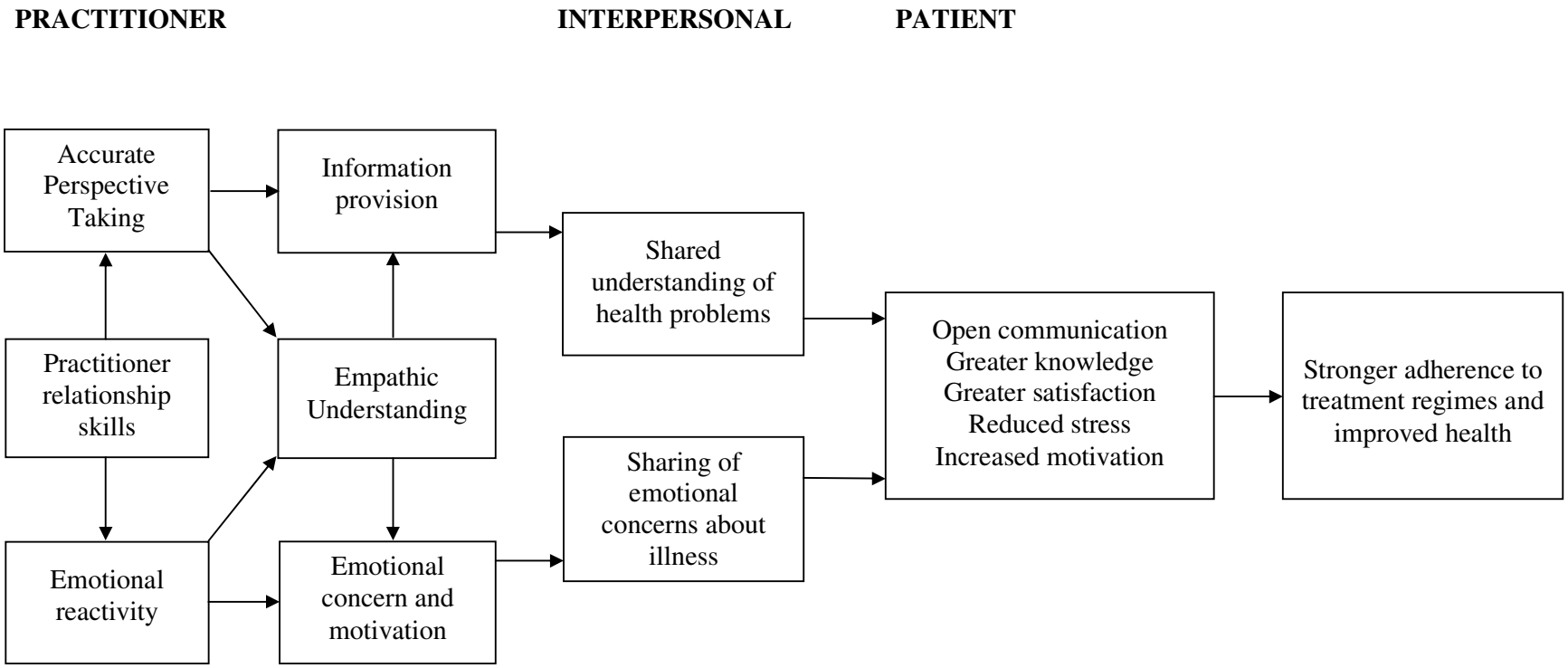

Figure 2.2: Model of empathic understanding and adherence to treatment regimens (adapted from Squier, 1990)

published, Stepien and Baernstein (2006) called for more empirical investigation to address this. Potential limitations of the model include an absence of the moral dimension of empathy identified within the healthcare literature as well as a vague behavioural dimension, described only as sharing of concerns and information. As no antecedents of empathy are specified, the model gives little guidance as to how empathic processes can be developed or sustained among healthcare practitioners.

2.3.2 The Multidimensional Model of Empathy (Davis, 1983)

Davis' multidimensional model (1983; 1996) is perhaps the most widely recognised psychological model of empathy (see Figure 2.3). Developed to explain empathy in the general population, this model identifies antecedents of empathy as including individual characteristics of the observer as well as situational characteristics. Thus this model gives greater understanding of potential ways to develop empathy than Squier's model, which does not specify antecedents of the empathic processes. With regard to individual characteristics, Davis' model suggests individual differences in empathy, with dispositional (or trait) empathy relatively stable across time (Davis, 1983; Gladstein, 1987; Strayer & Eisenberg, 1987). According to Davis an empathic disposition develops during childhood as cognitive ability develops, and social and family experiences take their influence (Hoffman, 1984). Changes during adulthood would depend on unusual events such as brain injury or illness which may affect cognitive capacity or personality (Damasio, 1994). Individual differences are proposed in terms of both abilities and traits, as antecedents are said to include

both the intellectual ability to engage in perspective taking and the dispositional tendency to engage in empathic processes and experience emotional outcomes. As well as individual characteristics, situational antecedents are identified as the strength of the observer's previous experiences and the degree of similarity between observer and target. Both of these would enable more accurate perspective taking and the activation of congruent emotional responses.

These antecedents are then proposed to provoke empathic processes in the observer. These include the non-cognitive 'primary circular reaction' (Hoffman, 1984) by which even young infants appear to experience shared affect. Simple cognitive processes are said to occur via classical conditioning as a result of the learning history of the observer. Certain emotions that one may have experienced, and at the same time perceived in others, can be activated simply by observing that emotion in a target (Eisenberg, Fabes, Schaller, Miller, Carlo, Poulin, Shea & Shell, 1991). This stage also includes the advanced cognitive process of role or perspective taking, although Davis does not explicitly recognise the distinction between emotional and cognitive role taking (Hynes, Baird & Grafton, 2006). Following these processes, a range of outcomes within both the observer (intrapersonal outcomes) and the target (interpersonal outcomes) may result. Affective outcomes within the observer are divided into parallel and reactive emotions. Parallel emotions are Davis' term for the shared affective response. The observer feels emotions the same as those experienced by the target, which may result directly from the individual characteristics of the observer, from the primary circular reaction or from simple cognitive processes

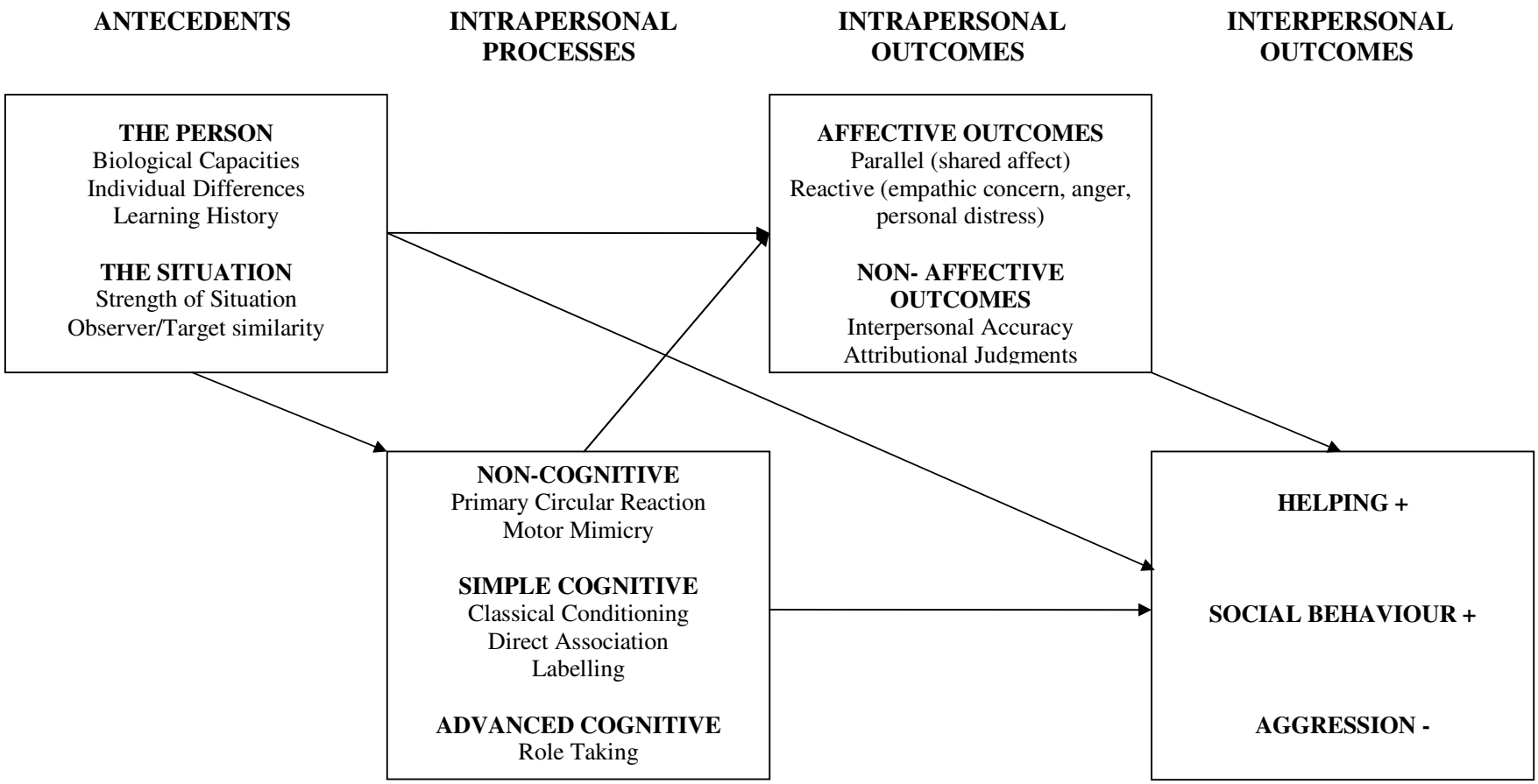

Figure 2.3: A multidimensional model of empathy (adapted from Davis, 1996)

such as classical conditioning as mentioned previously. Reactive emotions on the other hand are those which are different from, but congruent with, those of the target, such as compassion and sympathy. These are purported to result from more advanced cognitive processes such as perspective taking. Evidence for this relationship was found in a study by Axtell et al. (2007), in which emotional empathy self ratings were found to partially mediate the relationship between self ratings of perspective taking and manager ratings of helping behaviour. This study demonstrates the intertwined nature of perspective taking, emotional empathy and helping behaviour.

Personal distress, defined as "the tendency to feel discomfort and anxiety in response to needy targets" (Davis, 1996, p. 18) is highlighted as an interesting case in terms of an emotional reaction. Personal distress may be a parallel emotion in some circumstances. However it is not easily classified because it may not be the reproduction of the target's affective state, but more of a response to it. It is also difficult to classify it as a reactive emotion because it may not necessarily be a congruent response which the target would perceive as helpful. Davis' inclusion of personal distress in the model supports the view of Cialdini, Baumann and Kenrick (1981) who see helping behaviour in terms of egoistic motivation, resulting from the desire to relieve one's own negative state, which may include tension, stress or guilt. However as discussed earlier, it has been argued that true empathic helping should be altruistically motivated (e.g., Batson & Coke, 1981). Personal distress may generate an egoistic motivation to reduce one's own negative state but this would not constitute empathy. Only if empathic concern is experienced instead then the motivation to help is selfless and altruistic and thus can be considered as empathic

helping. Findings from studies such as that by Coke, Batson and McDavis (1978) in which empathic concern and not personal distress predicted help for a target on a radio broadcast have lead Batson, O'Quin, Fultz, Vanderplas and Isen (1983) to conclude that personal distress is distinct from empathy, which ought to be purely altruistic in nature. Therefore although personal distress may be an affective outcome of observing the emotions of another, an egoistic motivation to help should exclude it from a model of empathy. This potential criticism of Davis' model seems particularly relevant for healthcare practitioners who are seen as being defined by an altruistic nature (Odom-Forren, 2007).

Other non-affective outcomes identified in Davis' model of empathy include interpersonal accuracy and attributions. Accuracy is the result of *successfully* interpreting the other person's thoughts and feelings. This relates to work by Ickes (1993) on empathic accuracy, which conceptualises empathy as an ability rather than a predisposition to engage in empathic processes. It should be noted that although Davis acknowledges the need for accuracy, his measure of empathy (the Interpersonal Reactivity Index, 1983; see Chapter 3) is a self-report measure that does not attempt to measure ability from the perspective of a target.

The second non-affective outcome, attributions are judgements made by the observer to explain the behaviour of the target. Several researchers have reported links between empathy and attributions. Regan and Totten (1975) asked female students to watch a conversation between two other female students and then rate one of them on certain communication styles. Participants were asked to indicate whether they thought each style resulted from the student's personality or the situation.

Instructions were manipulated so that participants were either asked to empathise (emotional perspective taking) with the student or simply observe them. They found that encouraging people to empathise resulted in observers attributing the student's behaviour more to the situation rather than personal disposition. This finding has been replicated several times (e.g., Archer, Foushee, Davis & Aderman, 1979; Betancourt, 1990).

It has also been suggested that Weiner's (1980; 1985; 1986) attributional theory may be useful in understanding helping responses (Fenwick, 1995). Weiner (1986) suggests that it is the underlying structure of peoples' explanations for causes of events, rather than specific content, which determines the emotional and behavioural consequences for an observer. According to Weiner's attributional model of helping behaviour, an observer will attempt to determine why help is needed before acting. If the observer judges a negative outcome to be within a target's control, this may lead to negative emotions such as anger and annoyance, blaming the individual for the outcome, and consequently, to help being withheld (Meyer & Mulherin, 1980; Russell & McAuley, 1986). However, if the target is believed not to have control over the situation, observers are more likely to experience sympathy, increasing the likelihood of help and support being offered.

In a test of this in an applied medical setting, Silvester, Patterson, Koczwara & Ferguson (2007) explored a socio-cognitive model of empathic ability incorporating social-cognitive (distal) and behavioural (proximal) predictors of empathic judgments. Doctors' explanations for patient outcomes and their subsequent interactions with patients were examined. Explanations were assessed via a modified

Attibutional Style Questionnaire (ASQ: Peterson, Semmel, Baeyer, Abramson, Metalsky & Seligman, 1982; Peterson & Villanova, 1988). Behaviours were observed in simulated patient interactions as part of an assessment centre. Doctors' causal attributions for patient outcomes predicted empathy judgments made by observers, with doctors who attributed positive patient outcomes to causes that were more internal and controllable to him or herself being judged more empathic and more motivated to engage in help-giving behaviour. This suggests the need for the observer to perceive they have control over the situation.

Finally, Davis' model identifies the interpersonal outcomes associated with empathy as helping, aggression and social relationships. Historically, empathy has most often been linked with helping behaviour (Eisenberg, 1986). However, empathy has also been found to have both a negative relationship with aggressive behaviours and a positive relationship with prosocial behaviour (Eisenberg et al., 1991). Davis' multidimensional model is by far the most complex and comprehensive model of empathy reviewed here and it could be argued that aspects within the model relating to the development of empathy during childhood are less relevant for the study of adults working in the healthcare professions.

2.3.3 Process model of clinical empathy (Larson & Yao, 2005)

Davis' model has been identified by Larson and Yao (2005; see Figure 2.4) as having potential to further understanding of the process of clinical empathy, with their adaptation focusing on the more salient aspects for this context. Retaining the core aspects of antecedents, intrapersonal processes and outcomes of empathy, this

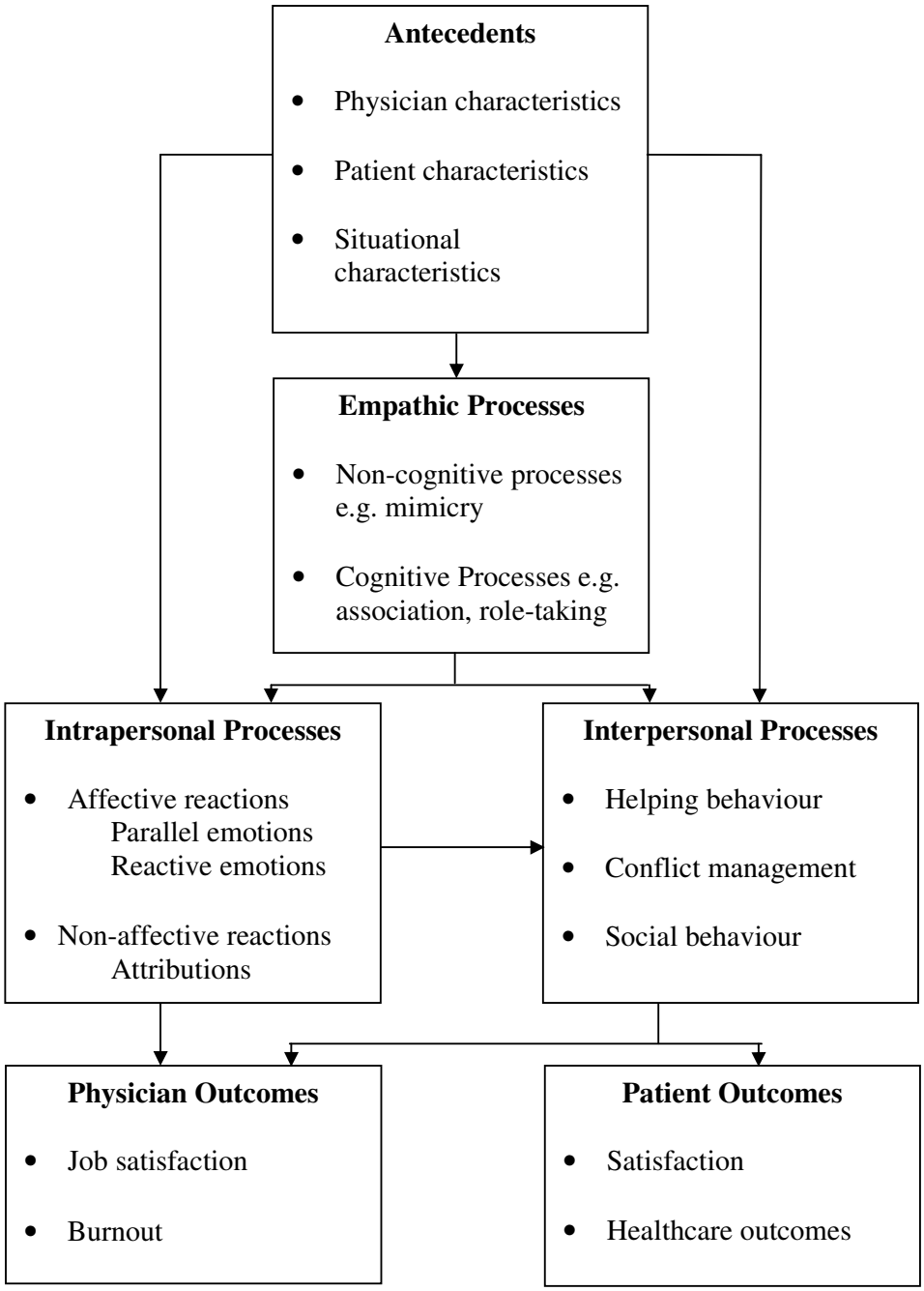

Figure 2.4: Process model of clinical empathy (from Larson & Yao, 2005).

direct adaptation by Larson and Yao (2005) illustrates the potential applicability of Davis' model to healthcare practitioners. The process model was developed to provide a better understanding of the psychological and behavioural activities involved in empathising and to help physicians incorporate empathy into daily practice. It includes antecedents such as patient and practitioner characteristics as well as situational characteristics. For example potential obstacles facing healthcare professionals who aspire to develop empathy include workload, a lack of focus on empathy and cynicism. Positive antecedents, if present, lead to the cognitive and emotional processes specified by Davis. These go on to result in interpersonal helping behaviours which include social behaviour and management of conflict. This adaptation of Davis' model provides guidance for practitioners wishing to develop and sustain empathy, with the inclusion of both individual and situational antecedents of empathy. Despite its strong theoretical support, the suggested pathways remain untested to date.

2.4 Models of empathy: limitations and next steps

To summarise, chapter one concluded by arguing that to identify the best methods to develop and sustain empathy in healthcare professionals there is a need to better understand the antecedents and processes involved in empathic responding towards patients. Chapter two has reviewed recent models of empathy in healthcare that embrace a multidimensional approach, incorporating antecedents, cognitive, emotional and behavioural components. Davis' model (1983; 1996) is the most comprehensive psychological model and the direct adaptation by Larson and Yao (2005) highlights the potential application of Davis' model to the healthcare context.

However, to date there has been very little research that has tested the utility of the model for understanding empathy between patients and healthcare professionals and, as such, very little is known about the individual characteristics that might have an impact on demonstrated empathic behaviour, or indeed what those specific behaviours are. In order to answer these questions, this thesis now turns to a review of the methods used to investigate empathy.

Chapter 3. Measures of empathy

"In spite of the apparent difficulty involved in developing a valid and acceptable measure of empathy, the theoretical import of the concept requires that continuing efforts be made."

Hogan (1969, p.308)

The predominant method of investigating empathy in adults is the self report questionnaire (e.g., Davis, 1983; Hogan, 1969). As indicated by Hogan's quote, numerous measures have been developed, focusing on emotional, cognitive and multidimensional aspects of empathy, including measures designed for use with the general population as well as those targeted specifically at healthcare settings. Before reviewing existing scales in more detail, however, it is first important to understand two important psychometric properties, namely reliability and validity.

3.1. Reliability and validity

Reliability is concerned with the effectiveness of a test to measure something consistently (Rust & Golombok, 1999). Types of reliability include internal and test-retest reliability. Test-retest reliability is estimated by administering the scale to the same group of respondents at two different time points and calculating the correlation coefficient between the two resulting sets of scores (Kline, 2000). Internal reliability can be estimated by either calculating Cronbach's alpha, the average correlation between all items on a test, or by calculating a split-half reliability - the correlation between scores on one half of the scale items with the

other half (Rust & Golombok, 1999). Generally, a minimum Pearson's *r* of 0.7 is required to demonstrate acceptable reliability (Kline, 2000).

Validity on the other hand is concerned with the effectiveness of the test in measuring what it claims to measure (Kline, 2000). Cronbach and Meehl's (1955) seminal paper on test validity identifies four types: content; construct; predictive, and concurrent. Content validity is evaluated subjectively, usually through consultation with subject matter experts, to determine if the scale samples the domain of interest satisfactorily (Rust & Golombok, 1999). Content validation is said to be particularly challenging for constructs with debates or inconsistencies in definitions (Murphy & Davidshofer, 2005). Furthermore, content validity is a state of an obtained scale score (Messick, 1995) which can vary across populations. Content validity should therefore be established for the population that will be sampled (Haynes, Richard & Kubany, 1995). An evaluation of the content validity of existing measures of empathy should therefore consider not only the complex nature of the concept but also the context of healthcare practitioners.

The second type of validity identified by Cronbach and Meehl (1955) is construct validity. Evidence of construct validity is generally accumulated from multiple studies (Rust & Golombok, 1999). Construct validity is an umbrella term for types of validity including convergent and discriminant validity (Domino & Domino, 2006). Convergent validity is said to be established when consistent relationships are found between the concept of interest and theoretically related concepts. Discriminant validity is on the other hand established when no consistent relationships are found with theoretically unrelated concepts (Kline, 2000). Factor analysis is a popular

method of construct validation, having been used extensively in evaluations of empathy measures (e.g. Carey, Fox & Spraggins, 1988; Pulos, Elison & Lennon, 2004). The third and fourth types of validity, predictive and concurrent, are known as criterion-oriented validity (Cronbach & Meehl, 1955). In order to assess criterion-oriented validity, a correlation is calculated between the predictor of interest and an independent criterion measure. When the scale score and criterion score are measured at the same time, this is known as concurrent validity, whereas predictive validity studies involve the criterion score being taken at a later date. For a scale to be deemed effective, it requires both reliability and validity for the intended purpose, taking the healthcare context into account (Messick, 1995).

3.2. An overview of empathy scales

These concepts are of particular relevance when considering empathy measures; a review of existing measures designed for use with the general population identified only two questionnaires as having generated sufficient research to be able to demonstrate satisfactory reliability and validity (Chlopan, McCain, Carbonell & Hagen, 1985). These two measures were by Hogan (1969) and Mehrabian and Epstein (1972). Other measures described as having inadequate supporting evidence included, the George Washington Social Intelligence Test (Hunt, 1928; Moss, 1931; Moss, Hunt, Omwake & Ronning, 1927; Moss, Hunt & Omwake, 1949); the Chapin Social Insight Test (Chapin, 1942); the Dymond Rating Test of Insight and Empathy (Dymond, 1949), and the Empathy Test (Kerr & Speroff, 1954). Since Chlopan *et al.'s* review, however, the Interpersonal Reactivity Index developed by Davis (1983) from his multidimensional model of empathy has also received support from

researchers (e.g., Pulos *et al.,* 2004) and this and the questionnaires by Hogan (1969) and Mehrabian & Epstein (1972) remain in use today.

In addition to measures of empathy for use with general populations, significant progress has been made in the development of empathy scales for use in healthcare contexts. Within nursing, scales include the Empathy Construct Rating Scale (ECRS: La Monica, 1981) and the empathic understanding subscale of the Barrett-Lennard Relation Inventory (BLRI: 1964, 1978). More recently, the Jefferson Scale of Physician Empathy (JSPE: Hojat et al., 2002) has been developed for use with doctors although is now being used within other healthcare professions as well (Chen, La Lopa & Dang, 2008). Publication of the Reynolds Empathy Scale (Reynolds, 2000) and the Consultation and Relational Empathy measure (CARE: Mercer, Maxwell, Heaney & Watt, 2004) have marked significant developments in efforts to assess empathy based on patient perceptions of healthcare professionals. The CARE measure is intended to be of use to a range of healthcare professionals, while Reynolds' scale is nursing-specific. In order to determine which measures are likely to be of most use in empirical research, this chapter reviews each of these eight measures and information is also summarised in tables 3.1 and 3.2.

3.2.1. Empathy Construct Rating Scale (ECRS)

One of the first specific measures of healthcare empathy was La Monica's (1981) Empathy Construct Rating Scale (ECRS) for nurses, which was originally developed to evaluate an empathy training program (La Monica, Carew, Winder, Haase & Blanchard, 1976). Initially, 259 items were generated by 25 female graduate nursing

students and then reviewed by three experts skilled in psychometrics, psychology and nursing respectively. These items were reduced to the final 100 via an item facility analysis using three expert and 10 student ratings. To calculate reliability, La Monica (1981) asked 103 nursing students to rate two colleagues, one high (Form A) and one low (Form B) in empathy. Both forms were found to have high Cronbach's α coefficients and split-half reliabilities. However, no reliability statistics for the self rating version were reported. Sample sizes are small in that experts recommend at least 200 people for an item and reliability analysis (Rusk & Golombok, 1999).

Three hundred female nurses and nursing students then completed a battery of scales in order to assess convergent and construct validity. The five subscales hypothesised to be present within the ECRS included: non verbal behaviour; personality traits such as openness and honesty; sensitivity to others; responding in ways such as encouraging and supporting, and finally respect for self and others. However these five subscales were not supported by a factor analysis. In analysis of the self ratings of the 300 nurses and students, all five subscales loaded on to a single factor. Analysis of self, patient and peer ratings concluded that the 100 items loaded on to seven factors, although 84 of the items loaded significantly on to the first two factors, one being positive and one negative indicators of empathy. Subsequent studies using the ECRS have used these 84 items rather than the original 100 (e.g., Layton & Wykle, 1990).

With respect to construct validity, self and peer ratings showed a correlation of only .20 ($p<.001$) while self and patient ratings were found to have an even lower correlation of .10 ($p<.05$). In addition, only a small correlation ($r = .16$, $p<.05$)

between self ratings and the Chapin Social Insight Test (Chapin, 1942) was found, suggesting concerns over construct and convergent validity of the test. Criterion related validity was also called into question when La Monica (1987) and Reynolds (1986) failed to find significant changes in patient or self reported empathy following empathy training.

Methodological concerns therefore include a lack of patient input into scale development as well as failure to establish sound construct, convergent or criterion related validity. Theoretically, the content of the scale does not appear to relate clearly to any models of empathy discussed in chapter two, suggesting that there is insufficient evidence to justify its continuing use (Reynolds, 2000).

3.2.2. The Barrett-Lennard Relation Inventory (BLRI)

Although an older measure than La Monica's ECRS, some researchers have argued that the strong theoretical underpinning of the Barrett-Lennard Relationship Inventory (BLRI: Barrett- Lennard, 1964, 1978) makes it suitable for use in applied settings beyond the counselling relationship for which it was originally developed (Layton & Wykle, 1990). The most widely used form of the BLRI relies on the patient describing the healthcare practitioner (the 'other towards self' or OS version). There is also a 'myself towards other' (MO) version which is effectively a self rating by the practitioner of their effectiveness in a specific relationship. The 64-item scale has four subscales pertinent to effective interpersonal relationships, including: empathic understanding; congruence; level of regard, and unconditionality of regard. The first of these, empathic understanding, is of particular interest here. Several

studies have employed the 16-item empathic understanding subscale as a measure of empathy in its own right (e.g., Layton & Wykle, 1990) and the subscale has also been adapted for use within medicine to assess the physician-patient relationship (Simmons, Roberge, Kendrick & Richards, 1995). The empathic understanding subscale of the BLRI is based on Barrett-Lennard's cyclical model of empathy described in chapter two. According to this model the empathy cycle starts with the empathiser in an attentional set which allows them to pick up cues from the target person. The cues are then perceived and empathy is expressed. The target person receives this expression and responds in turn, thus the cycle continues. The OS empathic understanding subscale taps into the empathy cycle at phase three, where the patient receives empathy and judges the motivation and understanding of the empathiser.

From development, the rationale of the BLRI has been "the logical presumption that it is what the patient… himself [sic] experiences that affects him most directly" (Barrett-Lennard, 1962, p. 2). In turn, this patient experience should be most closely related to positive healthcare outcomes. Evidence of reliability and validity is presented in Table 3.2. Numerous studies have reported results in which the OS empathic understanding measure based on patient perceptions has successfully predicted positive outcomes. Gurman and Razin (1977) for example reviewed 20 studies of actual help-seeking patients. In only one of these studies did the patient's perception of the relationship, including empathy, fail to predict therapeutic outcomes.

As noted by Reynolds (2000), however, the scale may have limited success when applied to the less formal nurse-patient relationship. It has been found that when used in conditions other than the counselling context for which it was designed, the reliability of the BLRI is reduced (e.g. Polit & Hungler, 1983). In addition, content validity was established by experts in patient-centred counselling (Gurman & Razin, 1977) rather than more general healthcare professions. According to Bennett (1995), the range of issues discussed by nurses and patients is more diverse than the therapist-patient interaction, and the content validity of the measure for the role of a non-psychiatric nurse or doctor may therefore be limited. Whilst the BLRI appears to capture an important aspect of empathy and is effective at including the patient's perspective, measures capable of capturing different aspects of empathy with items more suited to general healthcare roles are needed (Bennett, 1995).

3.2.3. Jefferson Scale of Physician Empathy (JSPE)

The most commonly used measure for assessing practitioner empathy reported in the medical literature is currently the Jefferson Scale of Physician Empathy (JSPE: Hojat, Gonnella, Nasca, Mangione, Vergare & Magee, 2002). The authors began the process of scale construction by reviewing the literature on general and clinical empathy, with the authors concluding that empathy in medicine should be viewed as a cognitive process. Qualitative research with subject matter experts (100 physicians) was then conducted prior to scale construction, as recommended by psychometrics experts (e.g., Rust & Golombok, 1999). Items for the scale were generated by these experts using the definition of empathy as "An uncritical understanding of the patient's experiences, emotions, and feelings" (Hojat et al., 2002, p. 1563). This

definition was explicitly contrasted with sympathy, which was defined as "feeling with the patient or feeling similar emotions that the patient feels" (p. 1563). The items were therefore immediately focused towards a cognitive view of empathy, and away from sympathy, which was identified as a possible obstacle to objective diagnosis and treatment (Hojat et al., 2002). The JSPE scale is widely used across various healthcare roles apart from medicine, including nursing and pharmacy (Chen, La Lopa & Dang, 2008; Fields, Hojat, Gonnella, Mangione, Kane & Magee, 2004). It has been found to have satisfactory psychometric properties, with high reliability for samples of 56 nurses and 42 physicians (Fields *et al.,* 2004). Tables 3.1 and 3.2 provide more information on the JSPE and its properties.

Despite the psychometric robustness of the JSPE it has theoretical limitations in that it does not account for multidimensional components of empathy in recent models described in chapter two. Notably, items lack assessment of the behavioural dimension of empathy. In evaluating empathy training, Evans *et al.* (1993) found that communicated empathy may be changeable whereas cognitive or affective empathy is more stable over time (Feighny Arnold, Monaco, Munro & Earl, 1998), suggesting a need to include a behavioural element in the assessment of empathy.

Of particular interest is the fact that although models of empathy emphasise the need to focus on communication of empathy, patients were not typically involved in the development of the empathy measures reviewed so far. In an attempt to address this Kane, Gotto, Mangione, West and Hojat (2007) developed a five item patient version of the JSPE, which is broadly in line with Davis' multidimensional model of empathy, and asks the patient to rate the physician's empathic concern, perspective

taking and behaviour. Analysis of data from 225 patients resulted in a single factor with a Cronbach's α of .58, which was deemed to be satisfactory given the small number of items in the measure. However, the patient scale appears to suffer from a ceiling effect as the mean rating was 23.8 while the maximum possible score is 25. The patient scale may therefore not be useful in discriminating between physicians, perhaps due to social desirability or that patients are unable to judge the internal empathic processes of the physician.

In summary, although the JSPE is a popular measure of empathy, the definition used to develop the scale is not multidimensional and neither version of the scale included patient input to thoroughly understand the behaviours which communicate empathy most effectively. There has been some progress in addressing these limitations in other recent scales, which are now reviewed.

3.2.4. The Reynolds Empathy Scale

This scale was developed to 'demystify' the process of empathy between nurse and patient, and allow nurses to better understand how to apply skills and appear empathic in terms of behaviour (Reynolds, 2000). In developing a new nursing-specific measure, Reynolds' aim was to make progress in the measurement of empathy in two respects, both of which were highlighted by a review of the effectiveness of existing measures. First, he argued that a measure was needed that the user could be confident of in terms of reliability and validity. Secondly, that an effective measure should include patient perceptions in the development process, something which other measures had typically failed to take into account and was

considered a major weakness in light of efforts to include patients as active and important collaborators in treatment (e.g., Barker, 1994; NHS,1996; The Scottish Office, 1997).

In order to develop the scale, 30 patients were asked for their perceptions of effective and ineffective interpersonal behaviours demonstrating empathy. These perceptions were gathered from explanations of ratings of student nurses on La Monica's ECRS (Reynolds, 1986). Rather than use a method of qualitative inquiry purely focusing on matters of importance to patients, the comments were therefore very much influenced by the content of the ECRS. Comments were categorised into helpful or unhelpful behaviours along four themes: creating an interpersonal climate where it is possible to become aware of the patient's emotions; listening to the concerns of the patient; using a range of strategies to help the patient, and awareness of how the process may be stalled by a failure to listen or the presence of unhelpful behaviour. To be included in the scale, the item must have been mentioned by at least twenty of the thirty patients and also be relevant to empathy as judged by reports in previous literature. Twelve items resulted on the scale, six positive and six negative. Further information can be found in Table 3.1.

Although the rationale for including patient perceptions in developing a measure of empathy is sound (particularly for the behavioural dimension where patients are in receipt of communicated behaviours), several criticisms can be levelled at the approach taken by Reynolds. First, the qualitative data gathered from patients was limited due to a focus on a previously constructed scale rather than the patients' own conceptualisations of empathy. Secondly, the actual words used by patients were not

included in the items themselves, which potentially resulted in a loss of meaning. An example is given to illustrate this point. Item 1 on the scale is 'Attempts to explore and clarify feelings' whereas item 5 is 'Explores personal meaning of feelings'. An example of a patient explanation of item 5 is given as "When I don't want to talk about something she seems to recognise this mood and asks me about it. She won't persist if I am reluctant" (Reynolds, 2000, p. 56). However one could argue that this statement reflects both items 1 and 5. Potentially, in moving from patient statements to item generation, the researcher's own interpretation may have altered the items thus negating the argument to put the patient perceptions at the centre of the scale. Indeed, content validation was checked in consultation with five experts from nursing and clinical psychology rather than referring back to patients. Finally, in focusing on behaviours rather than a multidimensional approach including cognitive and affective processes involved with empathy, the scale again fails to incorporate a multidimensional model of empathic processes. Reynolds' scale is relatively new and as yet little evidence is available of its usefulness, however, his central theme of including patient perceptions is one which is growing in popularity and has also led to the development of the CARE measure which is now introduced.

3.2.5. The CARE Measure

The CARE measure was developed on the basis of arguments that patients' views are central to the effectiveness of empathy in the clinical encounter (Mercer *et al.,* 2004). The authors also intended to build on the work of Reynolds by creating a measure of empathy which could be relevant for clinical encounters other than nursing. Their initial measure was piloted using a sample of general practitioners and

patients, and qualitative and quantitative examinations of validity allowed for appropriate revision of the CARE measure until the third version of the scale was deemed satisfactory (details are provided in Tables 3.1 and 3.2).

Although sample sizes were small in testing the two pilot versions of the scale (20 patients in first pilot followed by 13 in the second), a key stage in ensuring that the final scale represented patients' perceptions was to validate the scale with patient consultation. To further validate the CARE measure, 3044 patients then completed the final version of the questionnaire for 26 GPs from different practices (Mercer, McConnachie, Maxwell, Heaney & Watt, 2005). In total 76% of patients rated the items within the measure as being very important to their consultation with the doctor. In particular, patients with psychological or emotional distress and older patients rated the items as more important. This suggests that the measure is a good representation of the behavioural dimension of empathy within the clinical encounter as it might reasonably be assumed that these patients would be even more in need of empathy from their physician. Further analysis revealed that acceptable reliability of ratings for a physician could be reached with a minimum of 50 patient ratings (Mercer et al., 2005), and norms were established such that within the scoring range of 10-50, a score of less than 39 represented a below average score while above 42 represented above average. This final stage of analysis has resulted in the measure being adopted for use in appraisal of GPs practicing in Scotland. The measure appears to demonstrate sound psychometric properties and development included patient consultation, but it again focuses on the behavioural dimension (perhaps not surprisingly as it was intended for use by patients appraising medical professionals) rather than a multidimensional model of empathy.

The final three measures of empathy reviewed here were developed for use with general populations rather than the more specific healthcare context.

3.2.6. Hogan's Empathy Scale

Hogan's Empathy Scale was developed based on the dictionary definition of empathy as: *"the intellectual or imaginative apprehension of another's condition without actually experiencing that person's feelings"* (Hogan, 1969, p.308). It is therefore rooted in an exclusively cognitive definition of empathy. Importantly, Hogan argued that the definition of empathy involves apprehension of another's condition that does not imply (or therefore require) accuracy, consequently a self report questionnaire is a suitable method of measurement. This definition was given to nine psychologists and 14 other people who were asked independently to use California Q-sort items (Block, 1961) to describe a highly empathic person. A high degree of agreement in the items chosen by the psychologists and non-psychologists suggests that this definition is understandable to people outside the realm of psychology. Hogan therefore used it to develop a scale comprised of 100 items that represented characteristics most and least representative of an empathic person.

Two samples of participants (100 military officers and 111 scientists/engineers) completed this new scale alongside other personality scales. Reliability and validity analyses resulted in 64 items being retained in the final scale. The choice of sample for scale construction is an interesting one, as it could be argued that military officers and those in scientific careers might not be the most representative on which to base

a measure of empathy which may be used in the general population. In addition, no information was presented in terms of gender of the samples. Perhaps not surprisingly, Chlopan *et al.* (1985) note there is evidence to suggest that this scale is more valid for males than females, possibly resulting from the participants being drawn from traditionally masculine careers. Information regarding reliability and validity is presented in Table 3.2. Of some concern, is that in an investigation of the scale with a population of healthcare professionals (occupational therapy students) internal consistency was found to be only .57 while test-retest reliability was only .41 over 12 months (Froman & Peloquin, 2001). Using a restricted definition may have limited the success of the Hogan empathy scale as a measure as reliability has not been consistently established, particularly among healthcare professionals. Although evidence regarding validity may be viewed positively, particularly for males, concerns about using a purely cognitive definition remain and inclusion of an affective component might be beneficial.

3.2.7. The Questionnaire Measure of Emotional Empathy

Mehrabian and Epstein (1972) addressed this need in the development of the Questionnaire Measure of Emotional Empathy (QMEE). They argued that empathy also contains an emotional response for which there was no adequate instrument, but whilst Hogan's scale can be criticised for being purely cognitive in nature, the QMEE is purely emotional. The QMEE includes seven subscales: susceptibility to emotional contagion; appreciation of the feelings of unfamiliar and distant others; extreme emotional responsiveness; tendency to be moved by others' positive emotional experiences; tendency to be moved by others' negative emotional

experiences; sympathetic tendency, and willingness to be in contact with others who have problems. Very little information is published about how items were constructed, or the psychometric properties of the scale and the sample of individuals used to develop it. However, the 33 final items were apparently selected as a result of item analysis, validity analysis and a check of socially desirable responding. Each item therefore had a significant item-total correlation; loaded on to a factor derived from the data and showed no significant correlation with a measure of social desirability. Information regarding reliability and validity is presented in Table 3.2. Chlopan *et al.* (1985) concluded that of six measures reviewed, only the QMEE and Hogan's Empathy Scale had sufficient research to support their use. This is despite the fact that theoretically the two purport to measure different components of empathy, illustrated by low correlations between the two measures (Davis, 1983).

3.2.8. The Interpersonal Reactivity Index

Recognising a need for a multidimensional scale of empathy, Davis developed the Interpersonal Reactivity Index (IRI; Davis, 1983) based on his multidimensional model of the process of empathy. This has four distinct subscales and is based on the rationale that *"empathy can best be considered as a set of constructs, related in that they all concern responsivity to others but are also clearly discriminable from each other"*(Davis, 1983, p.113). The four constructs measured by the scale are perspective taking, empathic concern, fantasy and personal distress. Table 3.1 contains basic information regarding each of these subscales. Briefly, the Perspective Taking subscale is representative of an individual's tendency to adopt the views of another. The Fantasy subscale is similar to this, although is based on imagining

oneself in the role of characters in books, films or plays. The Empathic Concern subscale asks about the individual's own feelings of concern in response to another person. The Personal Distress subscale is also emotional, but focuses on how much one feels distress in response to another. According to Davis, while these four subscales do not exhaust the possible range of reactions to others, previous theory and research suggests that they reflect the variety of reactions to another that have at some point been referred to as empathy.

To establish validity of the IRI and four subscales, Davis investigated relationships between these and other psychological constructs. Findings from construct and convergent validity studies provide support for the theoretical and psychometric properties of the scale, with details of these investigations provided in Table 3.2. Furthermore, given the theoretical accounts that the four subscales are related (Coke et al., 1978; Hoffman, 1977), Davis argued that correlations between the subscales would also provide evidence for the validity of the scale as a whole.

Although the IRI has proved a popular, reliable and valid instrument, based on a multidimensional theory that includes both emotional and cognitive components, it was not designed specifically for the healthcare context. However, Yarnold, Bryant, Nightingale and Martin (1996), in a study of 114 physicians and 95 medical students, found the IRI to have good structural integrity and convergent validity with a measure of problem solving in the context of concern for the well being of others. Evans, Stanley and Burrows (1993) also undertook a study using the IRI to assess empathy in 55 medical students during clinical training. After completing the measure students' behaviours in a twenty minute consultation were scored, using

five items from the 16-item History-taking Interview Rating Scale (Verby et al., 1979) that assess behaviours relevant to empathy such as: eye contact; use of jargon; tendency to interrupt patients; coverage of psychosocial and personal issues; warmth, and ability to detect leads in what the patient is saying. Scores on the IRI and the five items measuring empathic behaviours were positively correlated, suggesting that the measure has the potential for use specifically with healthcare professionals.

3.3. Summary of empathy measures

Eight measures of empathy have been reviewed in this chapter; five designed specifically for healthcare professionals and three for the general population. The five healthcare measures were: the ECRS, the empathy subscale of the BLRI, the JSPE, the Reynolds Empathy Scale, and the CARE measure. Questions arose over the reliability of the ECRS and BLRI, particularly as the BLRI was designed in a counselling context and use outside this setting led to reduced reliability (Polit & Hungler, 1983). The JSPE is limited by its basis in a pure cognitive definition of empathy and failure to accommodate emotional aspects or how empathy is communicated to patients. Whilst the more recent scales by Reynolds (2000) and Mercer et al. (2004) have attempted to include a patient perspective, both suffer from the lack of a clear theoretical basis.

Table 3.1: Descriptions of existing measures of empathy

Target Population	Model and definition of empathy	Number of items and sample items	Response format and scoring
Empathy Construct Rating Scale (ECRS: La Monica, 1981)			
Nurses	Cognitive/Behavioural: 'Signifies a central focus and feeling with and in the patient's world. It involves accurate perception of the patient's world by the helper, communication of this understanding to the patient, and the patient's perception of the helper's understanding'.	100 item (e.g., 'Listens carefully', 'Checks to see if understanding of another's experience is valid') 20 item short version (La Monica, 1996)	Self, peer and patient versions 6 point scale 'extremely like' to 'extremely unlike' 46 negatively and 54 positively worded items
Empathic understanding sub-test of the Barrett-Lennard Relation Inventory (BLRI: Barrett-Lennard, 1964)			
Counselors	Multidimensional: 'To perceive the internal frame of reference of another with accuracy, and with the emotional components...as if one were the other person but without ever losing the 'as if' condition' (Rogers, 1957). Extended to communicative aspects of empathy.	16 items (e.g., Usually senses and realise what I am feeling - patient)	Self and patient versions 7 point scale 'strong agreement' to 'strong disagreement' Half items negatively worded
Jefferson Scale of Physician Empathy (JSPE: Hojat et al., 2002)			
Medics /general healthcare roles	Cognitive: 'An uncritical understanding of the patient's experiences, emotions, and feelings'.	20 items (e.g., I try to understand what is going on in my patients' minds by paying attention to their non-verbal cues and body language)	Self and patient versions 7 point scale 'strongly agree' to 'strongly disagree' Half items negatively worded

Reynolds Empathy Scale (RES: Reynolds, 2000)			
Nursing	Cognitive /Behavioural: 'Signifies a central focus and feeling with and in the patient's world...' from La Monica (1981).	12 items (e.g., 'Attempts to explore and clarify feelings')	Self, peer and patient versions 7 point scale. from 'never like' to 'always like'. Half items negatively worded, reverse scored.
CARE Measure (CARE: Mercer et al., 2004)			
General healthcare roles	Cognitive / Behavioural: 'Ability to: understand the patient's situation, perspective and feelings; to communicate that understanding and check its accuracy, and to act on that understanding with the patient in a helpful way'.	10 items (e.g., How was the doctor at… Making you feel at ease?)	Patient ratings 5 point scale 'poor' to excellent' plus 'Does not apply' No negatively worded items
Hogan Empathy Scale (HES: Hogan, 1969)			
General Population	Cognitive: The act of constructing for oneself another's mental state	64 items (e.g., I am usually rather short-tempered with people who come around and bother me with foolish questions (-)	True or false, negatively worded items reverse scored. Total summed score
Questionnaire Measure of Emotional Empathy (QMEE: Mehrabian & Epstein, 1972)			
General Population	Emotional: An involuntary vicarious experience of another's emotional state	33 items (e.g., The people around me have a great influence on my moods)	9 point scale +4 (very strong agreement) to -4 (very strong disagreement). Total summed score
Interpersonal Reactivity Index (IRI: Davis, 1983)			
General Population	Multidimensional. 4 subscales: Perspective Taking, Fantasy, Empathic Concern, Personal Distress	28 items , 7 per scale (e.g., I sometimes try to understand my friends better by imagining how things look from their perspective)	5 point scale from 0 (does not describe me well) to 4 (describes me very well)

Table 3.2: Reliability and validity information for existing empathy measures

Reliability	Validity
ECRS (La Monica, 1981)	
Cronbach's α .97 for Form A, .98 for Form B. Split half reliability .89 for Form A, .96 for Form B. Peer ratings only, reliability of self ratings not reported (La Monica, 1981).	Construct: expected subscales not confirmed by factor analysis: single factor for self ratings (La Monica, 1981). Convergent: large correlation with BLRI empathic understanding ($r = .78$, $p<.001$, Layton & Wykle, 1990); only small to moderate relationships between self, peer and patient ratings, or self ratings and Chapin Social Insight Test (La Monica, 1981). Criterion: no significant changes reported following empathy training (La Monica, 1981).
BLRI Empathic understanding sub-test (Barrett-Lennard, 1964, 1978)	
Cronbach's α from .64 - .92. Split half reliability .86. Test retest reliability from .66 - .91 (Gurman & Razin, 1977). Reliabilities reduced when used in contexts other than counselling (Polit & Hungler, 1983).	Construct: factor analysis of 64 items yielded 3 factors, with items from the empathic understanding sub-test loading on two factors, acceptance of another person's separateness (being open and non-judgmental) and psychological insight (sensitivity and understanding), in line with pre-empathy conditions and phase one empathy. Convergent: large correlation with ECRS ($r = .78$, $p<.001$, Layton & Wykle, 1990). Criterion: perceptions of empathic understanding predicted therapeutic change in 19/20 studies of patients in counselling interactions (Gurman & Razin, 1977).
Jefferson Scale of Physician Empathy (Hojat et al., 2001)	
Cronbach's α .87 and .89 for nurses and physicians respectively (Fields, Hojat, Gonnella, Mangione, Kane & Magee, 2004). Cronbach's α .58 for five item patient version (Kane, Gotto, Mangione, West & Hojat, 2007).	Predictive: Supervisor ratings significantly higher for top scorers on the measure than bottom scorers, with a large effect size (.50) (Hojat, et al, 2005). Construct: Factor analysis found the major construct to be the physician's view of the world from the patient's perspective with a second significant factor defined as understanding the patients' experiences, feelings and clues, both in line with the cognitive definition adopted (Hojat et al., 2001). Concurrent: Students rated higher on clinical competence were significantly higher scores on the JSPE, regardless of specialty. (n= 371, specialties included family medicine, internal medicine, obstetrics/gynaecology, paediatrics, psychiatry and surgery (Hojat et al., 2002). Divergent: Scale unrelated to a test of objective knowledge (Medical College Admissions Test: Hojat et al., 2002)

Reynolds Empathy Scale (Reynolds, 2000)	
Cronbach's α .90. Test-retest correlation .90 over 4 weeks. Inter-rater: percentage agreement between 3 raters rose from 27.6% to 72.2% after training (Reynolds, 2000).	Convergent: Reynolds Scale and La Monica's ECRS positively correlated (n = 34, r = .84, p<.001). No factor analysis reported.
CARE Measure (Mercer et al., 2004)	
Cronbach's α .93 (Mercer et al., 2004)	Convergent: positive relationships with the BLRI (r = .85, p<.001) and with the Reynolds scale was (.84, p<.001), however these correlations are Pearson's r despite being based on sample sizes of just 10 patient ratings.
Hogan Empathy Scale (Hogan, 1969)	
Test–retest reliability ranging from .60 to .84 (Cross & Sharpley 1982)	Convergent: highest scores positively related to self awareness and social insight test scores (Mill & Hogan, 1978), greater empathy is associated with lower anxiety (Hogan, 1969, Spielberger, Gorsuch & Lushene, 1970). Predictive: highest scores associated with more positive prognoses from clinical psychologists for their patients (Dubnicki, 1977). Highest scores of therapists associated with greater improvement in hyperactive child patients (Kendall & Wilcox, 1980)
Questionnaire Measure of Emotional Empathy (Mehrabian & Epstein, 1972)	
Split half reliability .94 (Mehrabian & Epstein, 1972)	Construct: Females score higher than males: Males mean score = 23, SD = 22; females mean score = 44, SD = 21 (Mehrabian & Epstein, 1972). Divergent and convergent: scores correlate negatively with aggressive behaviour and positively with helping behaviour (Mehrabian & Epstein, 1972). High scores associated with high neuroticism measures (Eysenck & Eysenck, 1978).
Interpersonal Reactivity Index (Davis, 1983)	
Internal consistency Cronbach's α ranges from .71 to.77 for each subscale (Davis, 1983). Test – retest ranges from.62 to .71 (Davis, 1983)	Divergent & Convergent: PT sub-scale correlates positively with the Hogan empathy scale (0.40) and negatively with tests of social-dysfunction. EC sub-scale correlates positively with tests of sensitivity to others and positively with the QMEE (0.60) (Davis 1983). Concurrent: IRI PT, EC and five-item measure of empathy behaviours positively correlated for medical students (Evans et al., 1993). Construct: Factor structure confirmed in medical students (Yarnold et al., 1996)

Broadly therefore, none of the specific healthcare measures possess both satisfactory theoretical underpinning and a robust method of scale construction.

Similarly, among the general population measures the Hogan Empathy Scale and QMEE fail to accommodate the multidimensional conceptualisation of empathy embraced by Davis' IRI (1983). Research has found evidence of satisfactory psychometric properties for the IRI and Evans et al. (1993) used the IRI measure successfully with healthcare professionals, finding self-reported empathy to correlate positively with observed behaviour. Therefore the measure that appears to escape most criticism on both theoretical and psychometric grounds is the Interpersonal Reactivity Index (IRI: Davis, 1983). More generally, the IRI questionnaire also has benefits associated with a psychometric approach to data collection (Rust & Golombok, 1999) in beings useful for theory and hypothesis testing, and convenient to use due to its brevity and usability for the participant (Coolican, 2009). Based on this review of available measures, the IRI is therefore chosen as the main focus for investigation of empathy in this thesis.

3.4. Overview of Thesis and Research Questions

To summarise thus far, chapter one concluded by arguing that in order to identify the best methods to develop and sustain empathy in healthcare professionals there is a need for greater understanding of the antecedents and processes involved in empathic responding towards patients. Chapter two reviewed models of empathy, identifying Davis' multidimensional model (1983; 1996) as the most comprehensive, with Larson and Yao's (2005) adaptation of this model emphasising its potential

utility for the healthcare context. To date very little research has tested either model in the context of empathy between patients and healthcare professionals. As such, very little is known about the individual characteristics that might impact on how empathic behaviour is demonstrated, or indeed, what behaviours impact on judgments of empathy made by patients for healthcare professionals. In order to address these questions, this chapter reviewed a range of existing measures and identified the Interpersonal Reactivity Index as a suitable measure to investigate empathy in the healthcare context, as it possesses both strong theoretical underpinnings and psychometric properties. The specific research questions addressed in this thesis are as follows:

1. What are the antecedents of empathy in healthcare practitioners, in terms of individual differences and situational factors?
2. What behaviours are associated with empathy in the healthcare practitioner?

This thesis aims to further understanding of the antecedents and behaviours involved in empathic interactions between patients and healthcare professionals. The empirical studies utilise the IRI in an attempt to answer these questions. Studies one and two begin by investigating the individual differences that are the antecedents of empathy. Study one is a cross sectional, quantitative research study employing a general population sample (n = 105). It utilises the IRI and the NEO Personality Inventory (revised) [NEO PI-R] in order to investigate empathic disposition within the framework of the five factor model of personality (Costa & McCrae, 1992). Study two is a cross sectional, quantitative study using a sample composed of medical professionals and students (n = 297). The study examines the link between individual differences in emotional intelligence and empathy, using the IRI and Bar-

On EQ-i. Study three investigates the relationships between emotional intelligence, propensity to empathise and observed empathic behaviour. The study uses a cross sectional, quantitative methodology to test the relationships between the IRI, EQ-i and ratings of behaviour by assessors and simulated patients. Finally, study four examines the antecedents of empathy in the healthcare context and identifies the behaviours associated with empathy as judged by patients. In order to understand the real experiences of patients currently in a hospital setting, study four involves a qualitative research design, using semi structured interviews with twenty patients. The studies are outlined in Figure 3.1.

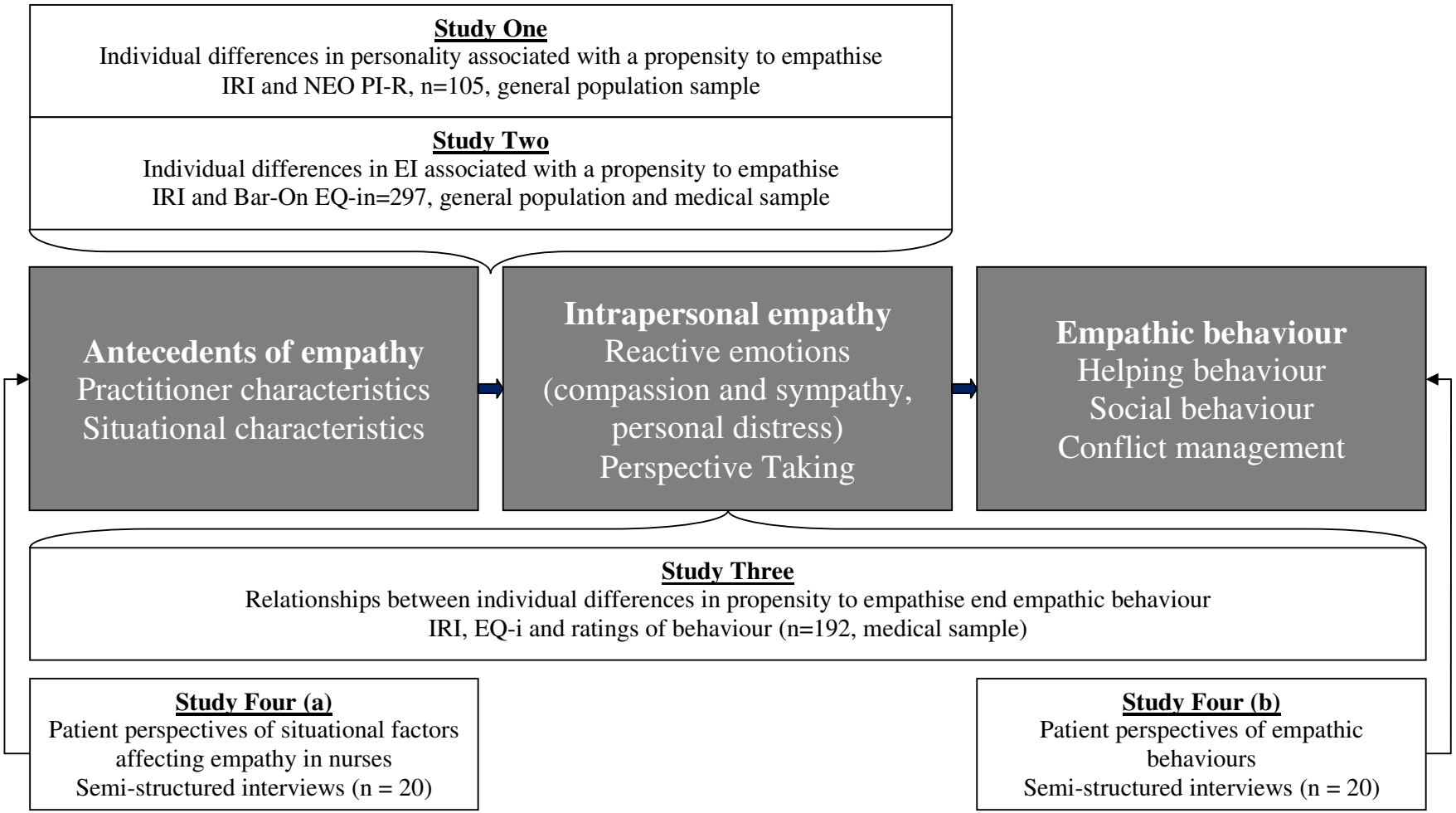

Fig 3.1: Framework for investigating empathy addressed by the studies within this thesis

Chapter 4 – Individual differences and empathy: Personality and the IRI

Of all the empathy measures reviewed in Chapter two, Davis' Interpersonal Reactivity Index (IRI: 1983), with its strong theoretical background and good psychometric properties, presents as the best option for investigating individual differences associated with empathic processes. However, the Interpersonal Reactivity Index is now almost thirty years old and evidence of construct validity that could support its use in the healthcare setting is limited, particularly in light of more recent developments in the understanding and measurement of personality (Chamorro-Premuzic, 2007). In fact, there has been very little research investigating the subcomponents of the IRI (perspective taking, empathic concern, personal distress, and fantasy) in relation to more recent personality frameworks, including the five factor model (FFM) of personality. The aim of study one was therefore to investigate whether personality factors might be associated with antecedents of empathy and, in doing so, to further investigate construct validity for the IRI in terms of a broad spectrum five factor measure of personality. Before reviewing previous evidence linking empathy to the FFM, the concept itself is introduced.

4.1. The Five Factor Model (FFM) of Personality

Personality traits have been defined as *"an individual's characteristic pattern of thought, emotion and behaviour"* (Funder, 1997, pp1-2) that are relatively stable across time and situations. Traits can be quantitatively assessed, using measures of

personality that typically rely on self perceptions (McCrae & Costa, 1999). A significant body of evidence now exists that supports claims that personality descriptors can be accounted for almost completely by five robust factors (Digman, 1990). The five factors are: extraversion (or surgency); neuroticism (or emotional stability); openness to experience (or intellect); agreeableness, and conscientiousness. McCrae and Costa's five factor theory, developed from empirical findings, suggests that traits are organised hierarchically with these five factors representing the highest level of the hierarchy (1999). Despite the recent dominance of the five factor model (McCrae & Costa, 1999), however, most existing research concerned with relationships between personality and empathy has been based on Eysenck's three factor model of personality comprised of extraversion, neuroticism and psychoticism (e.g. Mehrabian, Young & Sato, 1988).

Evidence of a relationship between empathy and personality is derived from three main sources: studies of emotional empathy, a small number of studies looking at cognitive empathy, and Davis' (1983) own exploration of his multidimensional model of empathy. All three sources have used correlational analyses to investigate relationships with three of the five factors of personality: neuroticism, extraversion and agreeableness.

According to the five factor model, neuroticism is broadly concerned with an individual's propensity to experience negative emotions such as sadness, fear and anger (Costa & McCrae, 1999). As such, studies examining links between empathy and neuroticism have tended to focus on the emotional components of empathy. This research has found that emotional empathy is positively related to trait anxiety.

For example, in a study of 250 adult participants using the Questionnaire Measure of Emotional Empathy (QMEE: Mehrabian & Epstein, 1972) emotional empathy was found to have moderate positive correlations with neuroticism ($r = .42$, $p<.05$; Rim, 1994). Similar findings were later reported by Eysenck and Eysenck (1978; $r = .35$, $p<.05$) in a sample of adults and by Eysenck & McGurk (1980; $r = .40$, $p<.05$) in a study of male adolescent delinquents.

In the IRI there are two subscales associated with emotional empathy: empathic concern and personal distress. Empathic concern relates to feelings of sympathy and concern for other people while personal distress refers to a tendency to experience anxiety and unease in response to others' distress. In Davis' own initial validation of the IRI (1983), several measures were used that relate to neuroticism, including the public self consciousness and social anxiety subscales of the Self Consciousness Scale (Fenigstein *et al.,* 1975) and the Fearfulness scale of the Emotionality, Activity, Sociability & Impulsivity (EASI) temperament measure (Buss & Plomin, 1975). For both males and females, the two emotional subscales of the IRI, personal distress and empathic concern, were found to be positively related to these measures. This was explained by suggesting that emotional empathy and trait anxiety both result from a higher level of emotional arousability (Eysenck, 1990). These results suggest that neuroticism will be positively correlated with the two emotional subscales of the IRI, personal distress (Hypothesis 1a) and empathic concern (Hypothesis 1b).

Agreeableness is the personality factor concerned with the nature of one's interpersonal interactions (Costa & McCrae, 1999). According to Graziano, Habashi, Sheese & Tobin (2007) descriptors for the domain of agreeableness most

closely resemble those associated with empathy, because they include words such as sympathetic, forgiving and helpful. Graziano and Eisenberg (1997) have also suggested that agreeableness is associated with prosocial behaviour, which is typically viewed as an outcome of empathy (Eisenberg & Miller, 1987). Despite this apparent link, evidence regarding relationships between the different components of empathy and the factor of agreeableness is limited to Davis' original validation of the IRI (Davis, 1983). The four subscales of the IRI were examined in relation to the F Scale of the Extended Personal Attributes Questionnaire (EPAQ: Spence, Helmreich & Holohan, 1979) which indicates sensitivity to others' feelings. Davis also used the Masculinity Scale of the EPAQ, which contains descriptors such as arrogant and boastful that are negatively associated with agreeableness. Both were found to be significantly related to the Perspective Taking and Empathic Concern subscales of the IRI. Based on these initial findings it was further hypothesised that perspective taking as measured by the IRI would be positively associated with agreeableness, such that individuals who rate themselves high on agreeableness will also rate themselves high on perspective taking (Hypothesis 2a). Similarly, empathic concern was predicted to correlate positively with agreeableness (Hypothesis 2b).

The third personality factor that has been found to relate to interpersonal interactions is extraversion (e.g. Costa & McCrae, 1992). As extraversion is concerned with the degree to which an individual seeks out social contact rather than the nature of specific interactions (Costa & McCrae, 1999), individuals who seek out social contact may also show a greater tendency to empathise with others.

Findings from research investigating the relationship between emotional empathy and extraversion have been mixed, however. For example, in a study using 250 participants, Rim (1994) found a small significant negative correlation between emotional empathy measured by the QMEE and extraversion measured using Eysenck's EPQ, while Klis (1997) used the same measures with a sample of teachers and found no significant correlation. However, the sample size of this study was considerably smaller at just 79 participants. In addition, Mehrabian and O'Reilly (1980) found a small significant positive correlation between emotional empathy and extraversion ($r = .25$, $p<.05$) based on a sample of 211 psychology undergraduates. Davis' validation of the IRI also used several scales relating to the domain of extraversion. These included shyness (Cheek and Buss, 1981), the Masculinity Scale of the EPAQ (Spence et al., 1979) which contains descriptors such as arrogant and boastful, and a scale of Extraversion composed of six items from the Self Monitoring scale (Briggs, Cheek and Buss, 1980). The emotional subscale of personal distress from the IRI was found to relate positively to shyness and negatively to masculinity and extraversion. Apart from this, no consistent findings relating to these scales and any of the other subscales of the IRI were found for both males and females. Although less extensively studied, the picture is similar for cognitive empathy and extraversion. Even with a small sample size of 79, Klis's study (1997) found a significant positive correlation with extraversion ($r = .24$, $p<.05$). However, Davis (1983) found no significant correlations between perspective taking and scales related to extraversion.

The relationships between empathy and extraversion are therefore unclear. In a recent study, De Young, Quilty and Peterson (2007) focused on 'aspects' of personality, which they defined as a level of analysis between the factor and facet

levels, arguing that extraversion could be meaningfully split into two such aspects: 'enthusiasm' and 'assertiveness'. While it is possible that previous mixed findings regarding emotional empathy and extraversion are due to sample size, existing studies have explored relationships between empathy and the five higher factors, rather than looking at aspect or even facet levels of personality. It is possible therefore that these mixed findings can be accounted for by the fact that that emotional empathy is related to certain facets of extraversion rather than the entire domain. Theoretically, certain facets of extraversion appear to be more closely related to the prosocial concepts of empathy, such as warmth and positive emotions. For the purposes of this study it was hypothesised that extraversion would be positively associated with perspective taking (hypothesis 3a) and empathic concern (hypothesis 3b) as these are the two components of empathy associated with social engagement. However this study extends previous research by exploring the relationships between the empathic dimensions identified by Davis and the more fine grained facets of the FFM of personality and addresses the construct validity of the IRI.

4.2. Construct validity

According to Cronbach and Meehl (1955), *"construct validity must be investigated whenever no criterion or universe of content is accepted as entirely adequate to define the quality to be measured"* (p.281). Chapter two presented the ongoing debates regarding definitions and models of empathy were presented, and as such further evidence of construct validity for the IRI would be useful. Evidence of construct validity is generally accumulated from multiple studies (Rust &

Golombok, 1999). The method of construct validation used most extensively in studies of the IRI is confirmatory factor analysis (e.g. Carey, 1988; Pulos, Ellison & Lennon, 2004), which has provided evidence to support a four factor model in general adult populations and healthcare workers (Carey, 1988; Pulos, Elison & Lennon, 2004; Yarnold et al., 1996). An alternative approach to establishing construct validity is to undertake a joint factor analysis of the measures to further test the multidimensional model of empathy in relation to the five factor model of personality (Kline, 2000).

4.3. Method

4.3.1 Participants and Procedure

A total of 105 volunteers took part in the study, 86 of whom were psychology undergraduates. The remaining 19 were an opportunity sample of employed adults. Mean age of the 105 participants was 22.83 years (S.D 8.41 years) while 75.7% were female. Two pencil and paper questionnaires were administered in person to participants for this part of the study. These were the 240 item NEO Personality Inventory – Revised (NEO PI-R: Cost & McCrae, 1992) and the 28 item IRI (Davis, 1983). No time limit was set.

4.3.2 Measures

Personality: NEO PI-R. The NEO PI-R (Cost & McCrae, 1992) is a measure of personality, based on the FFM previously described. According to the measure,

personality is made up of a pattern of preferences across the five factors. Within each factor, a person's traits are reflected in the fine grain 'facets'. Each of the five factors is made up of six facets, with eight items per facet. The study utilises a facet level measure of the FFM to address the mixed findings from previous research with respect to empathy and extraversion. The items within the questionnaire ask the person to consider statements which are general rather than situation specific, with the aim of measuring personality in a comprehensive manner so that it can be used for multiple purposes. For each of the 240 items, participants respond to a five-point Likert-type scale from "strongly disagree" through to "strongly agree". A brief description of the five factors is provided in Table 4.1, together with the facets associated with each factor. According to the manual, each factor has acceptable internal reliability, with αs ranging from .86 to .95. Facets have slightly lower reliability statistics (αs from .56 to .81) which are deemed acceptable for scales with only eight items (Costa & McCrae, 1992).

Empathy: The Interpersonal Reactivity Index. The Interpersonal Reactivity Index (IRI; Davis, 1983) has been described extensively in Chapter Three. the Perspective Taking subscale of the IRI is representative of an individual's tendency to adopt the psychological point of view of another with a sample item being "I sometimes try to understand my friends better by imagining how things look from their perspective". The Fantasy subscale is similar to this, although is based on imagining oneself in the role of characters in books, films or plays, with a sample item being "I really get involved with the feelings of the characters in a novel". The Empathic Concern subscale asks about the individual's own feelings of concern in response to another person. A negatively worded sample item is "Other peoples'

Table 4.1: Description of NEO PI-R five domains and facets

Factor	Description	Facets
Neuroticism	Tendency to experience negative affect e.g. fear, sadness, embarrassment, anger, guilt and disgust	Anxiety Angry hostility Depression Self consciousness Impulsiveness Vulnerability
Extraversion	The degree to which one directs energy to the external world	Warmth Gregariousness Assertiveness Activity Excitement-seeking Positive Emotions
Openness	Having an active imagination, preference for variety and intellectual curiosity	Fantasy Aesthetics Feelings Actions Ideas Values
Agreeableness	Concerned with interpersonal tendencies and how others find the experience of being with you	Trust Straightforwardness Altruism Compliance Modesty Tender-mindedness
Conscientiousness	Tendency for self control and organisation; associated with achievement of potential	Competence Order Dutifulness Achievement Striving Self-discipline Deliberation

misfortunes do not usually disturb me a great deal". The Personal Distress subscale is also emotional, but is more self-oriented, focusing on how much one feels distress in response to another. A sample item from this subscale is "I tend to lose control during emergencies". The four subscales are each composed of seven items, to which participants are asked to respond using a five-point Likert-type scale

('does not describe me well' to 'describes me very well'). All four sub-scales of the IRI have been shown to have satisfactory internal reliability (α = 0.71 to 0.77) and test – retest reliability (α = 0.62 to 0.71, Davis, 1983). A 0-4 scale is used for each item, so the minimum possible score for each subscale is zero, with a maximum of 28 for each subscale. The scores are not intended to be combined, as each represents a qualitatively different aspect of empathy, therefore no 'total' score is calculated. The full questionnaire is included in Appendix 1.

4.3.3 Analysis

The hypotheses were tested by calculating subscale scores for each subscale of the IRI and domains and facets of the NEO PI-R. Correlations were calculated using the domain scores of the NEO PI-R and the IRI subscales. A joint factor analysis was then conducted to examine similarities between Davis' four dimensions of empathy and the facets scores of personality measure. A joint factor analysis was deemed appropriate for this because it avoids the risk of type I errors that are associated with many correlational tests (Ferguson, 2001; Howell, 2002).

4.4. Results

Descriptive statistics for the NEO PI-R facets and the four IRI subscales are provided in Table 4.2. For this sample of participants, reliabilities were comparable to previously established reliabilities of the scales, with αs ranging from .50 to 82 for the NEO PI-R facet subscales and .69 to .80 for the IRI subscales. As Cronbach's α is sensitive to the number of items in the scale, these were deemed acceptable reliabilities for the numbers of items within each scale. For shorter

Table 4.2: Descriptive statistics for the NEO PI-R and Empathy (IRI) scales.

Scale		Mean	S.D	α
Neuroticism	Anxiety	18.44	5.40	.80
	Angry-Hostility	14.67	5.34	.79
	Depression	16.82	6.32	.84
	Self-Consciousness	17.27	5.12	.72
	Impulsivity	18.22	4.66	.66
	Vulnerability	13.60	5.09	.76
Extraversion	Warmth	23.01	4.01	.52
	Gregariousness	19.63	5.35	.77
	Assertiveness	15.19	5.46	.80
	Activity	16.77	3.64	.45
	Excitement-Seeking	18.96	4.87	.60
	Positive Emotions	20.87	5.24	.79
Openness	Openness to Fantasy	19.96	5.08	.75
	Openness to Aesthetics	20.61	5.87	.81
	Openness to Feelings	23.30	4.06	.71
	Openness to Actions	16.84	4.67	.71
	Openness to Ideas	21.00	5.08	.78
	Openness to Values	21.68	3.88	.61
Agreeableness	Trust	17.19	4.88	.77
	Straightforwardness	19.44	5.19	.76
	Altruism	23.46	3.48	.57
	Compliance	16.35	4.90	.70
	Modesty	19.45	4.73	.72
	Tender-mindedness	21.17	3.21	.50
Conscientiousness	Competence	18.62	4.04	.64
	Order	15.92	5.21	.74
	Dutifulness	20.16	4.17	.60
	Achievement Striving	16.70	4.80	.75
	Self-Discipline	16.11	5.72	.81
	Deliberation	15.75	5.42	.82
Empathy [IRI]	Fantasy	17.40	5.37	.80
	Perspective Taking	21.30	3.76	.69
	Empathic Concern	18.28	4.04	.70
	Personal Distress	12.84	4.76	.79

Note: N=105 for all subscales. NEO PI-R facet scales all have 8 items each with a minimum score of 5 and a maximum of 25, IRI scales have 7 items each with a minimum score of 0 and a maximum of 28.

scales, mean inter-item correlations (mics) should also be inspected as a measure of reliability (Briggs & Cheek, 1986). For all scales, mics fell within the range .18 to .45. These were within the acceptable range (Ferguson, 2001).

4.4.1 Correlations

To test hypotheses 1-3, first the correlations between the four empathy subscales and five personality factors were calculated (see Table 4.3). A multi-stage adjusted level of significance was adopted to control the family-wise error rate (Howell, 2002; Larzelere & Mulaik, 1977).

Hypothesis one: Neuroticism and empathy. Support was not found for hypothesis 1b, which predicted that a significant positive relationship would be found between empathic concern, and neuroticism ($r = .07$, ns). However support was found for hypothesis 1a as there was a significant large positive correlation between personal distress and neuroticism ($r = .47$, $p<.01$). Furthermore, perspective taking was found to be significantly negatively related to neuroticism ($r = -.33$, $p<.01$).

Hypothesis two: Agreeableness and empathy. Hypotheses 2a and 2b suggested that perspective taking and empathic concern respectively would show significant positive relationships with agreeableness. This was found to be the case ($r = .38$, $p<.01$ and $r = .29$, $p<.05$ respectively).

Table 4.3: Correlations between NEO PI-R factors and Empathy (IRI) scales.

	Empathy			
NEO PI-R	Fantasy	Perspective Taking	Empathic Concern	Personal Distress
Neuroticism (N)	.13	-.33**	.07	.47**
Extraversion (E)	.26	.35**	.30*	-.25
Openness (O)	.54**	.24	.25	-.30*
Agreeableness (A)	.10	.38**	.29*	.12
Conscientiousness (C)	-.10	.14	-.04	-.23

*Note: Larzalere and Mulaik (1977) adjusted *significant p<.05, ** p<.01.*

Hypothesis three: Extraversion and empathy. Support was found for hypotheses 3a and 3b, as significant moderate positive relationships were found between extraversion and both perspective taking and empathic concern ($r = .35$, $p<.01$ and $r = .30$, $p<.05$ respectively).

Openness and empathy. Finally, although no relationships were hypothesised between the IRI and openness to experience, this domain score showed a significant, large positive correlation with the IRI Fantasy subscale ($r = .54$, $p<.01$). In addition, openness was significantly negatively correlated with personal distress ($r = -.30$, $p<.05$).

4.4.2 Joint factor analysis

Correlations were only calculated between the four IRI subscales and the five domain scores for the NEO PI-R. To produce a correlation matrix at a facet level

would involve a very large number of tests and applying a correction for this would result in very few interpretable results. However, Ferguson (2001) notes that joint factor analysis (i.e. including subscale scores from the IRI and facet scores from the NEO P-IR) is an appropriate method for investigating these types of relationships: the simultaneous analysis allows for understanding of the IRI subscales within the framework of the five factor model. This approach was followed to undertake a facet level analysis of relationships between empathy and personality. Several pre-analysis checks were conducted before embarking on the factor analysis.

Pre-analysis checks*:* To ensure that the IRI subscale scores and NEO PI-R facet scores were suitable for an exploratory factor analysis, the data were checked following Ferguson and Cox (1993). These checks include: examining that a stable factor structure can be produced; that the variables are appropriately scaled and distributed, and that there is systematic covariation within the data. In order to determine the sample size required to produce a stable factor structure, statisticians suggest a range of heuristics. Guadagnoli and Velicer (1988) reviewed these and suggested that absolute sample size was the most important, as well as the component saturation. The absolute sample size here of 105 participants is more than the minimum of 100 suggested by Kline (1994). If the component saturation (mean factor loading for a factor) is greater than 0.6, then according to Guadagnoli and Velicer, increasing sample size will be of little value. This can only be evaluated post-analysis and so this point will be returned to following the factor analysis. Finally, skew and kurtosis of the variables were then explored. Muthen and Kaplan (1985) identified three parameters as important when checking skew and kurtosis. These were: the absolute magnitude of skew; the number of variables

affected by skew, and the proportion of the initial correlations between variables less than 0.2. None of the variables had skew of a magnitude of 2.0 (the modesty subscale of the NEO PI-R demonstrated the greatest skew of -1.17 and was the only variable to have a kurtosis value of more than 2.0: actual value 2.66).

Field (2005) also recommends calculating *z* scores for skew and kurtosis, with a value of more than 1.96 marking significant skew or kurtosis. Using this method, only four of the 34 variables were significantly skewed. These were from the IRI, fantasy (z = -2.02) and empathic concern (z = -2.07) and from the NEO, excitement seeking (z = 3.09) and modesty (z = 4.98). Only one variable showed significant kurtosis (modesty, z = 5.70). Four of the 34 variables were therefore affected by skew and/or kurtosis. According to Ferguson and Cox (1993), the cut off point for acceptability is 25%. As only four out of 34 (12%) of the variables here were affected, this should not adversely affect the solution. In addition, upon inspection of the correlation matrix, 340 of a possible 561 (60.61%) correlations between all 34 variables were lower than 0.2. If the majority (more than 60%) of variables are correlated less than 0.2, all variables can remain in the analysis regardless of skew or kurtosis (Ferguson & Cox, 1993; Muthen & Kaplan, 1985). Therefore despite there being some skew and kurtosis in four of the 34 variables, all were kept in this analysis.

The final statistics recommended for inspection by Ferguson and Cox (1993) before conducting exploratory factor analysis are those of the Kaiser-Meyer-Olkin [KMO] test of sampling adequacy and Bartlett's test of sphericity. The Bartlett's test of sphericity should be significant to indicate that relationships are present within the data. A KMO statistic of at least 0.5 is required to indicate that the relationships

between the variables can be accounted for by a reduced number of factors (Dzubian & Shirkey, 1974). For this data, the KMO was found to be 0.73 and Bartlett's test of sphericity was significant (2176.38, $p<.0001$). The data were therefore deemed suitable for exploratory factor analysis.

Factor extraction. The next stage is to choose a method for extracting factors (Ferguson & Cox, 1993). The most widely used method is the Kaiser 1 (K1) method, where all factors with eigenvalues greater than one are retained. A principal components analysis using this method found seven factors with eigenvalues greater than one. However, in a discussion of the various methods of factor extraction, Zwick and Velicer (1986) concluded that this method leads to the retention of too many factors. Instead the method of parallel analysis (Horn, 1965) is recommended. Parallel analysis involves comparison of a randomly produced set of eigenvalues, based on the same sample size, with those produced in the observed data. A number of such randomly generated values are run and the average eigenvalues are calculated. These average values and the observed values are then plotted against the number of variables. The number of factors to retain is identified immediately prior to the point where the two lines cross (Zwick & Velicer, 1986). This method has been shown to be the most accurate method of factor extraction and was therefore used here. Using syntax from O'Connor (2000), four analyses were conducted at the 50^{th} and 95^{th} percentiles using 40 and 100 sets of randomly generated data. The parallel analysis indicated that five factors should be retained. Five factors were extracted using principal components analysis (Tabachnick & Fidell, 2007) with varimax rotation.

Table 4.4. Factor loadings for joint factor analysis of IRI subscales and NEO PI-R facets

Factor		Component				
		1	**2**	**3**	**4**	**5**
1	Anxiety (N)	**0.83**	-0.01	-0.01	0.07	-0.01
	Depression (N)	**0.80**	0.06	-0.21	-0.27	0.04
	Vulnerability (N)	**0.75**	**0.37**	-0.10	-0.27	-0.11
	Angry-Hostility (N)	**0.72**	**-0.46**	-0.17	0.00	-0.04
	Self-Consciousness (N)	**0.70**	0.17	-0.27	-0.10	0.06
	Personal Distress	**0.54**	**0.31**	0.05	-0.20	-0.29
	Impulsivity (N)	**0.52**	**-0.41**	0.05	**-0.32**	0.17
	Openness to Actions (O)	**-0.42**	-0.19	0.18	-0.22	**0.40**
2	Compliance (A)	**-0.31**	**0.77**	0.13	-0.06	0.06
	Straightforwardness (A)	0.00	**0.73**	0.21	0.02	-0.05
	Assertiveness (E)	-0.29	**-0.69**	0.22	0.09	0.14
	Modesty (A)	0.28	**0.59**	0.22	0.07	-0.02
	Activity (E)	-0.05	**-0.49**	0.22	0.07	0.14
	Tender-mindedness (A)	0.13	**0.47**	**0.34**	-0.04	0.18
3	Warmth (E)	**-0.31**	0.06	**0.79**	-0.02	0.19
	Positive Emotions (E)	**-0.36**	-0.01	**0.73**	0.01	0.17
	Empathic Concern	0.24	0.06	**0.67**	0.04	0.17
	Altruism (A)	-0.01	0.37	**0.66**	0.17	0.13
	Gregariousness (E)	-0.23	-0.17	**0.64**	**-0.33**	-0.12
	Perspective Taking	-0.29	0.15	**0.53**	0.11	0.11
	Trust (A)	**-0.46**	**0.43**	**0.47**	0.05	0.07
4	Self-Discipline (C)	-0.24	-0.23	0.20	**0.78**	-0.12
	Dutifulness (C)	-0.07	**0.30**	0.07	**0.74**	0.04
	Achievement Striving (C)	-0.13	**-0.34**	0.03	**0.73**	0.04
	Competence (C)	**-0.36**	-0.24	0.06	**0.67**	0.10
	Order (C)	0.20	-0.08	-0.03	**0.67**	-0.17
	Deliberation (C)	-0.18	0.27	-0.05	**0.65**	-0.10
	Excitement-Seeking (E)	-0.08	**-0.38**	**0.38**	**-0.52**	0.11
5	Openness to Ideas (O)	-0.15	-0.29	0.07	0.11	**0.73**
	Openness to Aesthetics (O)	-0.15	-0.10	0.20	0.00	**0.67**
	Fantasy	0.19	0.02	0.22	-0.07	**0.66**
	Openness to Fantasy (O)	0.06	0.05	0.11	-0.28	**0.65**
	Openness to Feelings (O)	**0.32**	-0.04	**0.45**	0.14	**0.60**
	Openness to Values (O)	-0.18	0.20	-0.14	-0.06	**0.57**

Note: IRI subscales and factor loadings of 0.30 and greater are in boldface.

Factor extraction using an oblique rotation was also performed, with five factors being extracted. Factors two and three found to have a correlation coefficient of 0.24. Other than this, no factors showed substantial correlations and the pattern matrix showed a highly similar solution to that of the varimax rotation. For simplicity, the varimax rotated solution is reported.

The five factors extracted (eigenvalues = 6.72, 4.51, 4.28, 2.89, 1.94) accounted for 59.81% of the variance. Rotated factor loadings are presented in Table 4.4. The acceptable magnitude of a factor loading for a variable to define a factor varies, but the most commonly accepted level is 0.30 (e.g., Field, 2005). As mentioned previously, factor saturation is defined as the mean factor loading for a factor: these ranged from .62 to .73 for the five factors extracted in this analysis. As all were found to be greater than 0.6, then according to Guadagnoli and Velicer (1988), increasing sample size would be of little value. Therefore although the sample size was relatively small (105), this was deemed to be sufficient for this analysis.

Interpretation of factors. Factor one contained all of the neuroticism facets of the NEO PI-R. In addition, one of the openness facets (to actions) had a negative loading on this factor but also cross-loaded positively on to Factor five with a similar magnitude. This factor also included the Personal Distress subscale of the IRI, with a factor loading of .54, suggesting that the tendency to become distressed by another's experiences is indeed associated with a greater tendency to experience negative emotions in general.

Factors two and three both contained a mix of facets from the extraversion and agreeableness domains. Two subscales of the IRI, empathic concern and perspective taking, both loaded positively on to Factor three with factor loadings of .67 and .53 respectively. Factor Three also contains the Warmth, Positive Emotions, Altruism, Gregariousness and Trust facets of the NEO PI-R. The Openness to Feelings facet of openness also cross-loaded positively with this factor. This suggests that Factor three is composed of several facets of personality which indicate a compassionate disposition.

Factor Four contained all of the conscientiousness facets of the NEO PI-R along with one extraversion facet: excitement seeking negatively loaded on to this factor. None of the IRI subscales loaded significantly on to this factor. Finally, Factor five was made up of the remaining five openness facets. The Fantasy subscale of the IRI loaded positively on to this openness factor (.66).

4.5. Discussion

This study contributes in several ways to the theoretical understanding of individual differences in empathy as measured by the IRI. Hypothesis one made predictions regarding neuroticism and empathy. Support was not found for hypothesis 1b, which predicted that a significant positive relationship would be found between empathic concern, and neuroticism. However support was found for hypothesis 1a as there was a significant large positive correlation between personal distress and neuroticism. Hypothesis two predicted relationships between agreeableness and empathy. Hypotheses 2a and 2b were both supported, with perspective taking and empathic concern respectively showing significant positive relationships with

agreeableness. Hypothesis three was also supported, with significant moderate positive relationships were found between extraversion and both perspective taking and empathic concern. Finally, although no relationships were hypothesised between the IRI and openness to experience, this domain was found to be positively correlated with fantasy and negatively correlated with personal distress. The joint factor analysis provided a deeper, facet level understanding of the results for perspective taking and empathic concern. Clear links were established between these subscales and a single factor comprising a range of facets of Extraversion and Agreeableness. These were warmth, positive emotions and gregariousness from extraversion and altruism and trust from Agreeableness. Tender-mindedness also cross loaded on to this factor. Personal distress was found to load positively on to the Neuroticism factor as expected, while fantasy loaded on to openness to experience.

This study aimed to investigate the antecedents of empathy in terms of individual differences and more specifically the five factor model of personality. In order to do this, the relationships between each subscale of the IRI and the facets of the NEO PI-R have been investigated. Similar patterns of results were found for two of the subscales, Perspective Taking and Empathic Concern in terms of relationships with the five factor model. These two subscales are therefore discussed together, followed by findings for Personal Distress and then the Fantasy subscale which resulted in substantially different patterns of relationships.

4.5.1 Perspective Taking and Empathic Concern

The Perspective Taking and Empathic Concern subscales were both found to correlate with the factors of Agreeableness and Extraversion. Conducting a joint factor analysis at the facet level has provided a greater understanding of these relationships. It should be noted that it was not entirely unexpected to find that the facets from extraversion and agreeableness appeared to form two new composite factors in this analysis (Factors two and three). Other analyses have repeatedly found these two factors to be related in their impact upon relationships and social functioning (e.g., Noftle & Shaver, 2006; White, Hendrick & Hendrick, 2004). Further evidence from Trapnell and Wiggins (1990) and McCrae and Costa (1989) explains that these two factors comprise interpersonal aspects of personality and that a circumplex approach combining the two factors complements the five factor model. The two composite factors which emerged are in line with Mehrabian's Pleasure-Arousal-Dominance (PAD) Temperament Model of Personality (1996). The facets of Factor two (Compliance, Straightforwardness, Assertiveness (-), Modesty, Activity (-), and Tender-mindedness) all relate to Mehrabian's Submissive-Dominant dimension, with negatively loading facets representing dominance. The two empathy subscales did not load significantly on to this factor.

Factor Three comprised the facets of Warmth, Positive Emotions, Altruism, Gregariousness and Trust, and tender-mindedness also cross-loaded positively with this factor. This factor is therefore representative of Mehrabian's Pleasure dimension. This was the factor onto which the subscales of Perspective Taking and Empathic Concern were significantly positively loaded. In a recent study, De

Young, Quilty and Peterson (2007) identified ‘aspects’ of personality which they defined as a level of analysis between the factor and facet levels. They found that both the extraversion and agreeableness factors could be meaningfully split into two such aspects. The extraversion aspects were named ‘enthusiasm’ and ‘assertiveness’ while the agreeableness aspects were named ‘compassion’ and ‘politeness’. In line with their analysis, the two subscales of empathy were related to the aspects of enthusiasm and compassion from De Young et al. (2007). These findings suggest that an empathic person with a tendency for perspective taking and empathic concern also reports being warm, caring, outgoing, compassionate and trusting.

Perspective Taking and Empathic Concern showed the same patterns of relationships with the other trait-based measure. Those relationships were in line with hypotheses of expected descriptions for empathic individuals, providing support for the construct validity of the two subscales as part of a measure of empathy. Furthermore, the findings also provide evidence to include both cognitive and affective processes in a definition and measure of empathy (Davis, 1996; Vreeke & van der Mark, 2003). Researchers arguing for one or the other may well be making artificial distinctions (Preston & de Waal, 2002). However, the subscale of empathic concern is more related to congruent affect towards another person. Shared affect, the process which is the usual topic of focus within the empathy literature, is not captured by this subscale. The results of the analysis involving the Personal Distress subscale are therefore relevant at this point. This subscale showed very different relationships with the traits measured in this study, which are now discussed.

4.5.2 Personal Distress

The Personal Distress subscale of the IRI showed a significant and moderate positive correlation with the Neuroticism scale of the NEO PI-R. In addition, a moderate significant negative correlation was found with Openness. Two moderate negative correlations with Extraversion and Conscientiousness did not reach significance once a correction had been applied to reduce the risk of Type I error. The joint factor analysis provided greater understanding of these relationships, as Personal Distress was found to load positively on to the factor composed of all the facets of Neuroticism. This factor also contained one facet of Openness, namely Openness to Actions. The findings are in line with previous research that suggests that emotional arousability, positively associated with the neuroticism factor, underpins the emotional empathic response (Jabbi, Swart & Keysers, 2007). The pattern of relationships found in this study suggest that people who become distressed when others are in distress report greater experience of negative emotions in general. In light of this, it will be interesting to investigate the criterion-related validity of the IRI within the healthcare context. Before considering this further, the results of the final section of the analysis require discussion.

4.5.3 Fantasy

The final subscale of the IRI, Fantasy, showed a different pattern of relationships to any of the other subscales. In terms of its relationship to the five factor model, Fantasy showed a large positive correlation with Openness as well as loading

positively on to the fifth factor of the joint factor analysis, which all of the Openness facets also loaded positively on to. This suggests that those people who score highly on items in the Fantasy subscale concerning imagination and fantasy of thought are more open to new experiences in general. There is little previous research to explain this finding as the relationship between empathy and openness had not previously been explored. The Fantasy subscale was originally included in the IRI as it supposedly related to increased emotionality. Physiological evidence of a link between fantasy and greater emotional responding to the emotions of others was provided by Stotland et al., (1978), but in this study there was no significant correlation between this subscale and Neuroticism. The factor loading of the Fantasy subscale on to Factor one (Neuroticism) was positive, but only of a magnitude of .19. This suggests that for this sample of participants, self reported negative emotionality did not clearly relate to Fantasy. However, the Openness to Experience factor did positively correlate with Fantasy (r = .54, p<.01), perspective taking and empathic concern (although non significantly with Pearson's r being .24 and .25 respectively). It may be that being open to new ideas, feelings and more imaginative generally helps one to imagine the experience of another person, thus facilitating greater depth of perspective taking and empathic concern. In particular, in emotional labour roles such as healthcare practitioners, this openness may be particularly relevant when encountering new people with whom one has not yet developed relationships. The fantasy subscale, previously somewhat ignored, may therefore be useful in this context. However, there are those who have used the IRI without the Fantasy subscale, arguing for its lack of relevance to the topic of research (e.g., Christopher, Owens & Stecker, 1993). It will therefore be important to investigate the relationships between Fantasy and behaviour.

4.5.4 Limitations and next steps

The study makes a useful contribution in that it constitutes the first known comparison of the IRI with a broad five factor measure of personality, however, whilst the factor saturations suggested that sample size would not have altered the findings, the sample was relatively small size for this type of research (Field, 2005). More importantly, given that the aim of this thesis is to investigate processes of empathy in the healthcare setting, there is a need to extend findings to participants from the healthcare professions and demonstrate the utility of the IRI in this context. This is the focus of the next study.

Chapter 5 – Emotional intelligence and empathy

Significant advances have been made in the assessment of individual differences since the construction of the IRI. The last chapter focused on empathy within the framework of the five factor model of personality (Digman, 1990). Also of particular note is the emergence of the concept of Emotional Intelligence [EI], which has received considerable attention from academics and practitioners in organisational psychology (e.g., Goleman, 1995; Petrides & Furnham, 2000; Salovey & Mayer, 1990). Empathy and EI share common theoretical and research roots in social intelligence (Chlopan et al., 1985; Landy, 2005), but despite conceptual similarities, no structured comparison of a multidimensional measure of empathy and EI has been undertaken in an adult population. Indeed, researchers have tended to assume that empathy is a component of EI (e.g., Goleman, 1995) rather than investigate relationships between the two empirically, and the terms empathy and EI (and their associated measures) have been referred to interchangeably (e.g., Geher, Warner & Brown, 2001).

Consequently the first aim of this study is to undertake an empirical comparison of self-assessed empathy and EI, in order to understand how Davis' conceptualisation of a multidimensional model of empathy fits with more recent research concerned with the concept of EI. In addition, as the previous study used a sample of participants from the general population and this thesis aims to further understanding of empathy in the healthcare setting, a second aim of the study is to investigate self-assessed empathy using the IRI among doctors currently employed in the NHS. Before considering the relationships between empathy and EI, the concept of EI itself is introduced.

5.1 Emotional Intelligence

Emotional intelligence [EI] has received considerable attention in both popular and academic literatures in recent years (e.g., Petrides & Furnham, 2000). Although many different definitions have been proposed, a review by Ciarrochi, Chan and Caputi (2000) identified four aspects that are included by most definitions of EI: emotion perception, emotion regulation, emotion understanding and emotion utilisation. These areas relate to emotions in both the self and others, for example regulation of one's own emotions in coping with stress and understanding of others emotions in building social relationships (e.g. Bar-On,1997; Schutte et al., 2001). The four aspects are similar across the definitions of many researchers such as Davies, Stankov and Roberts (1998), Mayer, Caruso and Salovey (2000), and Law, Wong and Song (2004). However, as in the empathy literature, debates continue over definitions of EI. In fact, Pérez, Petrides and Furnham (2005) have argued that whilst most studies of EI are carried out in a *"theoretical vacuum"* (p.182), this does not appear to have hampered the development of measures of EI that are now sold widely for commercial use (Schulze & Roberts, 2005).

A major dispute among EI researchers at present is whether EI should be conceptualised as a trait, an ability, or a mix of the two (Pérez, Petrides & Furnham, 2005). Salovey and Mayer (1990) view EI as a cognitive ability, referring to it as *"the subset of intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions"* (p.189). In line with this, a 'test' of EI has been developed, the Mayer, Salovey & Caruso Emotional Intelligence

Test (MSCEIT; Mayer Salovey & Caruso, 2002). However, in a review of evidence pertaining to trait or ability EI, Pérez, Petrides and Furnham (2005) argue that such tests of maximal performance are inherently problematical when investigating EI due to the inability of researchers to objectively score responses. What constitutes a correct response has either been determined through consensus or expert scoring, neither of which can be deemed to be perfectly correct. Due to such difficulties, greater progress has been made in developing measures which conceptualise EI as a trait.

Petrides and Furnham (2001) emphasise the importance of the distinction between tests of maximal performance to assess abilities and self-report measures of typical performance for traits. Petrides, Perez-Gonzalez & Furnham, (2007) argue that EI is better viewed as a construct which "*encompasses self-perceptions and dispositions, which accord with the subjective nature of emotions*" (p, 274). One of the most commonly used self-report measures, which has received support from empirical studies, is the Bar-On Emotional Quotient Inventory (EQ-i: Bar-On, 1997). Bar-On defines EI as *"an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures"* (p.14). Although it has been claimed that the Bar-On EQ-i is a 'mixed' model of EI, assessing both abilities and preferences (e.g. Bar-On, 1997; Brackett & Mayer, 2003), the self-report nature of the assessment aligns itself more closely with a trait approach. Indeed, construct validation studies have been successful in finding relationships between this measure and the five factor model of personality, indicating that it can be viewed as a trait-based measure (e.g O'Connor & Little, 2003; Petrides & Furnham, 2001). The Bar-On EQ-i comprises fifteen different subscales, scores from which are then combined into five composite factors:

intrapersonal EQ; interpersonal EQ; adaptability; stress management, and general mood. The exact mapping of the fifteen subscales to the five composite factors is provided in Table 5.1.

Regarding construct validity of the EQ-i, the factor structure of the EQ-i has been questioned. For example, the Bar-On EQ-i manual does not find support for the five factors, instead reporting thirteen. However the method used for extracting factors was the K1 method retaining all factors with eigenvalues greater than one. This method has been found to lead to the retention of too many factors (Zwick & Velicer, 1986). Using confirmatory factor analysis, Petrides and Furnham (2001) found a single factor to be a better fit to data for a sample of 227 working adults. Despite this, other evidence regarding the reliability and criterion-related validity of the measure is positive (e.g. Dawda & Hart, 2000; O'Connor & Little, 2003). It is therefore the measure used within this study. Having introduced the concept of EI, evidence regarding the relationship between EI and empathy is now considered.

5.2 Empathy and Emotional Intelligence

Although empathy and EI share common roots in social intelligence (Chlopan, 1985; Landy, 2005), the two terms are often referred to interchangeably. Salovey and Mayer argue that empathy is a component of EI (1990; Mayer & Salovey, 1997). Empathy is also named as a subscale of the EQ-i (Bar-On, 1997) and the Trait Emotional Intelligence Questionnaire (TEIQue: Petrides, Perez-Gonzalez & Furnham, 2007) Making assumptions about relationships between the empathy

Table 5.1: Description of Bar-On EQ-i five factors and fifteen subscales

Composite factor	Subscales	Description
Intrapersonal EQ	Self Regard Emotional Self-Awareness Assertiveness Independence Self Actualization	High scorers are in touch with their feelings, feel good about themselves, feel positive about their lives, are independent strong and confident
Interpersonal EQ	Empathy Social Responsibility Interpersonal Relationships	High scorers are responsible and dependable individuals with good social skills, understanding and interacting well with others
Adaptability EQ	Reality Testing Flexibility Problem Solving	High scorers are flexible, realistic, effective in understanding problematic situations, competent at arriving at adequate solutions, find good ways of dealing with everyday difficulties
Stress Management EQ	Stress Tolerance Impulse Control	High scorers are able to withstand stress without falling apart or losing control, calm, rarely impulsive and work well under pressure
General Mood	Happiness Optimism	High scorers are cheerful positive and hopeful individuals who know how to enjoy life

and EI can result in misleading interpretations of research findings. For example, Geher, Warner and Brown (2001) investigated whether performance measures of EI were more effective than trait based measures at predicting participant performance in a video-based emotion detection task. The trait based 'EI' measures they used were in fact empathy measures – the QMEE and IRI, not EI measures – a fact that was not acknowledged. The ability based measure of EI and not the trait measures (of empathy) were found to predict performance on the video-based task, and the authors interpret this finding as evidence that EI is better conceptualised as an ability than a trait. As discussed in chapter three the QMEE or the IRI do not assess emotion detection *per se*, but encompass a broader assessment of the individual's preferred response once emotions have been detected. This example illustrates the need to be theoretically and methodologically clear before interpreting findings. To further clarify these relationships, a comparison of is needed of self-assessed empathy and emotional intelligence. Comparing the IRI with a trait-based measure of EI could also provide useful evidence of construct validity of the different IRI subscales. The two concepts show overlap in definitions and measures and should therefore be related. There are a small number of studies that have conducted correlational analyses between measures of empathy as measured by the IRI and EI and shown this to be the case.

Perspective Taking and EI. The empathy subscale of the TEIQue (Petrides, Perez-Gonzalez & Furnham, 2007) contains items focusing on perspective taking, implying that this is the key dimension of empathy relating to EI. Charbonneau and Nicol (2002) investigated EI in a sample of 191 adolescents

with a mean age of 14 years. Perspective taking was found to have a moderate positive correlation with the Trait measure of emotional intelligence (TMEI: Schutte et al., 1998). Schutte et al., (2001) also replicated this finding with two samples of adults using the same measures. This was true for both a sample of 24 students ($r = .35$, $p<.05$) and 37 teaching interns ($r = .59$, $p<.001$). However, the teaching interns were not given other subscales of the IRI and the sample size is small, therefore generalisations from the findings of these studies are not possible. Stratton, Elam, Murphy-Spencer and Quinlivan (2005) used the Trait Meta Mood Scale of EI (TMMS: Salovey et al., 1995) with 165 medical students. The TMMS scale is comprised of three subscales: attention to feelings (AF); clarity of feelings (CF), and mood repair (MR). Perspective taking was found to be positively related to all three subscales (AF $r = .47$; CF $r = .28$; MR $r = .56$, all $p<.05$). Therefore hypothesis 1 states that perspective taking will be positively related to a measure of EI.

Empathic concern and EI. Barchard (2003) attempted to assess the predictive power of EI to explain academic success, asking students to complete 31 measures of EI. One of the measures chosen was the empathic concern subscale of the IRI. All of the measures were used in a regression as separate predictors of the criterion; no assessment was made of the relationships between empathic concern and the other EI measures. Rather, it was assumed that empathic concern represents EI. In their study of medical students, Stratton et al. (2005) found positive relationships between the three TMMS subscales and empathic concern (AF $r = .71$; CF $r = .30$; MR $r = .49$, all $p<.05$). Charbonneau and Nicol (2002) also found moderate positive correlations between empathic concern and EI for a

sample of adolescents (TMEI: Schutte et al., 1998). Therefore hypothesis 2 states that empathic concern will be positively related to a measure of EI.

Fantasy and EI. The relationship between fantasy and EI is perhaps less clear on first inspection. Indeed, in their investigation of medical students' empathy, Stratton et al. (2005) did not administer this subscale of the IRI to the students, although no reason was given for this. Charbonneau and Nicol (2002) did find moderate positive correlations between fantasy and EI with the sample of 191 adolescents. (TMEI: Schutte et al., 1998). Therefore hypothesis three states that fantasy will be positively related to a measure of EI.

Personal distress and EI. One possible difference between EI and multidimensional empathy is apparent. EI is defined as necessary for effective social functioning, and trait-based measures such as the EQ-i have been associated with lower neuroticism and greater well-being (Bar-On, 1997; Petrides & Furnham, 2001). Evidence has been presented in the previous chapter that emotional empathy, in particular personal distress, is associated with higher neuroticism. Indeed, in their study of medical students Stratton et al. (2005) reported significant negative correlations between personal distress and the three subcsales of the TMMS measure of EI. (AF r = -.23; CF r = -.47; MR r = -.36, all $p<.05$). Hypothesis four is therefore that personal distress will be negatively related to a measure of EI.

By testing relationships between the IRI and EQ-i measure of emotional intelligence, this study will aim to provide further construct validity evidence for

the EQ-i. As in the previous chapter, one approach to establishing construct validity is to undertake a joint factor analysis of the measures to understand the multidimensional model of empathy in relation to the construct of emotional intelligence. As the few other studies reported in this section have only used correlational analyses, this study will aim expand understanding of the relationships between the two constructs.

5.3 Method

5.3.1 Participants

Data were collected from two sources for the study. Two hundred and fifty six applicants applying for GP specialty training in a UK deanery were invited to attend assessment centres conducted over a one week period. On arrival at the assessment centre, all applicants were invited to participate in the study on a voluntary basis. Information sheets were disseminated to briefly explain the purpose of the research study and applicants were assured that any information from the psychometric questionnaires used for the research would not be made available to those making selection decisions and as such the research did not form part of the selection process. Consent forms were signed by all participants to indicate their understanding and agreement to take part. (See Appendices 2 and 3 for the information sheet and consent form). Out of 256 applicants attending the assessment centres, 192 doctors agreed to take part in the study and completed the measures detailed below. Data were also collected from 105 students, to increase the sample size to an adequate number. The larger sample size was required as a decision was taken to conduct an item level factor analysis

of the emotional intelligence measure. The factor structure of the Bar-On EQ-i has been a subject of debate (e.g. Petrides & Furnham, 2001) and currently there is no clear agreement, therefore a factor structure for this sample was established. Due to the high number of items (133), a large sample size was required. The total sample for this study therefore comprised 297 participants. 59.1% of the sample was female, with a mean age of 22.83 years (S.D 8.41 years).

5.3.2 Procedure and Measures

Participants were administered two pencil and paper questionnaires for this part of the study. These were the 133 item Bar-On Emotional Quotient Inventory (EQ-i: Bar-On, 1997) and the 28 item IRI (Davis, 1983). No time limit was set.

Empathy: The Interpersonal Reactivity Index. The Interpersonal Reactivity Index (IRI; Davis, 1983) has been described extensively in Chapter Three. the Perspective Taking subscale of the IRI is representative of an individual's tendency to adopt the psychological point of view of another with a sample item being "I sometimes try to understand my friends better by imagining how things look from their perspective". The Fantasy subscale is similar to this, although is based on imagining oneself in the role of characters in books, films or plays, with a sample item being "I really get involved with the feelings of the characters in a novel". The Empathic Concern subscale asks about the individual's own feelings of concern in response to another person. A negatively worded sample item is "Other peoples' misfortunes do not usually disturb me a great deal". The Personal Distress subscale is also emotional, but is more self-oriented, focusing

on how much one feels distress in response to another. A sample item from this subscale is "I tend to lose control during emergencies". The four subscales are each composed of seven items, to which participants are asked to respond using a five-point Likert-type scale ('does not describe me well' to 'describes me very well'). All four sub-scales of the IRI have been shown to have satisfactory internal reliability (α = 0.71 to 0.77) and test – retest reliability (α = 0.62 to 0.71, Davis, 1983). A 0-4 scale is used for each item, so the minimum possible score for each subscale is zero, with a maximum of 28 for each subscale. The scores are not intended to be combined, as each represents a qualitatively different aspect of empathy, therefore no 'total' score is calculated. The full questionnaire is included in Appendix 1.

Emotional Intelligence: the EQ-i (Bar-On, 1997). The Bar-On EQ-i (1997) is currently one of the most widely used measures of emotional intelligence available, in both academic research and practice. It measures an *"array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures"* (Bar-On, 1997, p. 14). It is a self-report measure which assesses individuals on five composite factors: (a) intrapersonal EQ, (b) interpersonal EQ, (c) adaptability (d) stress management and (e) general mood. Each factor is comprised of several subscales. Empathy is named as one of three subscales of the interpersonal EQ factor. Respondents are asked to rate 133 items using a five-point likert scale (1 = 'Very seldom or not true of me' to 5 = 'Very often true or true of me'). Only 117 of the 133 items relate to the five composite factors, the remaining 16 items acting as 'validity indicators'. Reliability coefficients for the five subscales range

from α = 0.69 to 0.86 (Bar-On, 1997). Independent studies have also provided support for the validity and reliability of the measure (e.g. Dawda & Hart, 2000).

EQ-i item level factor analysis. Although the manual for the EQ-i provides information regarding the five composite factors, the decision was taken here to undertake an exploratory factor analysis of the EQ-i. Two reasons are given for this decision. First, 12 of the 117 items are used to calculate scores for more than one of the subscales. This is not uncommon within psychology (e.g., the Occupational Personality Questionnaire: Bartram, Brown, Fleck, Inceoglu & Ward, 2006) but suggests that a more parsimonious model might be in order. Secondly, the factor structure of the EQ-i is a subject of debate. For example, the manual for the measure produces a 13 factor solution rather than five factors (Bar-On, 1997), while Petrides and Furnham (2001) found a unifactorial solution to be a better fit to the data. Therefore an item level factor analysis of the EQ-i was conducted to determine the factors to use in the joint factor analysis with the IRI. This process is described before reporting the main analysis to test the hypotheses.

As new scales were to be calculated, a reliability analysis was also conducted. Before conducting any analysis on the data from the EQ-i, 16 of the 133 items were removed. These items are known as 'validity indicators', designed to detect when respondents are giving overly positive or negative impressions of themselves. While they may be a result of a lack of self awareness or issues with self esteem, which may be related to one's emotional intelligence, these scales do

not form part of the emotional intelligence score (Bar-On, 1997) and so have been removed from this analysis. A reliability analysis following guidance from Rust and Golombok (1999) was then carried out.

The reliability analysis started with a full item analysis of the remaining 117 items. Item facilities were inspected to check that the items were able to differentiate between respondents. Any items with a mean of less than 0.50 or more than 4.50, or with an acceptable mean but a standard deviation of less than 0.75 were deemed to have insufficient facility indices and so were removed. Four such items were removed. Next, item discrimination was checked to see if the scale was discriminating between people on the construct of interest. Inter-item correlations and item-total correlations were checked. These statistics should indicate positive relationships between the items to be measuring aspects of the construct in question. Any items with a majority of inter-item correlations or an item-total correlation of less than 0.2 were removed as these would not appear to be differentiating on the construct of interest. A further six items were removed as a result of these checks. No items had a majority of inter-item correlations or an item-total correlation of more than 0.8, suggesting that there was no issue of multicollinearity.

Having removed the 16 ‘validity indicators’ and ten items which did not meet the criteria of the item analysis, 107 items remained in the scale. Exploratory factor analysis was then conducted to determine how these items would form the subscales. A similar procedure to that of study one was followed. Again this involved checking that a stable factor structure can be produced, appropriate

scale and distribution and also that there was systematic covariation within the data (Ferguson & Cox, 1993).

The absolute sample size of 297 participants is more than the minimum of 100 suggested by Kline (1994). In terms of skew and kurtosis, no items had a skew of more than 2.0 and only 4 items had a kurtosis value greater than 2.0. This was within the acceptable limit of 25% of items suggested by Ferguson and Cox (1993), in line with Muthen and Kaplan's parameters (1985). The solution should therefore not be adversely affected by skew or kurtosis. Finally, the KMO statistic of 0.88 and a significant Bartlett's test of sphericity (17053.55, $p<.0001$) suggested that there were discoverable relationships within the data and so exploratory factor analysis was suitable.

Factors were then extracted, with parallel analysis determining the number of factors to extract (Horn, 1965; Zwick & Velicer, 1986). Analyses were conducted at the 50^{th} and 95^{th} percentiles using 40 and 100 sets of randomly generated data. The parallel analysis indicated that eight factors should be retained. Factors were extracted using principal components analysis (Tabachnick & Fidell, 2007) using an oblimin rotation with delta set at 0[1]. This rotation was used as the factors were anticipated to be intercorrelated, which was found to be the case (Field, 2005). The eight factors extracted (eigenvalues ranged from 25.34 to 2.09) accounted for 45.44% of the variance. Eight items of the 107 showed factor loadings of between .25 and .29.

[1] Rotations with delta set at 1 and 2 were found to produce similar solutions.

Table 5.2: Factor names, descriptions, means, S.D.s and reliabilities for eight subscales resulting from EQ-i factor analysis

New Factor Name	Original EQ-i subscale	Description and sample items	N. Items	M	S.D	α
Self esteem	Self contentment, enjoyment	Having a positive self regard *e.g. I have good self respect; I don't feel good about myself (-)*	21	3.47	.68	.94
Self control	Reality testing, impulse control	Having some control over one's thoughts and behaviour *e.g. I have strong impulses that are hard to control (-); I think its important to be a law abiding citizen*	11	3.37	.63	.78
Flexibility	Flexibility	Openness to change and adjustment *e.g. its hard for me to change my ways (-); I'm able to change old habits*	10	3.30	.64	.80
Rationality	Problem solving, stress tolerance	Taking a logical and reasoned approach *e.g. when trying to solve a problem I look at each possibility and then decide on the best way; I try to see things as they really are, without fantasizing or daydreaming about them*	15	3.41	.56	.82
Emotional Regulation	Stress tolerance, anger control	Keeping control over one's emotions *e.g. I feel that its hard for me to control my anxiety (-); I can handle stress without getting too nervous*	11	3.62	.75	.83
Interpersonal Sensitivity	Interpersonal relationships, empathy, social responsibility	Showing interpersonal respect and sensitivity *e.g. I'm sensitive to the feelings of others; I avoid hurting other people's feelings*	12	3.44	.59	.81
Emotional Expression	Emotional self awareness	Expression of one's feelings *e.g. it's fairly easy for me to express feelings; I'm unable to show affection (-)*	10	3.47	.73	.84
Assertiveness	Assertiveness/ Independence	Demonstrating resolve and decisiveness *e.g. when I disagree with someone, I'm able to say so; Others think that I lack assertiveness (-)*	17	4.08	.45	.86

These items have been kept in the analysis as their removal has the effect of reducing reliability of the subscales. Rotated factor loadings are presented in Appendix five. Mean factor loadings for this solution ranged from 0.32 to 0.54, suggesting that component saturation is an issue and increasing the sample size may be of benefit in future (Guadagnoli & Velicer, 1988). This was the primary reason for using all of the data available in a single analysis. However, as the absolute sample size was deemed to be satisfactory, results are interpreted.

For copyright reasons, the lists of items loading on to each of the eight components cannot be given in full. They were given to three occupational psychologists familiar with the topic of emotional intelligence for factor interpretation and naming. Reliabilities and scores for the eight subscales were then created in accordance with this factor analysis, details of which are provided in Table 5.2. This table also shows the original EQ-i subscales that go into each factor. The only subscale which was split over two of the new factors was stress tolerance. Some of the items from this subscale loaded on to the rationality factor, while others loaded on to emotional regulation. Apart from this, the new factors were broadly represented by items from one or more of the original subscales.

5.4 Results

To increase sample size for analysis, extra data were gathered from a sample of the general population, composed largely of undergraduate psychology students. To check that combination of the data was appropriate, the two groups were compared on the subscales of both the EQ-i and the IRI. A MANOVA revealed

no significant multivariate effect of group (F = 1.38, df = 284, p>.05). ANOVAs (see Table 5.3) did reveal a significant main effect of group for two of the subscales, with doctors reporting higher scores for emotional regulation and empathic concern. However, these effect sizes were small (partial eta squared = .01 in both cases). Therefore the two groups were deemed suitable to combine.

Table 5.3: Comparison of the medical and non-medical samples.

Subscale	Group 1 – doctors (n = 192)		Group 2 – other (n = 105)			
	Mean	SD	Mean	SD	F	Eta squared
EQi						
Self esteem	4.09	.59	3..96	.63		
Self control	4.07	0.52	3.99	.64		
Flexibility	3.51	.44	3.50	.45		
Rationality	3.91	.43	3.89	.55		
Emotional Regulation	3.95	.63	3.80	.60	3.89*	.01
Interpersonal Sensitivity	4.32	.46	4.23	.60		
Emotional Expression	3.91	.63	3.92	.75		
Assertiveness	3.75	.55	3.57	.68		
IRI						
Fantasy	14.22	5.96	14.84	6.34		
Empathic concern	22.09	3.50	21.23	3.78	3.87*	.01
Perspective Taking	19.85	4.22	19.09	4.37		
Personal Distress	9.98	4.51	10.45	3.73		

*Notes: EQi subscale scores range from 1-5; IRI subscale scores range from 0-28; *p=.05*

5.4.1 Correlations

Using the newly created subscale scores for the EQ-i, and the four subscale scores from the IRI, correlations and joint factor analysis were conducted to test hypotheses one to four. Normal distributions were confirmed by inspecting histograms for each variable. Correlations are presented in Table 5.4.

Table 5.4: Correlations between EQ-i and Empathy (IRI) scales.

	Empathy			
EQ-i	F	EC	PT	PD
Self esteem	-.11	.22**	.37**	-.38**
Self control	-.34**	.20*	.33**	-.31**
Flexibility	-.17	.19	.40**	-.37**
Rationality	-.12	.25**	.48**	-.50**
Emotional regulation	-.04	.13	.41**	-.48**
Interpersonal sensitivity	.02	.45**	.46**	-.21*
Emotional expression	-.02	.30**	.32**	-.32**
Assertiveness	-.13	.11	.29**	-.54**

*Note: Larzalere and Mulaik (1977) adjusted *significant p<.05, ** p<.01. Empathy (IRI) scales: F = Fantasy, EC = Empathic Concern, PT = Perspective Taking, PD = Personal Distress.*

Hypothesis one: Perspective Taking and EI. Support was found for hypothesis one as significant moderate correlations were found between perspective taking and all eight EQ-i subscales. Pearson's *r* ranged from .29 to .48 (all p<.01).

Hypothesis two: Empathic Concern and EI. Partial support was found for hypothesis two as small to moderate significant correlations were found between empathic concern and six of the eight EQ-i subscales. Pearson's *r* ranged from .20 (p<.05) to .45 (p<.01). The larger correlations were reported for interpersonal sensitivity and emotional expression, both of which concern interpersonal rather than intrapersonal EI.

Hypothesis three: Fantasy and EI. Support was not found for hypothesis three as no significant positive relationships were reported between fantasy and the EQ-i subscales. In fact, one significant moderate negative correlation was reported for the subscale self control (r = -.34, p<.01). Self control was described in Table 5.2

as ‘having some control over one’s thoughts and behaviour’ as opposed to the fantasising associated with this IRI subscale.

Hypothesis four: Personal Distress and EI. Support was found for hypothesis four as significant negative relationships were reported between personal distress and all eight EQ-i subscales. P Pearson’s *r* ranged from -.21 ($p<.05$) with interpersonal sensitivity to .54 ($p<.01$) with assertiveness.

5.4.2 Joint factor analysis

To further understand the relationships between the IRI and EQ-i, a second joint factor analysis of the two was conducted using the four IRI subscale scores and eight EQ-i subscale scores. Using exactly the same procedure as for the joint factor analysis in the previous study, pre-analysis checks were carried out to check that a stable factor structure could be produced; that the variables are appropriately scaled and distributed, and that there is systematic covariation within the data (Ferguson & Cox, 1993). The absolute sample size here of 297 participants is again suitable (Kline, 1994). Skew and kurtosis of the variables were found to be within the acceptable limits of the parameters suggested by Muthen and Kaplan (1985). The Kaiser-Meyer-Olkin [KMO] test of sampling adequacy was found to be 0.89 and Bartlett’s test of sphericity was significant (1556.10, $p<.0001$). The data were therefore deemed suitable for exploratory factor analysis.

Using parallel analysis, four analyses were conducted at the 50th and 95th percentiles using 40 and 100 sets of randomly generated data. The parallel analysis indicated that two factors should be retained. However the two factor solution produced cross loadings for six of the 12 variables in the analysis, with only two of the variables loading primarily on to Factor 2. These two variables were from the IRI (EC and F). Instead, a single factor solution was inspected and accepted as making more theoretical sense. The single factor was extracted using principal components analysis (Tabachnick & Fidell, 2007). With an eigenvalue of 5.57, the factor accounted for 46.4% of the variance. Component saturation of this single factor was 0.59. Factor loading are presented in Table 5.5.

Table 5.5: Factor loadings for IRI and EQ-i subscales

	Factor Loadings
Rationality	.84
Self Esteem	.84
Flexibility	.78
Emotion regulation	.78
Interpersonal sensitivity	.75
Assertiveness	.74
Emotional Expression	.74
Self control	.69
Perspective Taking [IRI]	.58
Personal Distress [IRI]	-.56
Empathic concern [IRI]	.35
Fantasy [IRI]	-.17

In support of hypotheses one, two and four, this analysis suggests that the eight EQ-i subscales are best represented by a single factor which is positively associated with Perspective Taking and Empathic Concern and negatively associated with Personal Distress. Not in support of hypothesis three, the fantasy subscale of the IRI did not load on to the EI factor.

5.5 Discussion

This study has investigated the relationship between each of subscale of the IRI and emotional intelligence. Perspective taking and empathic concern were found to be positively related to EI while personal distress was negatively related and fantasy broadly unrelated to EI. Similar patterns of results were found for two of the subscales, Perspective Taking and Empathic Concern in terms of relationships with EI. These are discussed together, followed by findings for Personal Distress and then the Fantasy subscale which, as in Chapter four, resulted in substantially different patterns of relationships.

5.5.1 Perspective Taking and Empathic Concern

The joint factor analysis with the emotional intelligence measure found that Perspective Taking and Empathic Concern significantly positively loaded on to a single factor of emotional intelligence, suggesting that people who report high Perspective Taking and Empathic Concern are also more socially oriented with greater tendencies for emotion perception and regulation. Perspective Taking most highly correlated with all of the EQ-i scales and had a stronger factor loading of .58. Empathic Concern only correlated with significantly with 5 of the

8 EI subscales and had a lower factor loading of .35. Perspective taking therefore appears more strongly related to EI. This is in line with previous research which relates perspective taking more closely to EI (e.g. Charbonnueau & Nicol, 2002; Stratton et al., 2005).

As in Chapter four, these relationships were in line with hypotheses of expected descriptions for empathic individuals, providing support for the construct validity of the two subscales as part of a measure of multidimensional empathy including both cognitive and congruent affective processes (Davis, 1996; Vreeke & van der Mark, 2003). This study also found that the personal distress subscale showed different relationships with EI compared to the perspective taking and empathic concern subscales.

5.5.2 Personal Distress

In fact, the personal distress subscale was found to correlate negatively with all of the subscales of the EQ-i and loaded negatively on to the EI factor in the joint factor analysis. This is a new finding in terms of the literature on emotional intelligence which has only described a positive relationship between empathy and EI. The distinction between the different dimensions of empathy is therefore useful in discussions of emotional intelligence. In this study, EI was found to be related to those aspects of empathy which involve cognitive processes as well as a congruent display of positive, compassionate emotions. However, empathy as an automatic, emotional reaction of distress (Hodges & Wegner, 1997) was found to be negatively related to EI, which requires more control over one's emotional reactions (e.g. Bar-On, 1997). This finding provides new evidence that

the two concepts, while showing some areas of overlap, also show a key difference. In light of this, it will be interesting to understand the implications of this emotional response within the healthcare context. Before considering this further, the results of the final section of the analysis require discussion.

5.5.3 Fantasy

The imaginative aspect of the IRI does not appear to be related to self reported emotional intelligence as the fantasy subscale was neither correlated with, nor loaded on to the factor of, emotional intelligence. This is unsurprising given Davis' original rationale for the subscale in the first place (1983). Both the fantasy and personal distress subscales were defined as being 'self oriented' as opposed to the 'other oriented' subscales of Perspective Taking and Empathic Concern. Indeed, the 'other oriented' subscales are the only ones to show positive relationships to emotional intelligence.

The fantasy subscale was originally included in the IRI as it supposedly related to increased emotionality. Physiological evidence of a link between fantasy and greater emotional responding to the emotions of others was provided by Stotland et al., 1978. Furthermore, Cliffordson (2002), in confirming the four factors of the IRI, also generated a one factor model of empathy which significantly predicted scores on all four subscales including Fantasy. However, Cliffordson also recognised the need to extend her findings as each subscale consists of narrow dimensions and their relationships to other personality constructs were not clear. Indeed, there are those who have used the IRI without the Fantasy subscale, arguing for its lack of relevance to the topic of research (e.g.,

Christopher, Owens & Stecker, 1993; Stratton et al., 2005). The mixed research findings regarding this subscale will require further investigation.

5.5.4 Limitations

It should be noted that the original research design intended to gather data on the IRI and the NEO PI-R for a sample of doctors, in order to confirm the results of the factor analysis in the previous study. However this was not possible on this occasion as participants were in an assessment centre context and the time and effort required from participants gather this data was not realistic. This is one of the limitations of attempting to conduct field research and so attempts were made to overcome this by utilising a shorter measure of individual differences, namely that of EI. In itself, this was a useful theoretical comparison to make. The further point to note is that the choice of EI measure was limited somewhat within the context of this research. Many existing measures of EI are commercially marketed and for financial reasons were not practical to use within this thesis. Of those that were available, as EI research is still very much in its infancy, limited evidence was available to guide the choice of a suitable measure. While the Bar-On EQ-i is still widely used in practice and research, it would be useful to replicate findings with a further trait measure of EI such as the TEIQue (Petrides, Perez-Gonzalez & Furnham, 2007).

5.5.5 Summary and next steps

This study makes several important contributions to our understanding of empathy as measured by the IRI. Taken as a whole, it has been found that Davis'

multidimensional model of empathy is shows overlap with, but also differences between, emotional intelligence. First, the evidence regarding the construct validity of the perspective taking and empathic concern subscales is positive, with all hypotheses being supported for these subscales. Clear links were established between these subscales and emotional intelligence. Secondly, a key difference between empathy and emotional intelligence was established. Personal distress was found to load negatively with EI while fantasy was found to be unrelated to EI. Chapter three ended by identifying two key aims of this thesis as follows:

1. What are the antecedents of empathy in healthcare practitioners, in terms of individual differences and situational factors?
2. What behaviours are associated with empathy in the healthcare practitioner?

The first two studies have therefore addressed the first aim only, by investigating the individual differences that are associated with empathy. While empathy involves automatic, emotional reactions, emotional intelligence involves control over those reactions (Bar-On, 1997; Hodges & Wegner, 1997). It will be important to investigate which concept, empathy or EI, has the greater utility in terms of the healthcare context by examining the links between empathy, EI and behaviour. This will begin to address the second aim of the thesis and is the focus of the next study.

Chapter 6 – Self-report empathy and other-rated empathic behaviour

Chapters four and five investigated antecedents of empathy focusing on personality and emotional intelligence. Findings suggest that (1) perspective taking and empathic concern are closely associated with agreeableness and extraversion, and also load positively onto the single factor of emotional intelligence (2) fantasy is associated with openness to experience but not emotional intelligence, and (3) personal distress was positively related to neuroticism and negatively related to emotional intelligence. Having established this, the thesis now turns to examine the relationship between individual differences and empathic behaviour in the healthcare context, and explore the potential utility of measures of empathy and emotional intelligence in the selection and development of healthcare professionals. In order to test these relationships, it is first necessary to revisit the model of empathy being tested in this thesis, focusing on the potential pathways to empathic behaviour.

6.1 Empathy and behaviour

Although Davis (1996) identifies 'interpersonal outcomes' as the final stage in his multidimensional model of empathy, in their adaptation of Davis' model (see Figure 6.1) Larson and Yao (2005) differentiate between 'interpersonal processes' and the final stage of empathy as positive outcomes for patients and practitioners. According to both models, a patient's judgment of empathy in a healthcare practitioner will depend not only on whether the practitioner

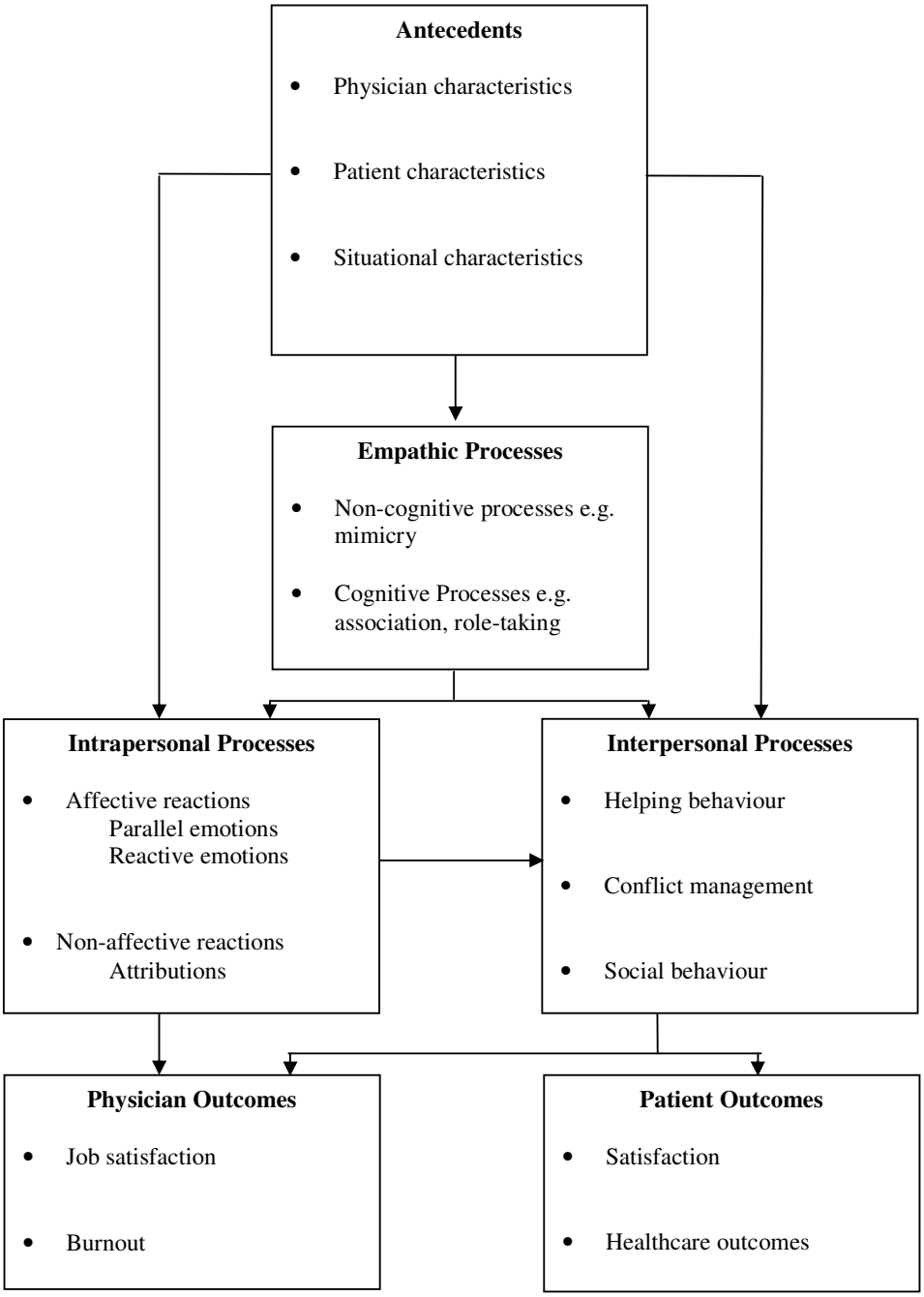

Figure 6.1: Process model of clinical empathy (from Larson & Yao, 2005).

understands the perspective of patients and their emotional response, but also the extent to which the practitioner demonstrates this understanding in empathic behaviour towards the patient. Therefore, whilst a doctor may rate themselves as highly empathic, outcomes such as patient trust, compliance with medical treatment, quality of care relationships and satisfaction with medical services will depend on patients' judgements that the doctor is empathic, which in turn will depend on the doctor's behaviour (Barnett, Howard, King & Dino, 1981; Becker & Maiman, 1975).

There is a growing call for the assessment of such interpersonal behaviours as an indicator of medical competence alongside clinical knowledge. For example, Epstein and Hundert (2002) propose that professional competence in doctors should be defined as "*the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and the community being served"* (p.226). In addition, the CARE measure, reviewed in Chapter three, now forms part of the method for appraising General Practitioners in Scotland. Further work in the UK has sought to identify the behavioural competencies needed by physicians in order to deliver good medical care, and among the competencies for General Practitioners identified by Patterson, Ferguson, Lane, Farrell, Martlew & Wells (2000) is 'empathy and sensitivity' which appears to relate closely to the 'interpersonal outcomes' identified by Davis (1983) and Larson and Yao (2005). Two further competencies, 'communication skills' and 'professional integrity' also reflect helping and social behaviours and may therefore reflect components of empathy. This study tests

whether interpersonal outcomes, specifically physician empathic behaviour, are predicted by the empathic disposition as measured by the IRI. The study therefore represents a test of the criterion-related validity of the IRI subscales.

6.2 Criterion-related validation

The third and fourth types of validity identified by Cronbach and Meehl (1955) are predictive and concurrent (also known as 'criterion-oriented') validity. In order to assess these, a correlation is calculated between the predictor of interest and an independent criterion measure. When test scores and criterion scores are measured at the same time, this is known as concurrent validity, whereas predictive validity studies involve the criterion score being taken at a later date. Landy and Conte (2007) note that the usual limitation of concurrent compared to predictive validity studies is that if current employees in a particular role are used, then range is restricted as only those with higher test scores are sampled. However, an opportunity arose for concurrent validity data to be collected in a sample of applicants for a role. This limitation was therefore not an issue and this is the approach taken in this study.

Given the focus on empathy as an intra-psychic phenomenon it is not surprising that comparatively few studies have investigated whether any of the self-report empathy questionnaires are positively related to empathic behaviour as judged by observers. Even less research has tested these relationships among practitioners in the healthcare context. Of the few studies that have been conducted in the healthcare setting, the predominant methodology has involved quantitative

instruments with a relatively narrow or peripheral scope (Pedersen, 2009), and often focusing on either cognitive or emotional components of empathy. For example, Hojat *et al.* (2005) found that a measure of attitudes towards cognitive empathy predicted later ratings of empathic behaviour during medical training. Only one study has been located which aimed to compare self report with others' judgements of empathy using the IRI. Carmel and Glick (1996) asked 324 physicians within an Israeli hospital to identify colleagues who were 'Compassionate Empathetic Physicians' [CEP], defined as those whose "*pattern of behavior reflects strong devotion to the welfare of patients on two crucial dimensions of patient care: the scientific-technical and socio-emotional, or, as it is often put, curing and caring"* (p.1253). Those most frequently identified were put into the high CEP category, while those least frequently identified were put into the low CEP category. Results indicated that the high CEP group scored significantly higher on perspective taking and significantly lower on the personal distress subscale of the IRI. This supports research from other organisational contexts which has also found a positive link between perspective taking and interpersonal relating in the workplace (Parker, Atkins & Axtell, 2008). No significant differences were found for the empathic concern or fantasy subscales by Carmel and Glick. However this study did not use actual measures of behaviour and so the reliability of the categorisation process is unclear. Furthermore, the perspective taking and empathic concern subscales for the IRI have been found to be closely related in the first two studies of this thesis, in line with previous research. For example, Axtell, Parker, Holman and Totterdell (2007) asked 347 agents from two UK call centres to complete self ratings of perspective taking and empathic concern. Both of these significantly predicted

managers' ratings of helping behaviour. A similar result was found in a study of manufacturing employees in helping internal customers, suggesting that the results of the study may be generalisable (Parker & Axtell, 2001). In study three it is therefore hypothesised that these two subscales (empathic concern and perspective taking) will be positive related to ratings of empathic behaviour as judged by others.

> *Hypothesis one: perspective taking will be positively correlated with ratings of empathic behaviour.*
>
> *Hypothesis two: empathic concern will be positively correlated with ratings of empathic behaviour.*

With respect to the fantasy scale of the IRI, Davis neither expected nor found any relationship between this subscale and measures of interpersonal functioning, commenting that *''it is not apparent that a tendency to become deeply involved in the fictitious world of books, movies, and plays will systematically affect one's social relationships''* (Davis, 1983, p.123). However, Stinson and Ickes (1992) found that those scoring higher on the fantasy scale also performed better on a task of empathic accuracy in an interaction with a stranger. As healthcare practitioners are often interacting with patients with whom they are not well acquainted, it may be that a general tendency to imagine oneself in the shoes of a stranger, as with a fictional character, could aid perspective taking and therefore enhance the empathic process. The following hypothesis was therefore made:

> *Hypothesis three: fantasy will be positively correlated with ratings of empathic behaviour.*

Turning to the fourth IRI subscale, Davis' suggests that emotional arousability, characterised by feelings of personal distress when observing the distress of another, motivates the observer to help that person, and therefore acts as a mechanism to relieve the observer's distress. This subscale was found to be positively related to neuroticism in study one, a personality trait that has previously been associated negatively with work performance in general (e.g. Salgado, 1997; Tett et al., 1991) and Carmel and Glick found that physicians identified as more compassionate and empathetic by their colleagues were actually found to score significantly lower on personal distress. In the healthcare context, where objectivity is considered crucial to making accurate diagnosis and treatment decisions, Hojat et al. (2001) argue that personal distress is the kind of uncontrolled emotional response that could interfere with objectivity. Indeed, it has been argued that patients will not perceive this type of emotional response as helpful at a time when they are seeking reassurance (e.g. Morse et al., 2006). This study therefore predicts that a self-rated tendency to experience personal distress will negatively related to ratings of empathic behaviour in the healthcare context.

> *Hypothesis 4: Personal Distress will be negatively correlated with ratings of empathic behaviour.*

As a key difference between empathy and emotional intelligence was found with respect to personal distress in study two, it is relevant to consider whether emotional intelligence may be a more appropriate concept to use in an applied healthcare setting. Responsiveness to the emotions of others while controlling one's own emotions appears to be a potentially useful mechanism of combining a

caring approach with the ability to maintain objectivity. Criterion-related validity has been explored in some depth in relation to emotional intelligence in recent years (e.g., Salovey & Mayer, 1990; Goleman, 1995), with EI found to play a role in successful task performance (Lam and Kirby, 2002), academic performance (Petrides, Frederickson & Furnham, 2004) and social competence (Mavroveli, Petrides, Rieffe & Bakker, 2007). EI has also been suggested as an important skill in medicine (Elam, Stratton & Andrykowski, 2001; Stratton et al., 2005). However no study has been located to date that tests the relationship between self-reported EI and empathic behaviour as judged by others in the healthcare context. This study therefore investigated whether physicians who rate themselves higher in emotional intelligence will also be evaluated more positively in terms of their demonstrated empathic behaviours.

Hypothesis 5: Self-report emotional intelligence will be positively associated with ratings of empathic behaviour.

6.3 Method

6.3.1 Context and participants

The data for study three were collected during an assessment centre to select doctors applying to train as General Practitioners (GPs) in the NHS. Two hundred and fifty six applicants applying for GP specialty training in one UK deanery were invited to attend assessment centres conducted over a one week period. On arrival at the assessment centre, all applicants were invited to participate on a voluntary basis. Information sheets were disseminated to briefly

explain the purpose of the research study and applicants were assured that any information from the psychometric questionnaires used for the research would not be made available to those making selection decisions and as such the research did not form part of the selection process. Consent forms were signed by all participants to indicate their understanding and agreement to take part. (See Appendices 2 and 3 for the information sheet and consent form). Out of 256 applicants attending the assessment centres, 192 doctors agreed to take part in the study and completed the measures detailed below. Half of the participants completed the self-report measures before the assessment centre exercises, with the other half completing the measures afterwards. This was primarily for logistical reasons but also helpful in controlling for potential order effects. Of the 192 doctors taking part, 109 (56.77%) were male and 83 (43.23%) female. 32.8% described themselves as White, 45.8% as Indian/Pakistani/Bangladeshi, 10.4% as Asian/Chinese, 3.1% as Black and 7.8% as Multiracial/Other. Mean age was 30.55 years (SD 5.34 years). Sixty seven doctors (36.5%) had completed their medical training within the UK and Ireland, while the other 125 were trained overseas. Countries of qualification for those trained overseas were predominantly India (35.4%) and Pakistan (10.3%) with the final 17.8% qualifying in a wide range of countries including Sri Lanka, Nigeria, Iraq, Libya and Myanmar.

The sample therefore provides an opportunity to gain greater understanding of empathy and cross-cultural differences in a medical selection process. This is an important area for consideration in a time when many medical professionals in the UK have been recruited internationally. Participants in this study were

doctors all currently resident and working in the UK. Many were however trained in and native of different countries, particularly India, Pakistan and Bangladesh. In 2008, the Home Office and Department of Health moved to prevent overseas doctors from registering to work within the NHS, in an attempt to preserve jobs for UK graduates. By this time however, some 277,000 overseas doctors were already registered with the General Medical Council, with almost half of these obtaining their original medical qualifications abroad (Hawkes, 2008). This is partly a result of overseas recruitment in response to a shortage of qualified UK staff. In selecting overseas doctors, the only stipulation in addition to a recognised medical qualification was that recruits were required to be linguistically proficient, although those from within the European Economic Area do not have to be assessed on language ability. (MacDonald, 2003). It will therefore be interesting to see if there are cross cultural challenges in empathy for overseas qualified doctors.

6.3.2 Measures

1. Empathy: The Interpersonal Reactivity Index (IRI; Davis, 1983): This is the same measure used in Chapters four and five, chosen because of its positive evaluations of reliability and validity. To recap, the Perspective Taking subscale of the IRI is representative of an individual's tendency to adopt the views of another. The Fantasy subscale is similar to this, although is based on imagining oneself in the role of characters in books, films or plays. The Empathic Concern subscale asks about the individual's own feelings of concern in response to another person. The Personal Distress subscale is also emotional, but focuses on

how much one feels distress in response to another. The four subscales (Perspective Taking, Empathic Concern, Fantasy and Personal Distress) are each composed of seven items, to which participants are asked to respond using a five-point likert scale ('does not describe me well' to 'describes me very well'). All four sub-scales of the IRI have been shown to have satisfactory internal reliability (α = 0.71 to 0.77) and test – retest reliability (α = 0.62 to 0.71, Davis, 1983). A 0-4 scale is used for each item, so the minimum possible score for each subscale is zero, with a maximum of 28. The full questionnaire is included in Appendix 1.

2. Emotional Intelligence: The Bar-On EQ-i (1997): Again, this measure was used in Chapter five to investigate the construct validity of the IRI. It measures an *"array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures"* (Bar-On, 1997, p. 14). Respondents are asked to rate items using a 5 point Likert-type scale (where 1 = 'Very seldom or not true of me' and 5 = 'Very often true or true of me'). Chapter five produced an eight factor solution using 107 items of the measure. Given that the participants in this study formed part of the sample for Chapter five, it was deemed appropriate to use this factor structure for the test of EI in this study. Eight subscale scores were therefore calculated: self esteem (21 items); self control (11 items); assertiveness (17 items); rationality (15 items); sensitivity (12 items); emotional expression (10 items); emotional regulation (11 items), and adaptability (10 items). Subscale scores were calculated by reverse scoring negatively worded items and calculating the mean score from the items for each scale. Mean scores were used to account for the

differing numbers of items in each subscale. Reliabilities for all of the subscales created in Chapter five were deemed to be satisfactory, with αs ranging from 0.78 to 0.94. An EQ-i total was calculated by summing these means. The minimum possible score for each subscale is therefore one and the maximum is five, while the minimum possible EQ-i total score is eight and the maximum is 40.

3. Cognitive ability: Ravens Advanced Progressive Matrices Set II (Raven, Court & Raven, 1994): This was administered according to the standard instructions. This questionnaire was considered suitable for exploring intellectual efficiency in a cross-cultural context because it is relatively language free. Participants had 40 minutes to complete 36 items, each of which consisted of a pattern with a part missing. The task is to identify the correct missing part from a range of eight possible options. The internal consistency reliability of Ravens is estimated at 0.90 (Raven et al., 1994). Each correctly answered item receives one point, such that the minimum possible total score is zero while the maximum is 36.

4. Empathic behaviour: Assessment centre ratings: Ratings of participant behaviour were obtained from two sources, trained assessors and medical actors playing the role of patients within a simulated consultation. These assessors provided ratings of interpersonal behaviour during two of the assessment centre exercises, a group discussion and a simulated patient consultation. The group discussion exercise required participants to work as part of a team of four Senior House Officers in a city hospital who must prioritise which patients should receive surgery the following morning. In the simulated consultation exercise,

participants were observed in a one-to-one dialogue with a 'patient', played by a medical actor, who has just been diagnosed with cancer. 'Patients' followed a pre-scripted dialogue in which they were instructed to express a range of emotions including anger, fear and confusion, while responding naturally to the interaction with the participant. In each of the exercises, the participant was observed by a trained assessor who then rated them using behavioural indicators from the competency framework for General Practitioners generated by previous research (Patterson et al., 2000). Trained assessors were either medical professionals or lay assessors, in this case a role fulfilled by Ofsted inspectors. Three of the competencies included interpersonal behaviours: 'empathy and sensitivity'; 'communication skills', and 'professional integrity'. Definitions and sample indicators are provided in Table 6.1. After each exercise, assessors rated participants on each of the three competencies using a 1-4 Likert-type scale (where 1 = few positive behaviours, many negative behaviours, and 4 = no negative behaviours and many positive behaviours). For each interpersonal competency, scores from the two exercises were combined. The minimum possible score for each competency is therefore two, while the maximum is eight.

After the simulated consultation, the 'patients' also rated the participants on two of the interpersonal competencies, 'empathy and sensitivity' and 'communication skills'. For each competency, patients were given 5 statements and asked to rate the participant on a 1-4 Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). For Communication Skills, statements included 'This doctor communicated effectively with me', 'The nature of my problem was explained/clarified clearly' and 'I had adequate opportunity to express my

Table 6.1 Definitions and sample behavioural indicators of competencies related to empathy (from Patterson et al 2000).

Competency	Definition	Sample positive indicators	Sample negative indicators
Empathy and sensitivity [ES]	Desire and ability to take in the perspective of others, and sense associated feelings, generating a safe, reassuring atmosphere	Demonstrated a caring manner towards others Was clearly intent on establishing exactly what others were thinking or feeling Was perceptive, responding to the concerns of others with understanding Clearly reassured others with appropriate words and actions	Showed very little visible interest/understanding. Was quick to judge, make assumptions. Appeared isolated or authoritarian. Lacked warmth in voice/manner and failed to encourage patient Created uncomfortable atmosphere
Communication Skills [CS]	Ability to engage others, clearly and actively, in constructive dialogue, adjusting language and non-verbal behaviour according to the needs of differing situations	Actively encouraged others through use of supportive words or comments Used open exploratory questions inviting others to become actively involved Adjusted language as appropriate to suit particular needs of the situation	Failed to use supportive words or comments to encourage others Asked closed questions, restricting opportunities for others to become involved Unable to adapt language to suit particular needs of the situation
Professional integrity [PI]	Professional commitment (i) to provide equality of care for all, (ii) to take responsibility for own actions – while at the same time recognising the parameters of one's role and expertise, (iii) to act confidently but safely	Showed clear respect for others (whether through words or actions) Was positive/enthusiastic during the exercise, however challenging it seemed When appropriate, was open and accepting of the particular situation of others	Appeared to lack sufficient respect for others (whether through words or actions) Approached the exercise defensively, more as a problem than a challenge Appeared judgmental, not prepared to consider each situation on its merits

concerns'. For Empathy and Sensitivity, statements included 'This doctor was sensitive to my feelings', 'This doctor seemed to understand my situation/concerns' and 'I felt at ease with this doctor'. A mean score was then taken of these five statements, thus the patient ratings for each competency ranged from 1-5. Unfortunately the assessment centre administrators did not provide raw scores for every statement so a reliability analysis of these subscales was not possible.

6.4 Results

Table 6.2 presents the means and standard deviations of the variables. Before testing the relationships between the variables, distributions were considered. Kolmogorov-Smirnov tests of normality for all variables were significant. However, these tests are often significant with a large sample size and so histograms should be inspected to assess suitability for parametric tests (Field, 2005). In addition, the skewness and kurtosis were converted to z-scores. As large sample sizes give rise to small standard errors, z scores are large and so significant z scores are found from small deviations from normality. In this case, the criterion of 2.58 was used to represent a significant deviation from normality (Field, 2005). All of the z scores for both skewness and kurtosis were less than 2.58, taken as support for the assumption of normality, for the subscales of the IRI, EQ-i, RAPM scores and assessor ratings of behaviour from the three interpersonal competencies. The histograms for these variables were deemed acceptable for using parametric tests. However, the z scores were greater than 2.58 for age and the two patient competency ratings. The patient ratings for both

competencies were significantly negatively skewed with a clear ceiling effect. Age was also significantly positively skewed as most of the doctors were at the beginning of their medical careers at the stage of choosing a specialty with the minority coming to this point later in their careers. Transformations were not successful in reducing this, so tests using these variables were non-parametric.

Table 6.2.Descriptives all variables (n=192).

Variable	Mean	SD
Age (Years)	30.55	5.39
Ravens Advanced Progressive Matrices	21.72	5.16
Empathy & Sensitivity-Assessor	5.91	1.53
Communication Skills- Assessor	5.92	1.43
Professional Integrity- Assessor	6.08	1.13
Empathy & Sensitivity-Patient	2.81	.82
Communication Skills-Patient	2.97	.79
IRI-Fantasy	14.22	5.96
IRI-Empathic Concern	22.09	3.50
IRI-Perspective Taking	19.85	4.22
IRI-Personal Distress	9.98	4.51
EQ-i Total	31.51	3.25
EQ-i Self Esteem	4.09	0.59
EQ-i Self Control	4.07	0.52
EQ-Assertiveness	3.75	0.55
EQ-i Rationality	3.91	0.43
EQ-i Interpersonal Sensitivity	4.32	0.46
EQ-i Emotional Expression	3.91	0.63
EQ-i Emotion Regulation	3.95	0.63
EQ-i Flexibility	3.51	0.44

6.4.1 Correlations

Table 6.3 then presents correlations between the variables for all 192 doctors. Correlations for age and the patient ratings are Spearman's rho non-parametric correlations, with all others reported being Pearson's *r*. Age correlated moderately negatively with intellectual efficiency as measured by the Ravens Advanced Progressive Matrices [RAPM] (rho = -.37, p<.01) as well as assessor ratings of all three competency scores (Empathy and Sensitivity [ES]: rho = -.36; Communication Skills [CS]: rho = - .39; Professional Integrity [PI]: rho = -.40, all p < .01). There were also small negative correlations between age and patient ratings of ES (rho = -.14, p<.05) and CS (rho = -.21, p<.01). Age also showed a small significant negative correlation with the Fantasy subscale of the IRI (r = -.17, p<.05). The RAPM scores were significantly positively correlated with the three competency scores as rated by assessors (ES: r = .36; CS: r = .37; PI r = .43, all p < .01). These are all moderate positive correlations (Cohen, 1988). As anticipated, the RAPM scores were not significantly correlated with any of the subscales of either IRI. There was only one small negative correlations between RAPM and one subscale of the EQ-i, self control (r = .19, p<.05). The positive correlations between the Perspective Taking and Empathic Concern subscales of the IRI with the various subscales of the EQ-i, again illustrate the overlap between these elements of empathy and EI while the consistently negative significant correlations between Personal Distress and EI demonstrate the key difference between the two concepts.

Table 6.3 Bivariate correlations for all variables (n = 192)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Age																		
2.	RAPM	-.37**																	
3.	Empathy & Sensitivity-A	-.36**	.36**																
4.	Communication Skills-A	-.39**	.37**	.85**															
5.	Professional Integrity I-A	-.40**	.43**	.79**	.76**														
6.	Empathy & Sensitivity-P	-.14*	.20**	.47**	.46**	.36**													
7.	Communication Skills-P	-.21**	.25**	.52**	.46**	.48**	.74**		.										
8.	IRI-Fantasy	-.22**	.13	.23**	.19*	.25**	.14	.08											
9.	IRI-Empathic Concern	.10	-.05	-.03	-.07	.01	-.05	.02	.08										
10.	IRI-Perspective Taking	.14	-.03	-.01	-.07	.00	.09	.03	-.01	.39**									
11.	IRI-Personal Distress	-.10	-.13	-.24**	-.15	-.12	-.18*	-.25**	.10	.01	-.22**								
12.	EQ-i Self Esteem	.09	-.05	-.04	-.05	-.02	-.04	-.03	-.03	.25**	.35**	-.31**							
13.	EQ-i Self Control	.08	-.19*	.01	.00	.02	-.02	-.07	-.22**	.27**	.30**	-.29**	.56**						
14.	EQ-Assertiveness	-.11	-.03	.17*	.16*	.09	.16*	.21**	-.14	.05	.20**	-.52**	.60**	.40**					
15.	EQ-i Rationality	.32**	-.12	-.02	.00	-.02	.01	-.05	-.06	.16*	.41**	-.36**	.66**	.36**	.53**				
16.	EQ-i Interpersonal Sensitivity	-.09	.14	.14	.17*	.13	.11	.16*	.05	.47**	.45**	-.18*	.69**	.52**	.45**	.57**			
17.	EQ-i Emotional Expression	.08	-.11	.16*	.13	.16*	.05	.08	.06	.24**	.27**	-.31**	.58**	.46**	.55**	.48**	.51**		
18.	EQ-i Emotion Regulation	-.06	-.05	.14	.12	.10	-.11	-.13	-.02	.13	.42**	-.46**	.65**	.57**	.59**	.54**	.59**	.52**	
19.	EQ-i Flexibility	.07	.02	.03	.02	.01	.06	.05	-.15*	.10	.29**	-.33**	.50**	.42**	.44**	.47**	.43**	.31**	.54**

Note: RAPM = Ravens Advance Progressive Matrices.For competency ratings, A indicates an assessor rating, P a 'patient' rating

Individual differences and behaviour: assessor ratings

To assess the relationships between individual differences and behaviour, correlations between the IRI, EQ-i and assessor ratings of the interpersonal competencies were inspected. Few significant relationships were observed. From the IRI, only the Fantasy subscale showed significant positive correlations with the three competency scores (ES: $r = .23$, $p < .01$; CS: $r = .19$, $p < .05$; PI: $r = .25$, $p < .01$). All of these correlations are small (Cohen, 1988). The Personal Distress subscale showed a small negative correlation with one of the competency scores, empathy and sensitivity ($r = -.24$, $p<.01$). Thus, hypotheses one and two (perspective taking and empathic concern) were not supported while hypothesis three regarding fantasy was supported and hypothesis 4 (personal distress) was partially supported.

Some of the subscales of the EQ-i were correlated with assessor ratings of behavior: Assertiveness showed small significant positive correlations with the two of the three competency scores (ES: $r = .17$, CS: $r = .16$, both $p < .05$), and Interpersonal Sensitivity was also positively correlated with the assessor rating of Communication Skills ($r = .17$, $p < .05$). Emotional Expression was significantly positively correlated with two of the three competency scores (ES: $r = .16$, PI: $r = .16$, both $p<.05$), providing partial support for hypothesis five.

Individual differences and behaviour: patient ratings

To assess the relationships between individual differences and behaviour from the patient perspective, the non-parametric correlations between the IRI, EQ-i and

patient ratings of the interpersonal competencies were inspected. From the IRI, the Personal Distress subscale was significantly negatively correlated with the patient ratings of empathy and sensitivity (rho = -.18, p<.05) and communication skills (rho = -.25, p<.01), providing support for hypothesis four. With regard to the EQ-i, a similar pattern of results was found as with the assessor ratings. The Assertiveness factor showed small significant positive correlations with the two competency scores (ES: rho = .16, CS: r = .21, both p < .05). The Interpersonal Sensitivity subscale was also positively correlated with the patient rating of Communication Skills (rho = .16, p < .05). Partial support was therefore found for hypothesis five from the patient ratings of behaviour.

6.4.2 Cultural differences: comparing groups

One of the potential reasons for the lack of a clear relationship between individual differences and behaviour is the effect of cross-cultural interactions. As noted previously, sixty seven doctors (36.5%) had completed their medical training within the UK and Ireland, while the other 125 were trained overseas. The sample therefore provided an opportunity to gain greater understanding of empathy and cross-cultural differences in a medical context. This was not a hypothesised part of the study, but as the opportunity arose, the decision was taken to investigate the study hypotheses again, for both the sample of UK and Ireland trained doctors (n = 67) and those trained overseas (n = 125). The group of doctors trained overseas were from a range of countries, predominantly India, Pakistan and Bangladesh. Although not a homogenous group, they differ from the UK doctors in that they did

not receive their initial medical training within the healthcare system in which they are currently applying for GP training. This is the key difference being explored in comparing the two groups.

Before doing this, tests for differences between the two groups on the key variables were conducted. As age and RAPM scores were identified in Table 6.3 as covariates, it was first necessary to check if applicants trained in the UK and Ireland differed from overseas applicants on these variables. To test differences in age, a non-parametric Mann Whitney U test was conducted as the assumption of normality was not met. This found that applicants trained in the UK and Ireland (*Mdn* = 26.00 years) were significantly younger than applicants trained overseas (*Mdn* = 31.00 years), $U = 1847.5$, $p<.001$. To check differences in RAPM scores, an independent t-test was conducted which revealed that applicants trained in the UK and Ireland ($M = 24.57$, $SE = .53$) scored significantly higher than those trained overseas ($M = 20.20$, $SE = .44$), $t(190) = 6.10$, $p<.001$.

In order to control for possible confounding effects of the differences in the covariates, a randomised matched pairs design was used (Pedhazur & Schmelkin, 1991) to create two groups of doctors who had either trained in the UK and Ireland (Group 1) or Overseas (Group 2). The groups were matched for age and RAPM scores. In creating the two groups it was not possible to match all of the participants therefore sample size for this set of analyses was 63 applicants in each group. To confirm they were matched for age, a non-parametric Mann Whitney U test was used because the assumption of normality was not met. This found that Group 1

(*Mdn* = 27.00 years) and Group 2 (*Mdn* = 28.00 years) did not differ significantly in age (*U* = 1708.5, ns). An independent t test also revealed no significant differences in RAPM scores (Group 1: *M* = 24.13, *SE* = .50, Group 2: *M* = 23.13, *SE* =.43; t(124) = 1.52, ns). To assess homogeneity of variance between the two groups, the variance ratios were used rather than Levene's test, which is sensitive to sample size. All variance ratios were less than two indicating homogeneity of variance (Field, 2005).

Group 1 was composed of 43 male and 20 female applicants. In terms of ethnicity, 90.5% described themselves as White, 4.8% as Indian/Pakistani/Bangladeshi, 3.2% as Asian/Chinese and 1.6% as Black. Group 2 was composed of 44 male and 19 female applicants. 3.2% described themselves as White, 66.7% as Indian/Pakistani/Bangladeshi, 14.3% as Asian/Chinese, 4.8% as Black and 11.1% as Multiracial/Other.

To investigate differences between the two groups on the IRI, EQ-i and competency scores, a MANOVA was conducted with one fixed factor (country of qualification) and eight dependent variables (FS, EC, PT, PD, EQ-i total score, assessor ratings of ES, CS and PI). All of the dependent variables were included in a single analysis as there were hypothesised relationships between these variables, which were partially supported in Table 6.3, therefore the variables were not independent. A large multivariate effect of country of qualification was found (F = 26.40, df = 15, $p<.001$, $\eta^2 = .79$). To investigate this effect further, a series of

ANOVAs was conducted. Table 6.4 presents the means and standard deviations for all variables for each group as well as F values from the ANOVAs.

Table 6.4 Descriptive statistics for UK and Ireland and Overseas trained doctors.

	UK & Ireland		Overseas		
	M	*SD*	*M*	*SD*	*F*
ES-A	7.14	1.01	5.54	1.27	57.62***
CS-A	7.13	.98	5.48	1.12	73.17***
PI-A	6.97	.90	5.83	.85	49.93***
F	16.48	6.09	12.63	5.51	11.96**
EC	21.78	3.41	22.27	3.48	.78
PT	19.59	3.75	20.30	4.59	1.02
PD	9.10	3.99	10.21	4.56	1.87
EQ-i total	23.00	1.28	23.29	1.62	1.21

*Note: For each group, n = 63. ***sig p<.001, **sig p<.01*

Large group effects were found for all three competency scores. Applicants who trained in the UK and Ireland (Group 1) were rated significantly higher by assessors on Empathy and Sensitivity ($F = 57.62$, $df = 1$, $p<.01$, $\eta 2 = .32$), Communication Skills ($F = 73.17$, $df = 1$, $p<.01$, $\eta 2 = .38$) and Professional Integrity ($F = 49.93$, $df = 1$, $p<.01$, $\eta 2 = .29$) than doctors who trained overseas (Group 2). Despite the large differences on the competency scores, the two groups did not differ significantly on the three of the IRI subscales or the EQ-i. The only exception to this was the Fantasy subscale where Group 1 scored significantly higher than Group 2 ($F = 11.96$, $df = 1$, $p<.01$, $\eta 2 = .09$). This was a medium effect size. Additionally, non-parametric tests were conducted to assess differences between the two groups on the patient ratings of behaviour. For both competencies, applicants trained in the

UK and Ireland (*Mdn* = 3) were rated significantly higher by patients than applicants trained overseas (*Mdn* = 2). Non parametric tests confirmed that these differences were significant (ES: $U = 766$; CS: $U = 675.5$, both $p<.001$).

6.4.3 Correlations by group

In order to explore the potential moderating role of the grouping variable on the relationships between the self report questionnaires and the ratings of the competency scores for the two groups, one method is to conduct hierarchical regressions using interaction terms calculated by multiplying independent variables with the grouping variable. However, due to the high number of independent variables resulting and the relatively low sample size, there was insufficient power to conduct this analysis (Field, 2005; Kline, 2000). Instead, partial correlations were calculated controlling for age and RAPM scores. Age and RAPM scores were controlled for because of the moderate correlations found between these variables and some of the competency ratings (detailed in Table 6.3). The partial correlations between IRI and EQ-i subscales and assessor ratings are reported in Table 6.5, and patient ratings in Table 6.6. Fisher's z transformation was then used to compare the correlations (Howell, 2002). Pairs of correlations resulting in a z of at least 1.96 are significantly different at the .05 level, with a z of 2.58 or more indicating a significant difference at the .01 level. For this sample size, correlations needed to differ by at least .35 to be deemed significantly different. Table 6.5 shows the z values that reached significance.

Individual differences and behaviour: assessor ratings

For the Perspective Taking subscale, the correlation for Group 1 was significantly positive with Professional Integrity, ($r = .29$, $p<.05$) whereas for Group 2 the r value was non-significant. This apparent difference was confirmed with a significant Fisher's z of 1.96 ($p = .05$). Partial correlations with Empathy and Sensitivity and Communication Skills were non-significant for both groups, although the correlation between perspective taking and empathy and sensitivity approached significance ($r = .20$, $p = .07$). Only partial support was therefore found for hypothesis one with group one and no support at all with group 2.

For Group 1, all correlations between the empathic concern subscale of the IRI and the competencies were significantly positive (ES: $r = .27$, $p<.05$, CS: $r = .28$, $p<.05$, PI $r = .41$, $p<.01$). Again for Group 2, none were significant. All pairs of correlations were found to be significantly different (ES: $z = 1.96$, $p = .05$, CS: $z = 2.35$, $p<.05$, PI: $z = 2.94$, $p<.01$). Thus hypothesis two was fully supported for group 1 only.

For Group 1, applicants trained in the UK & Ireland, the Fantasy subscale of the IRI correlated significantly positively with Empathy and Sensitivity ($r = .27$, $p<.05$), Communication Skills ($r = .27$, $p<.05$) and Professional Integrity ($r = .37$, $p<.01$). For Group 2, this subscale did not correlate significantly with any of the competency scores.

Table 6.5 Partial Correlations controlling for age and intelligence between IRI, EQ-I and assessor-rated competency scores

	Empathy & Sensitivity			Communication Skills			Professional Integrity		
	UK/Ir	OS	*z*	UK/Ir	OS	*z*	UK/Ir	OS	*z*
IRI									
Fantasy	.27*	.02		.27*	-.13	2.23*	.37**	-.05	2.40*
Empathic Concern	.27*	-.08	1.96*	.28*	-.14	2.35*	.41**	-.10	2.94**
Perspective Taking	.20†	-.03		.13	-.10		.29*	-.06	1.96*
Personal Distress	-.19	-.21		-.09	-.05		-.11	-.01	
EQ-i Total									
Self Esteem	.21	-.03		.03	.01		.14	-.02	
Self Control	.13	-.07		.00	-.02		.07	-.07	
Assertiveness	.27*	.14		.06	.15		.14	.05	
Rationality	.24†	.01		.19	.10		.29*	.10	
Interpersonal Sensitivity	.45**	.06	2.33*	.37**	.16		.39**	.16	
Emotional Expression	.29*	.10		.18	.10		.32*	.10	
Emotional Regulation	.23†	.08		.04	.10		.13	.10	
Flexibility	.17	.11		-.01	.19		.01	.09	

*Note: For each group, n = 63; Larzalere and Mulaik (1977) adjusted *significant p<.05, ** p<.01, †p = .07*

For both Communication Skills and Professional Integrity, the correlations for Group 1 were significantly different from Group 2 (CS: $z = 2.23$, $p<.05$, PS: $z = 2.40$, $p<.05$). Thus hypothesis three was fully supported for group 1 but not for group 2.

The final subscale of the IRI, Personal Distress, was not significantly positively correlated with any of the competency scores for either group. Therefore hypothesis four was not supported.

There were some significant findings when looking at the subscales of the EQ-i and the assessor ratings of competency scores, but again only for Group 1. Assessor ratings of Empathy and Sensitivity were significantly positively correlated with Assertiveness ($r = .27$, $p<.05$), Interpersonal Sensitivity ($r = .45$, $p<.01$) and Emotional Expression ($r = .29$, $p<.05$). The Interpersonal Sensitivity subscale of the EQ-i was the only one for which this correlation differed significantly for Group 2 ($z = 2.33$, $p<.05$). Again for Group 1, Communication Skills was significantly positively correlated with Interpersonal Sensitivity ($r = .37$, $p<.01$). The last competency, Professional Integrity was correlated significantly positively with Rationality ($r = .29$, $p<.05$), Interpersonal Sensitivity ($r = .39$, $p<.01$) and Emotional Expression ($r = .32$, $p<.05$). Apart from the significantly different correlation between EQ-i Interpersonal Sensitivity and the Empathy and Sensitivity competency score, none of the Fisher's zs were significant looking at the pairs of correlations. Thus partial support was found for hypothesis five with group 1 only.

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Table 6.6 Partial correlations controlling for age and intelligence between IRI, EQ-i and 'patient'-rated competency scores

	Empathy & Sensitivity-P		Communication Skills-P	
	UK/Ir	OS	UK/Ir	OS
IRI				
Fantasy	-.07	.04	-.04	-.12
Empathic Concern	-.03	-.00	.10	.05
Perspective Taking	.01	.20	-.02	.12
Personal Distress	-.25*	-.05	-.26*	-.18
EQ-i				
Self Esteem	.15	-.08	.22	-.00
Self Control	-.07	-.01	.03	-.07
Assertiveness	.16	-.12	.04	-.01
Rationality	.19	.11	.22	.08
Sensitivity	.07	.11	.14	.19
Emotional Expression	.08	.04	.31**	.12
Emotional Regulation	.14	.23	.07	.22
Adaptability	.19	.12	.25*	.15

*Note: For each group, n = 63; Larzalere and Mulaik (1977) adjusted *significant p<.05, ** p<.01.*

Individual differences and behaviour: patient ratings

Partial correlations were calculated controlling for age and RAPM using rank scores for the patient ratings (Pallant, 2007). The UK & Ireland group correlations did not differ significantly from those in the overseas group, with all zs being less than 1.96. It was found that personal distress was significantly negatively related to the two competency ratings from patients for the UK and Ireland group only. For empathy and sensitivity, $r = -.25$, $p<.05$ and for communication skills $r = -.26$, $p<.05$. Thus partial support was found for hypothesis four but only for group 1. Also, in terms of the EQ-i, emotional expression ($r = .31$, $p<.01$) and flexibility ($r = .25$, $p<.05$) were positively related to communication skills for the UK and Ireland group only. Thus hypothesis five was partially supported for group 1 but not for group 2.

6.5 Discussion

This study has built upon the first two studies to test the relationships between individual differences in empathy, emotional intelligence and empathic behaviour as rated by assessors and patients. Specifically, the study examined the relationship between empathy as assessed using the Interpersonal Reactivity Index and the Bar-on EQ-i measure of EI with assessor and patient ratings of interpersonal behaviours demonstrated by doctors during an assessment centre. The main findings can be summarised as follows:

1. Fantasy was positively associated with assessor ratings of empathic behaviour and personal distress was negatively associated with patient ratings of empathic behaviour. Few other relationships were apparent between self report

measures of individual differences and others' ratings of behaviours when investigating the whole group of participants from the assessment centre.

2. Comparing doctors who had trained in the UK & Ireland with those trained overseas revealed very little difference in terms of the self report measures of individual differences. However, doctors who qualified in the UK and Ireland were rated significantly higher on the interpersonal behaviours, by assessors and patients, than doctors who trained overseas.

3. Self-reported empathy correlated significantly with observers' ratings of empathic behaviour for UK and Ireland trained doctors, but not for overseas trained doctors. Specifically, fantasy, empathic concern and, to a lesser extent, perspective taking were all positively related to assessor ratings of behaviours for the UK and Ireland trained doctors.

4. Various aspects of self reported EI (Interpersonal sensitivity, emotional expression) also correlated significantly with observers' ratings of empathic behaviour for UK and Ireland trained doctors, but not for overseas trained doctors.

5. There were more clear relationships between the self report measures of empathy and EI and assessor ratings of behaviour than between the self report measures and patient ratings of behaviour.

There are various potential explanations for this set of findings, related to both method and theory. Theoretical considerations relate to situational factors such as the challenge of empathising cross culturally, which has been investigated to some degree in this study, as well as the content of the competency ratings. Methodological reasons include the assessment context and the process of

assessment as well as the measures chosen. Theoretical explanations are considered first.

6.5.1 Empathy and behaviour

The first finding was that fantasy was associated with assessor ratings of empathic behaviour. This may be surprising to some in the medical community who have chosen to ignore this aspect of empathy (e.g. Elam, Stratton & Andrykovski, 2001). However the relationship was predicted as there is some evidence to suggest that fantasy is associated with empathy for a stranger (Stinson & Ickes, 1992), as is the case in the assessment centre exercises where applicants consult with an unknown simulated patient and interact in a group with other applicants generally unknown to them. It may be that as relationships become well established, fantasy becomes less important although this has yet to be explored. The weak findings for perspective taking are perhaps surprising although it may be that this scale becomes more relevant as relationships are established. Additionally, this subscale has been shown to be susceptible to social desirability (Charbonneau & Nicol, 2002), which may be of particular relevance when completed in a selection context.

The negative relationship between patient ratings of behaviour and personal distress is consistent with the argument that automatic emotional reactions, while they may be a motivator of helping behaviour (Davis, 1983), are not perceived as helpful by patients in this context. Indeed, the more controlled responses of assertiveness and interpersonal sensitivity from the EQ-i were positively related to patient ratings of

behaviour. It would therefore seem possible that in this context, EI is a more appropriate concept than empathy.

6.5.2 Empathy and culture

The study also provided an opportunity to investigate cross cultural displays of empathy by comparing doctors trained in the UK and Ireland with those trained overseas, predominantly in more collectivist cultures. A recent article identified a need to investigate EI cross culturally as most of the research to date has been conducted in westernised cultures (Walter, Cole & Humphrey, 2011). Although medical education has begun to develop frameworks for assessing cultural competence (Betancourt, 2003), in the US and Canada it has been claimed that "medical schools do not employ effective methods of training and evaluation to ensure culturally competent care" (Zabar et al., 2006, p.510). Whilst this is a potential issue needing investigation, surprisingly little research has taken place. The term 'ethnocultural empathy' was proposed by Wang *et al.* (2003) to describe the process of empathising with people from racial, ethnic or cultural groups different from one's own. Wang *et al.* argue that in a multicultural environment, empathy is not universally applicable and practitioners require training in order to raise awareness and understanding of how care may need to adapt for diverse groups. Thus far, studies have established that those with more open attitudes towards diversity training are more likely to report intentions to empathise with people from diverse backgrounds (e.g. Brouwer & Boros, 2010; Cundiff, Nadler & Swann, 2009).

Appreciating the thoughts and concerns of a patient from another culture may require the doctor to elicit extra information from that person, as comparisons from one's own experiences will become less appropriate. Also, from a patient perspective, the behavioural cues that patients use to determine whether the doctor is empathising with them may be different. If this is the case, there could be important implications for doctors trained in one country operating successfully in another. Although there has been little investigation of this in relation to doctor-patient relationships, there is some evidence from the general population and other healthcare settings such as counselling to suggest that it is more difficult to demonstrate empathy cross-culturally (Chi-Ying Chung & Bemak, 2002). For example, in spontaneous interactions outside the formal helping relationship, Webster Nelson and Baumgarte (2004) found that American college students were less able to take the perspective of targets who were dissimilar from U.S. cultural norms. In addition, less compassion and sympathy were reported for targets from an unfamiliar cultural perspective. Within a formal helping relationship, in an investigation of counselling across cultures, Sue and Sundberg (1996) found that counsellors who demonstrated an understanding of their patients' family and societal backgrounds and acknowledged them to be different from their own were evaluated more positively by those patients. The findings of the present study, by comparing partial correlations from the randomised matched groups, support the possibility that there is a moderating effect of country of training on the relationship between empathic disposition and demonstration of empathic behaviour.

The different patterns of associations between self report empathy and EI measures and ratings of behaviours are consistent with previous research which suggests that,

regardless of motivation to empathise, demonstration of empathy is more difficult cross-culturally. It is possible that for those doctors trained overseas, whilst motivation to empathise is equal, ability to demonstrate this effectively for a patient from a different culture is reduced as a result of less familiarity with that person's experiences and background. It was noted during the assessment centre that all of the medical actors were of White British origin. It would be interesting to see if the same findings were apparent if there were more of a mix in ethnicity among the medical actors for simulated consultation exercise.

6.5.3 Limitations

It is not possible to definitively explain the large group differences found between the UK and Ireland doctors and the overseas trained doctors. An alternative explanation for these findings could be that demonstrated behaviours are not in fact different from those operating cross-culturally, but that they are being evaluated differently when the assessor and candidate are from different cultural backgrounds. However, in an examination of assessor characteristics on scores given in an assessment centre, race of assessor was not found to have a significant impact on scores (Lowry, 1993). Furthermore, the assessment centre in this study used only trained assessors with very specific behavioural criteria, which has been found to reduce any reliance on stereotypes or hence biases from occurring (London, 2001). Future studies are clearly needed to provide a greater understanding of the impact of culture on medical performance. For example, investigations could include analysis of the behaviours associated with empathy as identified by practising GP doctors cross-culturally.

There are also some limitations to note with regard to the method of assessing behaviours. First, within the assessment centre exercises, participants are required to demonstrate maximal performance whereas the self report measures are assessments of typical preferences for behaviour. It is therefore reasonable to expect that there would not be large correlations between what participants can do and what they normally do. Evidence of poor correlations between assessments of maximal and typical performance is well established (e.g. Sackett, Zedeck & Fogli, 1988). The second issue of note is that each assessment centre exercise lasted for no more than thirty minutes and was a one off 'snapshot' of behaviour regarding interactions with strangers. According to classical measurement theory, longer assessments tend to be more reliable (Rust & Golombok, 1999). In addition, due to the context, sources of error in all measures may have included test anxiety (Fletcher & Kerslake, 1993). It would therefore be preferable to gain an assessment of behaviours within the normal working environment over a greater number of interactions.

The final point to note is that few relationships were apparent between the self report measures and the patient ratings of behaviour. This may have been because of the skewed data on these variables, or because the behaviours being assessed aren't those that actually predict judgments of empathy in patients. There is some evidence to suggest that patients use different cues from assessors in judging empathy (Silvester et al., 2007). Ultimately, it is the patients who are the consumers of practitioner empathy in this context and as such, this question requires further research. Although patients did play a role in the creation of the competency model

(Patterson et al., 2000), their role was relatively minor and not focused specifically on empathy but on the overall understanding of performance for GPs.

6.5.4 Summary and next steps

Having developed a clear picture of the individual differences associated with a propensity to empathise, this study has conducted an examination of the relationships between empathic disposition and behaviour. In an assessment context, ratings of behaviour were provided by trained assessors and patients and compared to self report empathic disposition. For those doctors trained in the UK and Ireland, fantasy, perspective taking and empathic concern were positively related to assessments of interpersonal behaviour. However this relationship did not hold for doctors trained overseas. Furthermore, personal distress was universally related to lower patient ratings of interpersonal behaviour, again suggesting that this is not an effective empathic process in this context. However this study also showed that patient ratings of behaviour were highly skewed suggesting that there is no clear understanding of the behaviours that patients associate with empathy. Therefore the final study of the thesis will explore understanding of the specific behaviours associated with empathy in the healthcare context, focusing on the patient perspective.

Chapter 7 - Empathy from the patient perspective

Studies 1-3 utilised the IRI in understanding the individual differences associated with the antecedents of empathy and aimed to explore the specific behaviours connected with those individual differences in the healthcare context. While a clear pattern of individual differences was apparent in terms of a broad measure of personality and a specific measure of emotional intelligence, the behaviours associated with these differences remain unclear. There are several reasons for this, both methodological and theoretical, which were explored in detail in the previous chapter. In terms of methodology, there is a need to explore typical empathic behaviours from the perspective of the ultimate judge in this context, the patient. Theoretically, the situational factors as well as the specific behaviours associated with empathy in the healthcare context also need to be considered. Patient-practitioner similarity in terms of culture was given as an example of this in the previous study. The purpose of this final study is therefore twofold. First, it will aim to expand current understanding of the typical behaviours associated with empathy in this context, as judged by patients. Secondly, it will build upon the findings of studies 1-3 to expand understanding of the antecedents of empathy by considering situational factors as well as individual differences. This chapter will begin by considering the theoretical basis of the present study, before moving on to justify an alternative methodology.

7.1 The patient perspective: judgements of empathy

Davis (1996) identifies 'interpersonal outcomes' as the final stage in his multidimensional model of empathy, with the adapted model from Larson and Yao (2005: see Figure 7.1) arguing that these 'interpersonal processes' are the indicators by which empathy is judged by patients in this context. These judgments of empathy will depend not only on whether the practitioner understands the perspective of patients and their emotional response, but also the extent to which the practitioner demonstrates this understanding in empathic behaviour towards the patient. Outcomes such as patient trust, compliance with medical treatment, quality of care relationships and satisfaction with medical services will depend on patients' judgements that the doctor is empathic, which in turn will depend on the doctor's behaviour (Barnett, Howard, King & Dino, 1981; Becker & Maiman, 1975). However, there is some evidence to suggest that the behaviours that patients use to make these judgments are different to the ones identified as important by healthcare professionals themselves. For example in a study of physicians, patient judgments of empathy were predicted by reassurance, listening and being sensitive to needs, whereas assessor ratings were influenced by the introduction of open communication cues (Silvester et al., 2007). It is therefore important that research should focus on the patient perspective, particularly in light of the fact that within the NHS there is an ongoing commitment to acknowledging the patient perspective and developing doctor-patient partnerships (Department of Health, 1996).

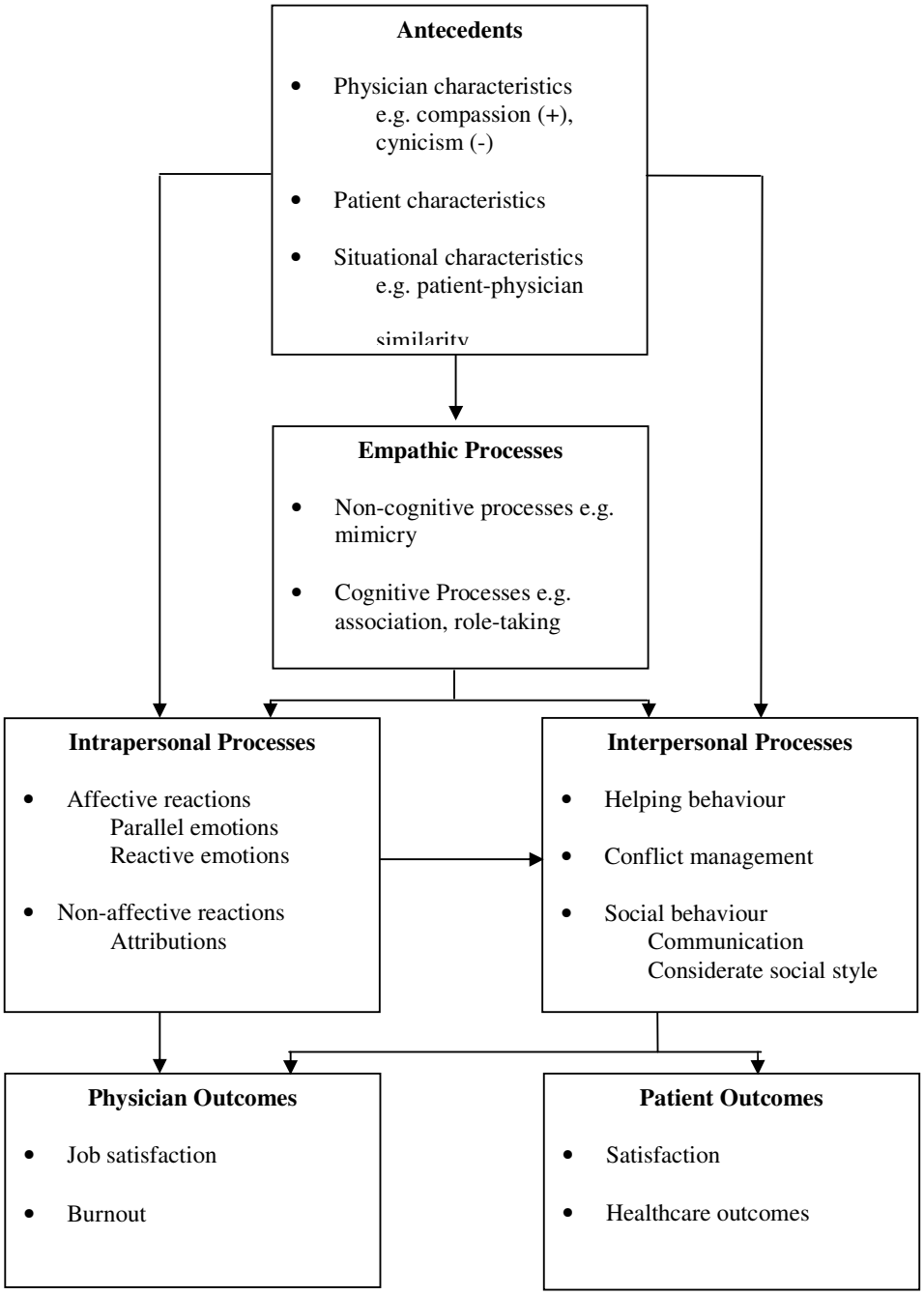


Figure 7.1. Process model of clinical empathy (from Larson & Yao, 2005).

7.2 Empathy and behaviour

While it is important to understand empathic behaviour from the patient perspective, specification of the behaviours remains vague (Stepien & Baernstein, 2006). There is a growing call for the assessment of interpersonal behaviours as an indicator of medical competence alongside clinical knowledge (e.g Epstein & Hundert, 2002). Methods of evaluating empathic behaviours have typically been developed without a strong theoretical focus on empathy (e.g. Mercer & Reynolds, 2002). Although work in the UK has sought to identify the behavioural competencies needed by physicians in order to deliver good medical care (e.g. Patterson et al., 2000), these investigations have also been broad in focus, looking at the full range of physician performance. Although some more recent research has attempted to understand empathic behaviour more specifically, examples are few. A study by Forchuk and Reynolds (2001) asked 30 patients within a psychiatric unit to describe the behaviours of nurses that they perceived as helpful in building an empathic relationship. Helpful behaviours included exploration and clarification of feelings and their meaning to the patient as well as helping clients to focus on future solutions rather than past problems. Listening was an important indicator of this. While this research is a useful starting point, it is limited to one context (psychiatric patients) and therefore further research is needed to replicate these findings in alternative contexts. This study therefore seeks to develop understanding of the specific interpersonal behaviours which patients judge as empathic in the healthcare context.

7.3 Antecedents: situational characteristics

In their adapted model, Larson and Yao (2005) also highlight the need to consider not only the characteristics of the healthcare practitioner but also those of the patient and the situation in discussing antecedents to empathic processes. For example, they highlight patient-practitioner similarity as a potentially important variable. In the previous study, similarity in terms of culture was raised as a possible important factor. However, the majority of empathy research within the healthcare literature focuses on the individual characteristics of the practitioner (e.g. Morse et al., 2006; Stepien & Baernstein, 2006) and so very little is known about the situational factors that may influence the relationship between individual differences and behaviour. This final study will therefore pose two central research questions:

1. *What are the specific behaviours identified by patients when making empathy judgments in the healthcare context?*
2. *What are the situational antecedents of empathy that might impact on the relationship between individual differences and behaviour?*

In order to address these research questions, a different methodological approach is used for this study, namely a qualitative one. It is therefore necessary to first justify this decision.

7.4 Quantitative and qualitative methods

Quantitative approaches to research, such as those taken with the use of psychometric questionnaires used in this thesis are useful for testing hypotheses via measurement and control of a structured sample of variables (De Vaus, 2002). They

are underpinned by a positivist assumption that 'the truth is out there', in that there are consistent relationships which can be measured and observed. Indeed, the very word 'quantitative' implies that measurement can be made on some numerical basis (Rust & Golombok, 1999). Quantitative research aims to be as objective as possible, in order to discover the generalised laws that apply to psychological constructs. As Coolican (2009) notes, quantitative methods result in reliable, internally valid, objective data. It is this kind of evidence which has been presented thus far. However, this psychometric approach can have its limitations. For example, analysis focuses on areas defined by the researcher, rather than exploring what is meaningful to the participant (Robson, 2002). In addition, the method of investigation, namely that of a self report pencil and paper questionnaire, could be seen as incongruent as a method for examining a dynamic interpersonal concept such as empathy (Cassell & Symon, 2004).

In order to address some of these limitations, this study uses a qualitative methodology. For many years within psychology, a debate has existed with regard to the relative benefits and limitations of quantitative and qualitative approaches. Proponents of pure quantitative methods criticise qualitative research as lacking in reliability and validity, being uncontrolled, subjective and biased (Coolican, 2009). Qualitative researchers on the other hand would reply that a reductionist, quantitative approach removes understanding of humans who are *'laden with values and must be understood in the context of their time and cultural setting'* (Bem & Looren de Jong, 1997, p.23).

Rather than the positivist approach underpinning quantitative research, qualitative researchers use a social constructionist approach (Smith, 2008). Instead of an observable objective truth, the assumption is that reality is multiple and constructed by individuals (Banister et al., 1994). Within this framework, participants' accounts are not simply representations of the world. Rather knowledge is actively created between researcher and participant (Miles & Huberman, 1994). Importantly, rather than investigating numbers and objective facts, qualitative research paradigms emphasise meanings, descriptions and experiences, looking for the emergence of themes or patterns. Raw data consists of what people have said in interviews or recorded conversations, or a description of what has been observed (Smith, 2008). Within the context of empathy research, this would involve allowing patients to talk about their descriptions and experiences of empathy instead of guiding them with reference to previous scales and definitions. It would seem then that empathy is a suitable topic for qualitative research. It is complex concept with many dimensions therefore qualitative investigation will allow the participants to focus on those areas meaningful to them. As a dynamic interpersonal concept, a method of social exchange rather than a pencil and paper questionnaire could be seen as more authentic (Lincoln & Guba, 1985).

It should further be noted that qualitative and quantitative methods are not necessarily incompatible. Multi-method approaches which aim to combine the two perspectives are commonly found within theory and measure development (Coolican, 2009). According to Bartunek & Seo (2002), qualitative research can complement findings from research studies to develop understanding. Collection of data using an authentic research method for the topic of interest can allow for a

greater understanding of how phenomena are experienced in particular contexts, in terms of depth and meaning from a smaller sample of participants (Lincoln & Guba, 1985). This is the therefore the approach taken in this study. Empathy from the perspective of patients is explored, with a focus on real experiences.

7.5 Method

7.5.1 Participants

The study was located within three wards of the medical division of a large teaching hospital in the north east of England. Approval was sought and finally gained from the local ethics and research & development committees. Twenty patients were interviewed over a two week period within private rooms on the wards. Of the 20 patients interviewed, 14 were female and six were male. Nineteen of the patients were from the local area and of White (British) ethnic origin. One patient was from Pakistan and of Pakistani ethnic origin. Age ranged from 28 to 78 years (Mean age 55 years, S.D. 15.62 years). Length of stay in the hospital ranged from one week to a period of several months. In accordance with requests from the ethics committee, no additional information was gathered as this was not deemed relevant to the study.

7.5.2 Procedure

Participation in the study was voluntary. Ward sisters on each of the three wards involved were asked to identify current patients whom they felt were well enough to take part in a 30 minute interview in a side room. Before starting the interview,

information sheets were provided and the purpose of the study and format of the interview were explained fully. Patients were asked to sign a consent form to indicate that they understood this information and agreed to take part (see Appendices 5 and 6 for the information sheet and consent form). Twenty two patients were approached to take part in the study; only two patients declined to be interviewed. All interviews were conducted face to face and audio-recordings were made for accuracy.

A semi structured interview incorporating a critical incident method was adopted for all patient interviews (Flanagan, 1954). Patients were asked to describe incidents of when they felt a nurse had empathised with them and also when a nurse had not empathised with them. Where patients spoke in general terms about a nurse, they were then prompted to give a specific example of an incident to illustrate their point. Within each critical incident, patients were asked to describe briefly what had happened during a specific example and also the outcome for them (see Appendix 7 for the interview schedule). Confidentiality was assured by explaining that any names mentioned would not be recorded in transcripts of interviews and that information provided in the interviews would only be fed back to hospital staff in general terms so that individuals could not be identified. Interviews lasted from 15 to 30 minutes and were transcribed verbatim for analysis.

7.5.3 Analysis

Template analysis was used to code the data from the patient interview transcripts, using the approach specified by King (2004). In template analysis (King, 2004), *a*

priori codes or categories are pre-selected according to the researcher's particular interests. Categories are usually organized in a hierarchical fashion, with several lower order categories being grouped together to produce a more general, higher order code. Production of the initial template was directly influenced by the model of Larson and Yao (2005; Fig 7.1) in their adaptation of Davis' (1996) multidimensional model for the clinical encounter, but deliberately kept to only two levels of code to allow for emergent themes from that data rather than taking a very prescriptive coding approach.

According to the Larson and Yao model, six higher order (or level one) codes were present in the initial template: antecedents to empathy; empathic processes; intrapersonal processes; interpersonal processes; nurse outcomes, and patient outcomes. Within these six higher order codes, one further lower level of code was present. For example within 'antecedents', a level two code was 'situation'. The model could have been used to identify further levels of code at the initial stage, but this was avoided so that the final template could be guided by the data rather than being constrained by the initial template. The initial template is shown in Figure 7.2.

Figure 7.2: Initial Template for analysing patient interviews

1. Antecedents of Empathy
    - 1 Nurse
    - 2 Patient
    - 3 Situation
2. Intrapersonal processes
3. Empathic Processes
4. Interpersonal Behaviour
    - 1 Helping Behaviour
    - 2 Social Behaviour
    - 3 Conflict management
5. Nurse Outcomes
6. Patient Outcomes

The initial template was used to code all 20 patient interview transcripts. It is important to note that template analysis allows for parallel coding, in which the same segment of text might be classified under two or more categories. A brief illustration of the coding process is given for the following extract from the first patient who was talking about the fact that a nurse had accompanied her for some tests because she had been quite frightened:

> *"And when she came back up she thanked me* [3 – interpersonal behaviour: considerate social style] *because she said she'd learnt a lot* [5 - nurse outcome: thanking the patient] *and we'd had a nice chat on the way* [3 – interpersonal behaviour: communication, chatting], *so we enjoyed it* [5 - nurse outcome, 6 – patient outcome: satisfaction].

According to King (2004), it is necessary to consider modifications to the coding template and make changes during this initial coding process, in order to develop a final coding template: possible modifications inserting a theme; deleting a theme; changing the scope of a theme to make it broader or narrower, and differentiating between higher (broader) and lower (narrower) coding themes. It is also possible to change the higher-order classification of a theme by moving it into a different category. This illustrates an important advantage of template analysis in that, whilst theories or previous research may suggest certain themes (and can include these to formulate initial templates) the modification process allows for a degree of open coding such that the final template fully represents emergent themes from the data. Modifications made to the initial template are summarised below.

First, two higher order themes were combined. Specifically, there was little use of the themes 'intrapersonal processes' and 'empathic processes' during coding, but where they were, they appeared to fit together. This is unsurprising given that the methodology focused on the patient perspective. Patients spoke relatively less about the process of empathising within the nurse and more about the context and behaviour.

Secondly, there was a need to differentiate several codes with the addition of a number of lower level codes. It became apparent during initial coding that many of second level codes needed to be redefined with the use of third and fourth level codes in order to produce a useful final template. For example, the higher order theme 'interpersonal processes' was originally split into three second level codes, 'helping behaviour', 'conflict management' and 'social behaviour'. 'Conflict

management' was not used at all in the coding process and this was deleted. The other two codes 'helping behaviour' and social behaviour' were used extensively. Helping behaviour was split into four third level codes: responding to requests; being quick to help; problem solving, and acting as a patient advocate. Social behaviour was split into two third level codes, communication and considerate social style. These were then split into a further five level four codes each, representing the fine grained nature of the coding process for this area of the template.

Analysis was conducted fully by the researcher with modifications made throughout the coding process. The final template was reached after four rounds of coding of the 20 transcripts. Appendix 8 includes a sample of a fully coded interview transcript, which Coolican (1999) recommends providing as an indicator of transparency in a rigorous coding process (King 2004). Once the final template had been developed, transcripts were reviewed and recoded by the researcher to check that the coding reflected the final template fully.

In terms of quality checks on the qualitative analysis process, there are several options available. Respondent feedback is a useful method of checking the quality of the analysis (King, 2004). In order to do this, those who participated in the research area asked to comment on the analysis and interpretation. Unfortunately the hospital participating in the research was not willing to allow this final stage of checking. There are some researchers who recommend that it is necessary to consider inter-rater reliability of identifying codes (Coolican, 2009). However this is not advocated by King (2004) and, as noted by Coolican (2009), this may be more relevant where teams of researchers are involved in coding the data from a single study, which was

not the case here. Despite this, there remains some need to demonstrate the vigour and transparency of the data analysis process. King (2004) suggests that a final template may be satisfactory when: (a) no sections of the transcripts that are relevant to the research question remain uncoded; (b) all data have been read through and the coding checked at least twice, perhaps three or four times, and (c) collaborating researchers (or in the absence of a collaborator, an outside expert) agree that the template is sufficiently clear and complete. The final template was reached by the researcher after four rounds of coding. At this point, independent scrutiny of the final version of the template was conducted by two psychologists who were experienced in the use of coding approaches to qualitative data. These psychologists used four of the transcripts to consider whether there were: any themes that they found difficult to employ; any aspects of text not covered by the template, and any other issues of note when reading the text. No issues of concern were raised by either, therefore the template was considered to be sufficient as a final version. The final template for all transcripts from both positive and negative incidents of empathy is given in Figure 7.3.

Figure 7.3 Final template from analysis of patient interviews

1. Antecedents
    1. Nurse characteristics
        1. Agreeable personality
        2. Motivated and engaged
    2. Patient characteristics
        1. Negative feelings about medical condition or treatment
            1. Sadness and loneliness
            2. Frustration and anger
            3. Anxiety and fear
            4. Shock
        2. Behaviours
            1. Asking questions about condition or treatment
            2. Withdrawal
    3. Situational characteristics
        1. Lack of time, nurses' workload
        2. Communication between staff
2. Intrapersonal processes
    1. Perspective taking
    2. Compassion and sympathy
3. Interpersonal Processes
    1. Helping behaviour
        1. Responding to requests
        2. Acting as patient advocate
        3. Quick to help
        4. Problem solving for patient
    2. Prosocial behaviour
        1. Communication
            1. More communicative
            2. Initiating communication
            3. Listening
            4. Explaining and informing
            5. Communicating with family
        2. Considerate social style
            1. Participative
            2. Kind and considerate
            3. Reassuring
            4. Positive emotional display
4. Patient Outcomes
    1. Satisfaction with care
        1. Trust and confidence in nurses
        2. Negative feelings alleviated
    2. Healthcare outcomes
        1. Confidence and optimism about medical condition
        2. Compliance with treatment
5. Immediate Nurse Outcomes
    1. Open communication from patients and family
    2. Satisfaction with interactions

7.6 Findings and Discussion

The interviews were successful in producing rich, detailed accounts of participants' experiences of nurses' empathy, in line with the complex multidimensional nature of the concept. As a result, it is necessary to justify the nature of the presentation of the findings. To go through every code within the final template in equal depth would result in a rather superficial, descriptive account of the findings. Rather, the discussion of the findings focuses first on the two central research questions for the study before moving on to briefly consider other emergent findings. This selective, interpretive presentation of findings is in line with previous articles employing template analysis (e.g. King, Carroll, Newton & Dornan, 2002). Any participant names are pseudonyms to emphasise individual participant's experiences while also maintaining confidentiality. The research questions for this study were:

1. *What are the specific behaviours identified by patients when making empathy judgments in the healthcare context?*
2. *What are the situational antecedents of empathy that might impact on the relationship between individual differences and behaviour?*

The findings from the template analysis with respect to 'Interpersonal Processes' will therefore first be discussed, in response to question one. This is followed by exploration of the findings from 'Antecedents – Situational characteristics' in response to question two.

7.6.1 Interpersonal Processes

Perhaps understandably from interviews focusing on the patient perspective, the most frequently identified codes fell within the higher order category of interpersonal processes. These are of course much easier for the patient to observe than intrapersonal processes. Patients identified two main categories of behaviour with respect to interpersonal processes, namely *helping* and *social behaviour.* Each of these second level codes was then split into several level three codes. These findings are presented in considerable detail as they provide much specific information regarding to behaviours associated with empathy in this context.

Interpersonal processes: helping behaviour

Helping behaviour was frequently characterised by patients as the nurse being *responsive to requests: "No matter what I'm asking about, she doesn't give me the brush off, she answers me properly. And she responds at the time that I've asked her to. And she sits and listens to you. And I find that very helpful".* Many patients identified other factors within helping behaviour as well as being responsive which they saw as demonstration of the nurses' understanding and caring. These included *acting as a patient advocate, helping quickly* and *resolving issues fully.* All of these themes are reflected in the quote from Ann, a 62 year old stroke victim talking about Beth, a nurse she viewed as highly empathic:

> *"If you have a problem, she sorts it out. I was supposed to have an appointment with the physio, the doctor said. I waited for days...but it didn't happen. I just spoke to Beth and she made it happen for me right away. She gives me privacy when I want it, she's the one that thinks about that sort of*

> *thing. She's got more go. She sorts you out very quickly, even though she's very busy, she pays attention to everybody".*

Acting as an advocate is something which has been previously been identified by nurses as an expression of empathic behaviour (Morse et al., 2006) and it appears it is received in this way by patients.

Interpersonal processes: prosocial behaviour

Whereas *helping behaviour* referred largely to what the nurse did in response to the patient, *prosocial behaviour* was seen as the style of responding. There were two themes within this *prosocial behaviour* category which characterised incidents of nurse empathy, namely *communication* and *considerate social style*. Both of these themes were seen as resulting from the nurses' personality and situational characteristics. In particular, patients described nurses who were seen as compassionate and understanding as *more communicative* in general. This was not necessarily through spending more time with them, although this was sometimes the case. The patients on these wards frequently spoke of empathic nurses as busy but able to make the most of their time by *chatting about social topics* in addition to clearly *explaining and informing* them of medical issues, as described by Ann, a stroke victim:

> *"I was scared at first that I wasn't going to be able to talk but she kept talking to me and ...I was a lot better after a week. She would chat about different things, how the stroke happened and explaining it to me so I understood. But also just talking to me about the weather and my family, you know, just to keep my spirits up".*

In addition, empathic nurses were described as those who *initiated and opened up communication* with patients, as a result of their responding to the patients' emotions. Initiating conversation might involve going in to a side room to check on a lonely patient or asking open questions to find out more about a situation:

> *"When I was in the side room, I didn't see many people coming and going. She would try to have a chat with you and buck you up a bit you know because I was on my own, otherwise it was just very depressing".*

Patients also identified the importance of listening within incidents of nurse empathy, as described by Susan, a young lady with an undiagnosed illness under investigation:

> *"She listens to you, listens to the problems you've got. When she's got time then she'll listen to you... To her, it's more than my medical condition, I'm a person".*

Finally within this theme, over half of the patients identified the nurses' communication with the family as being demonstration of a caring and understanding approach. In Susan's interview she went on to say:

> *"My Mum and Dad are able to ask her things, that's important. It's difficult for me because I've been due to go home a few times now and then at the last minute there's been a problem with my tests. They know how I desperate I am to get home... she was disappointed for me as well. But at least I know Mum and Dad can talk to her".*

This theme was closely linked to the patient withdrawal as an antecedent to empathy; where patients became less communicative, they judged communication with the family as a demonstration of empathy towards them.

In addition to communication, the second theme within *prosocial behaviour* was the presence of a *considerate social style.* Within this theme, a participative style characterised several incidents of nurse empathy, demonstrated with patients being *asked and encouraged* rather than told to do something:

> *"Things were explained fully, whether they could be treated or not. I wasn't made to do anything, I was encouraged. She didn't tell me what to do".*

Helping and communication behaviours were generally characterised by *kindness* and *patience:*

> *"she's very patient and very kind. Like I had a stroke, and she was very patient with me. Whatever you ask for, she helps you so nicely and you don't feel like you're any trouble and you feel very good".*

In contrast, nurses who did not empathise were seen as being too quick and harsh in their communication style: *"I asked her something and she really turned round and snapped at me like I was stupid.... And I was that upset".*

The provision of *reassurance* alongside other actions was also seen as important by more than half of the patients, in particular those who reported feeling anxious, frightened or worried. This is an example from a patient who was anxious about requiring a hearing aid:

> *"And she reassured me, she said "This is what we mean, we can't see it on you, no one knows you've got it on" I agreed and I was pleased, so I said yes, I would have it put on".*

For those patients who reported feeling sad or down, rather than reassurance, they frequently mentioned the use of *humour* as an effective social style in helping them to feel supported and more optimistic:

> *"I felt completely suicidal last year when I was in for so long. She would come and sit with me and let me talk, she was here when I was upset. She let me talk and she tried to cheer me up, you know making jokes and that. It makes a real difference to me".*

This use of humour and a general display of positive emotions is interesting because it does not necessarily require the experience of a particular emotion from the nurse. Larson and Yao (2005) identify clinical empathy as a form of emotional labour. Whereas surface acting emotional empathy can refer to the appearance of emotions that are not necessarily experienced, deep acting empathy involves the actual experience and subsequent expression of these emotions (Grandey, 2003). These are important issues to consider in developing and sustaining clinical empathy because within the emotional labour literature, researchers have much to say about the potential impact of care work on the practitioner and the patient. For example, it has been argued that surface acting empathy might protect the practitioner from becoming over-involved and emotionally exhausted (Maslach, 1978) but might not be perceived by patients as genuine. However this did not seem to be the case for these patients. Conversely, while deep acting emotional empathy provide the practitioner with emotional harmony, potential negative consequences might include

over-involvement, decreased objectivity and emotional exhaustion. Such issues are important in understanding the difficulty of maintaining clinical empathy over time (e.g. Hojat et al., 2004; Spencer, 2004). The discussion now turns to the antecedents of empathy as identified by patients.

7.6.2 Antecedents of empathy

The patients interviewed in this study discussed several themes regarding the antecedents of empathy. The situational factors that were the subject of the second research question are discussed first.

Situational characteristics: workload

Most frequently, when patients were asked to describe an incident when a nurse had been unable to empathise with them, they did not feel that the nurse was particularly responsible for this situation occurring. Rather they saw it as a result of *staffing levels* in the ward: *"I wouldn't say anyone doesn't understand, they're just busy"* and *"They can't spend too much time with each patient because there's so many patients and so few nurses".* Although workload might not prevent all nurses being able to empathise, it certainly seemed to present an extra challenge for nurses according to many of the patients. For example, Frank compared wards where nurses were highly effective and less effective in empathy by saying:

> *"I don't know, I suppose it's just that they don't have the time down there* [different ward]. *Mind you, they don't really have the time up here but they always try to make time for you, just to pop in and see if you're OK, if there's anything you need. You know you're not going to get lonely up here".*

Lindsey, a 33 year old female patient agreed with this, by describing incidents of presence and absence of empathy within the same nurse whom she had previously described *as "a really caring person",* thus demonstrating that nurse personality is not sufficient to ensure effective empathy in the nursing role*: "If they've got time then she'll listen to you. Time is the main problem, because they have to look after so many patients".*

Situational characteristics: communication between staff

Although the discussion of positive incidents of empathy did not identify this theme within the data, three patients also mentioned an absence of empathy where there had been poor communication between staff. *"When you come to a shift change, the nurse who comes on doesn't usually understand what has happened to you during the day - that is annoying".* Handover of information is not the only potential barrier within this theme. Potential conflicts or poor team relationships create issues which divert nurses' attention away from patients. David, a 58 year old male patient in the day unit described such a situation:

> *"It's very frustrating not knowing what's happening or why...I sometimes feel like the nurses don't know what the doctors are doing and the doctors don't trust the nurses. The doctor put me on antidepressants and the nurse said I wasn't depressed. I was just worried because I didn't know what was going on. The communication isn't there between the doctors and the nurses...".*

These situational characteristics that patients described as barrier to empathy from nurses on these wards are not entirely new findings. For example McCormack & McCance (2006) identified similar themes in a review of the literature on the

development of person–centred nursing, where key characteristics of the care environment included culture of the workplace, effective staff relationships and nursing leadership. However, it is an aspect of the process model of empathy that has thus far been largely ignored, the focus instead placed centrally on the individual practitioner in terms of skills and abilities.

So far, this discussion has focused on the areas of the template most relevant to the two research questions. It is important to briefly describe the findings from the rest of the template, in so much as they support previous literature regarding empathy in healthcare settings.

Patient characteristics: negative feelings

Most of the patients began describing the incidents by discussing their own feelings and behaviours which created the need for empathy from the nurse. This was to be expected as nurse empathy is likely to be triggered by the patients' expression of *negative feelings* which ranged in both nature and intensity. These negative emotions included *anxiety* about treatments or conditions, or about a perceived lack of control over their situation. For other patients, there were feelings of *sadness and upset*. This went as far as clinically diagnosed *depression* for two patients, associated to longer and repeated stays in hospital and serious diagnoses (not recorded for confidentiality reasons). Others reported feelings including *frustration* and *shock.* The large range of negative feelings articulated by patients, which were either associated directly with the medical conditions suffered by patients or indirectly with the experiences of treatment and being in hospital all seemed to act as the trigger for the subsequent empathic (or non-empathic) interaction.

Patient characteristics: behaviours

Sometimes the patients also identified their own *behaviours* which resulted from these feelings. Most frequently, patients reported that their feelings resulting in *questioning* of nurses and other staff. The questions tended to be medical ones stemming from uncertainty over the condition or treatment. Some patients on the other hand reported the opposite of asking for help, in that they would *withdraw* from interaction with others. This highlights the difficult task faced by nurses in having to pick up on very different behavioural cues offered by different patients.

Nurse characteristics: agreeable personality

In discussing incidents of empathy from nurses, patients made judgements regarding the nurses' personalities, in particular with respect to the domain of agreeableness. Words such as *kind, gentle, caring and approachable* were frequently used throughout all twenty of the interviews. Some of the patients said more empathic nurses were more *tolerant* and *patient* of their particular circumstances which they appreciated. The patients who mentioned it definitely felt it was part of the nurse's personality which therefore facilitated an interaction in which the nurse demonstrated empathy, in line with the findings of this thesis.

Nurse characteristics: motivated and engaged

In addition to personality, patients also identified nurses who were more *motivated and engaged* as ones who were more approachable to share their feelings with: *"She's always there for your needs. If you need anything, she's prepared to go and*

do it for you". This was highlighted particularly well by Andrew, a 55 year old male patient, in his general observations of a particular nurse's working style:

> *"She's got more go. She sorts you out very quickly, even though she's very busy, she pays attention to everybody... If you need anything, she's prepared to go and do it for you. Even down to one someone getting the wrong tea, she'll go and get them the right meal. It's not part of her job but she does it...She does her job as a nurse, the obs and everything, but it's more than that".*

The importance of motivation and engagement in workplaces within the UK is currently a topic for much investigation, with drivers of engagement being identified as human resource management strategies and leadership (MacCleod & Clarke, 2009). This links back to the situational characteristics identified earlier and again suggests that for nurses to be empathic, development interventions should take a wider focus than the skills of individual practitioners.

7.6.3 Other areas of the template

<u>Intrapersonal processes, nurse and patient outcomes</u>

The nature of the intrapersonal processes of perspective taking and emotional responsiveness are well documented and supported by the results of this analysis. This is also the case for outcomes of empathy for both nurses and patients. As such, these findings are not be explored in depth but are briefly described.

Most patients interviewed perceived that nurses who were more kind and caring were more likely to engage in *cognitive role taking* such that they appeared to be

thinking about what the individual patient might be feeling or needing. Indeed, absence of this perspective taking was identified many times as being a factor in negative incidents of empathy. Patients only talked about the affective *reactions* of nurses in terms of appropriate *reactive emotions* observed in response to the patient's own negative feelings. Words such as *sympathy* and *concern* were used frequently throughout examples of empathy. Correspondingly, a lack of compassionate responding tended to be a major theme throughout interactions lacking in empathy: *"They did explain but they didn't show much sympathy".* Although patients did not identify parallel emotions or shared affect, this could have been because they are not able to judge these kinds of processes within the nurse accurately. However, with regard to the compassion and sympathy, there was a perception that this was empathic because it was genuinely felt by the nurses. This was perceived to be a genuine felt emotional reaction rather than merely the display of it, as described by John, a 47 year old patient who had been in hospital for several months: *"It bucks you up, especially if you're feeling low. It makes you think at least somebody cares, you feel stronger you know and you don't feel like you're going to be just stuck in here. She really does care... she was so good to me and my wife".*

The immediate outcomes identified by patients as a result of the interpersonal processes described above included both *satisfaction* with the care they had received and perceived improvement in *health outcomes.* S*atisfaction* with care fell into two main themes: *trust and confidence in the nurses*, and the *alleviation of negative feelings* that had acted as the trigger to the incidents described within the interviews. *Feelings of trust and confidence in the nurses* were strongly reported by patients, particularly resulting from the open communication and explanation of the current

and future situation for them. The alleviation of negative feelings, crossing into the generation of positive feelings for some patients, was the most frequently identified outcome of nurse empathy: *"It bucks you up, especially if you're feeling low. It makes you think at least somebody care"*. As well as reporting satisfaction with care, patients also reported perceived benefits in terms of *health outcomes* of nurse empathy. This was characterised by an optimism and confidence in their ability to recover or improve, particularly resulting from the encouraging style of nurses: *"You always feel nervous in hospital but when the nurses are good to you like that, you feel like you're being looked after and you're going to get out"*. The participative style was also used to great effect in gaining compliance with treatment in those occasions where the patient's negative feelings were around a proposed treatment or course of action.

Whilst literature suggests that the long term outcomes of empathising for nurses may involve greater job satisfaction and burnout (e.g. Larson & Yao, 2005), as mentioned previously patients were unable to comment on these broader issues. Although the patients were able to identify positive experiences for the nurses, they were unable to say whether or not this resulted in overall job satisfaction which can of course be influenced by a large range of other factors such as pay or leadership (Larrabee et al., 2003). Instead, the nurse outcomes identified revolved around the impact of patients' own behaviour towards the nurses following a demonstration of empathy (or lack of it). First, patients reported that once they had experienced nurse empathy, they were more likely to *communicate openly* with that nurse. Secondly, many patients perceived that the enhanced communication between nurse and patient did provide nurses with *positive experiences* in their job.

7.6.4 Reflections and limitations

There were several limitations within this study. First, it is important to note that the patients interviewed as part of this study were identified by the Ward Sisters and as such the sample was not random. In addition, interviewing current patients may in itself be problematic as there were perhaps times when patients were reluctant to speak openly about people upon whom they are currently relying for care. One way around this for future research would be to go through GP surgeries to identify patients who had recently experienced a hospital stay. However, the critical incident technique and use of a private room were both effective in encouraging patients to identify example of empathy and speak at some length. The interview skills required for this kind of research are also important to note. It is unlikely that a patient would open up to an interviewer on the topic of empathy if an empathic approach to interviewing was not taken. In this case, having been a relative of a patient on one of the wards involved in this study, it was possible for the researcher to understand and relate to the patients experiences.

A further limitation was that the findings of the template analysis could not be shown to the participants for feedback (King, 2004). However, the process of gaining ethical approval was a long and drawn out one and in the end this was a part of the research design which was not possible. It took eleven months, two committee meetings and a letter of recommendation to finally obtain ethical approval. Hospital ethics committees are possibly more used to medical research and so this kind of proposal seemed to pose problems for them. Organisational access to collect data can

be fraught with difficulties at the best of times (Robson, 2002). Perhaps this is one of the reasons why the concrete experiences of patients with regard to this topic remains so relatively unexamined (Forchuk & Reynolds, 2001).

7.6.5 Summary

This study adopted a different approach, to extend understanding of the situational characteristics and specific behaviours associated with empathy in the healthcare context. Importantly, the study aimed to gain the perspective of the receivers of empathy, namely patients, whilst employing a congruent methodology with the interpersonal nature of the topic. The themes resulting from the template analysis supported the findings of the first two studies in terms of individual differences, while adding to understanding of the situational characteristics that can act as antecedents to empathy. These included issues of workload and communication between staff. Specific behaviours were also identified in considerable detail, including the provision of practical help as well as prosocial aspects of communication and a participative, positive, considerate approach. This information will be useful in guiding interventions for the development of empathy in the healthcare setting, discussion of which is included in the final chapter.

Chapter 8: Concluding discussion

A basic premise of this thesis has been that greater understanding is required of how empathy can be developed in patient-healthcare professional interactions in order to foster the development of more effective training and development. Despite evidence that empathy in healthcare professionals can have an important impact on patient care and professional satisfaction, surprisingly little progress has been made in efforts to develop interventions capable of sustaining or significantly improving the levels of empathy demonstrated by professionals. Interestingly, very few researchers in the medical field have sought to develop an integrated theory of empathy based on empirical research, but have relied instead on reviews of literature conducted in a range of contexts. Chapter two identified a direct adaptation of a comprehensive model of empathy for this context. This was the process model of clinical empathy. The key aspects of this model which were identified for investigation were: antecedents of empathy in terms of individual differences, patient and situational characteristics, and the specific behaviours associated with these characteristics. Chapters four to seven outlined four studies which examined these aspects. This chapter will begin by summarising their findings before moving on to consider the broader theoretical and practical implications of the findings.

8.1 Summary of the findings

The thesis began with a psychometric investigation of empathy and the five factor model of personality in the general population, before moving on to investigate emotional intelligence in a sample of healthcare professionals. The third study then

examined the relationship between empathy and behaviour in the same sample of healthcare professionals. The final study adopted a different methodology in an attempt to triangulate the findings with respect to individual differences in addition to expanding understanding of situational characteristics and empathic behaviours in this context. In order to understand the implications of this stream of research, it is first necessary to summarise the findings of each study.

Chapters four and five provided a psychometric investigation of the individual differences that are the antecedents of empathising. The first study was conducted using a general population sample and found a clear pattern of traits associated with a propensity to empathise. At the domain level, correlations indicated that those higher on agreeableness and extraversion were higher on self assessed perspective taking and empathic concern, while personal distress was characterised by greater neuroticism. A facet level analysis revealed a clearer picture of the empathic disposition. Facets of extraversion positively related to empathic concern and perspective taking included warmth, positive emotions and gregariousness. Facets of agreeableness related to those same scales included altruism, trust and tender-mindedness.

The second study then moved on to look at the individual differences associated with empathy in a specific healthcare context. A sample of 192 doctors completed a measure of emotional intelligence in addition to the measure of empathy, in addition to data from a general population sample. A preference for perspective taking and empathic concern was positively associated with a single factor of emotional intelligence. Of interest, those who reported higher personal distress also reported

lower emotional intelligence, suggesting that aspect of empathy may be problematic in an emotional labour context where control of emotions to remain objective is required.

Having developed a clear picture of the individual differences associated with a propensity to empathise, an examination of the relationships between empathic disposition and behaviour was then conducted. In an assessment context, ratings of behaviour were provided by trained assessors and compared to self report empathic disposition. For those doctors trained in the UK and Ireland, fantasy, perspective taking and empathic concern were positively related to assessments of interpersonal behaviour. However this relationship did not hold for doctors trained overseas. Furthermore, personal distress was universally related to lower ratings of interpersonal behaviour, again suggesting that this is not an effective empathic response in this context. However study three also showed that patient ratings of behaviour were highly skewed suggesting that there is no clear understanding of the behaviours that patients associate with empathy.

Therefore the final study adopted a different approach to extend understanding of the situational characteristics and specific behaviours associated with empathy in the healthcare context. Importantly, the research aimed to gain the perspective of the receivers of empathy, namely patients, whilst employing a methodology perhaps more congruent with the interpersonal nature of the topic. Twenty semi-structured interviews with patients within three medical wards were analysed. Themes resulting from the template analysis supported the findings of the first two studies in terms of individual differences, while adding to understanding of the situational

characteristics that can act as antecedents to empathy. These included issues of engagement, workload and communication between staff. Specific behaviours were also identified in considerable detail, including the provision of practical help as well as prosocial aspects of communication and a participative, positive, considerate approach.

8.2 Implications for theory

The thesis used a multidimensional model of empathy (Davis, 1983; 1996) and an adaptation of it by Larson and Yao (2005) as a framework for the examination of empathy in the healthcare setting. Figure 8.1 summarises the implication of the findings by incorporating them into a model extended from Larson & Yao (2005). Developments of this model in comparison to the Larson & Yao model can be seen particularly in the antecedents and interpersonal processes. Antecedents in terms of individual differences of the practitioner as well as role engagement are new findings, as are those of the situational characteristics around the work environment and team communication. In terms of the intrapersonal empathic processes, perspective taking and empathic concern were both found to fit with the model. Personal distress, a kind of automatic emotional response to those in need, was not seen as appropriate in this context where more control is required. Emotional intelligence therefore appears to fit well with the emotional labour context. Finally, the interpersonal processes that are likely to be judged as empathic have been

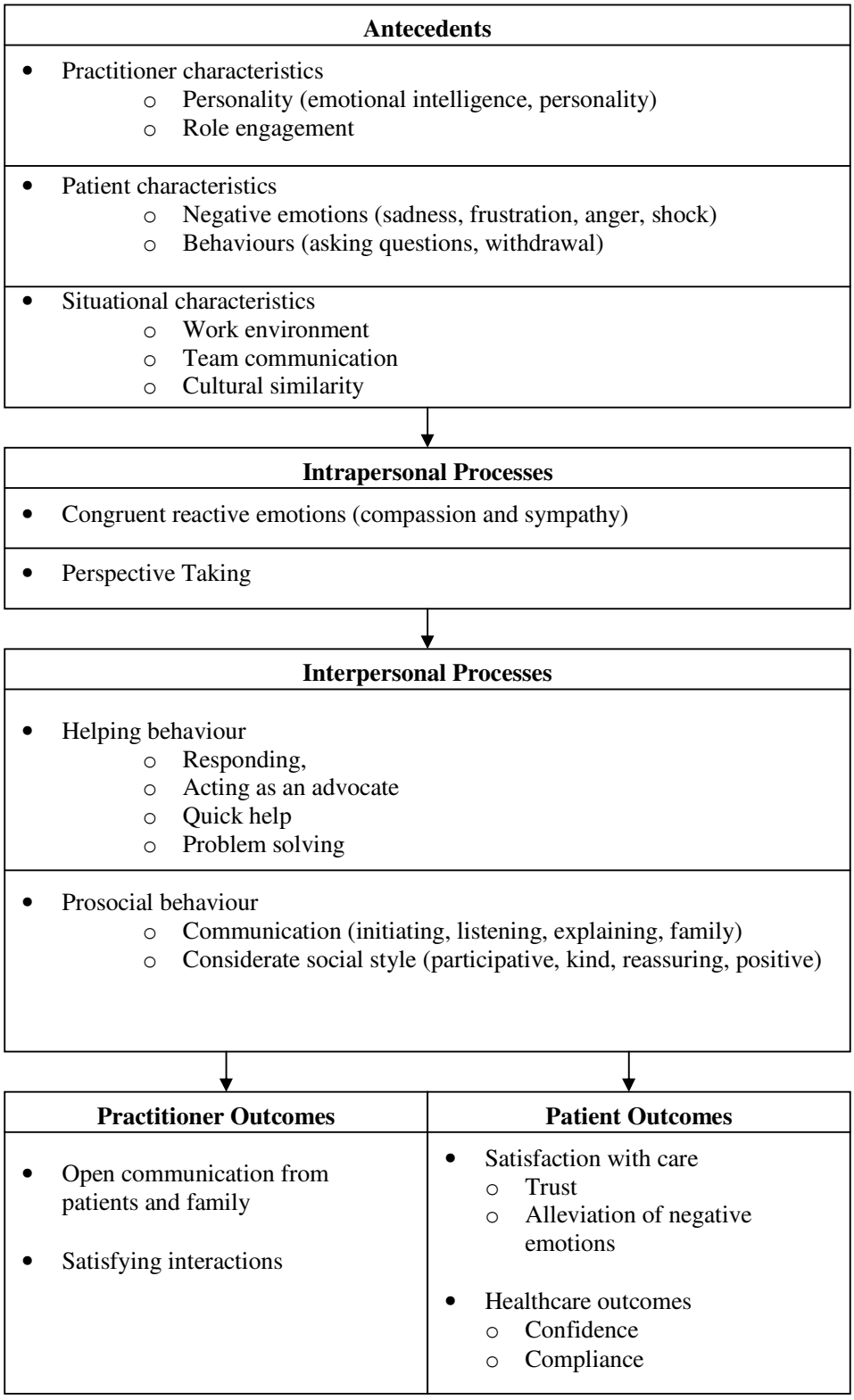


Figure 8.1: A process model of empathy in the healthcare setting

specified with much greater detail than previous models. The model as it now stands has clear implications for practice, which are now discussed.

8.3 Implications for practice

As stated throughout this thesis, a basic premise of this research has been that greater understanding of empathy in patient-healthcare professional interactions would be useful to guide the development of more effective training and development. The development of the model in Figure 8.2 has clear implications for the strategies adopted by healthcare organisations in their attempts to foster empathy among staff. These can be broadly aimed at three areas: training interventions; longer term development interventions and work design interventions.

Findings from evaluations with regard to empathy training interventions remain mixed at best (Stepien & Baernstein, 2006). Of particular note was the range of theoretical definitions adopted within Chapter two, which have guided the design of training content. Findings from this research clearly indicate that the concept of empathy is a complex one, which perhaps it is unrealistic to change a great deal through the provision of brief training interventions. It is possible that training courses could form part of longer development interventions; the experiences shared by patients in the final study of the thesis could be put to very good use in the design of training materials.

As empathy is often seen as part of personality, support for which has been found from this research, there are those who believe that training may only have a limited

effect on practice as personality remains stable over time (e.g. Evans et al., 1993). However, the focus on behaviour will be useful, as trait theory tells us that while our natural preferences may not change over time, one can learn characteristics adaptations to ensure a better fit to the requirements of the environment (McCrae & Costa, 1999). As such, the greater knowledge of behaviours associated with judgments of empathy should form the basis of training and development interventions. It would also be useful to use psychometric questionnaires with healthcare professionals to raise their self awareness of their natural preferences in understanding how change might be achieved. This is consistent with Carper's (1978) description of personal knowledge in nursing, where self awareness enhances empathy. The many commercially available emotional intelligence measures may prove useful for this purpose, providing a method of assessing empathy but also control of emotional responses (e.g. Bar-On, 1997).

Having considered direct interventions at the level of individual empathy, other interventions that could create a work environment where empathy is more likely to occur should also be considered. This is building on the findings from the research of situational characteristics that are antecedents of empathy. The situational characteristics included the work environment, employee engagement and cultural similarity between patients and practitioners. Where employees are required to work in multi-cultural environments, development interventions that focus on raising awareness of cross-cultural issues in healthcare would be of value (Wang et al., 2003). Given that more engaged nurses were identified by patients as the ones who provide more empathic interactions, it will be important to assess the link between engagement and empathy, currently a popular topic within organisational

psychology. Issues of leadership and teamwork are likely to be key to this kind of initiative (Robinson, Perryman & Hayday, 2004).

8.4 Future research

This thesis has raised many questions for future research. A limitation of all four studies was the cross-sectional nature of data collection. Future research should aim to take a longitudinal approach to assessing the development of empathy over time. Furthermore, it would be useful to assess the effectiveness of any training and development interventions via thorough evaluations. Within such investigations, it is important to consider the perspectives of the healthcare professional, as emotional labour roles are known to have impact on well-being over time (Maslach, 1978). It is however fundamentally important to continue to include patient perspectives in research, in order to understand the ultimate impact of empathy in the healthcare setting. Although this thesis has focused entirely on the healthcare setting, it would be very interesting to test the applicability of a multidimensional model of empathy in other roles. Any roles in which interactions with people are part of the job are likely to be relevant. Finally, the cross cultural challenge for empathy in healthcare settings requires further investigation.

8.5 Closing points

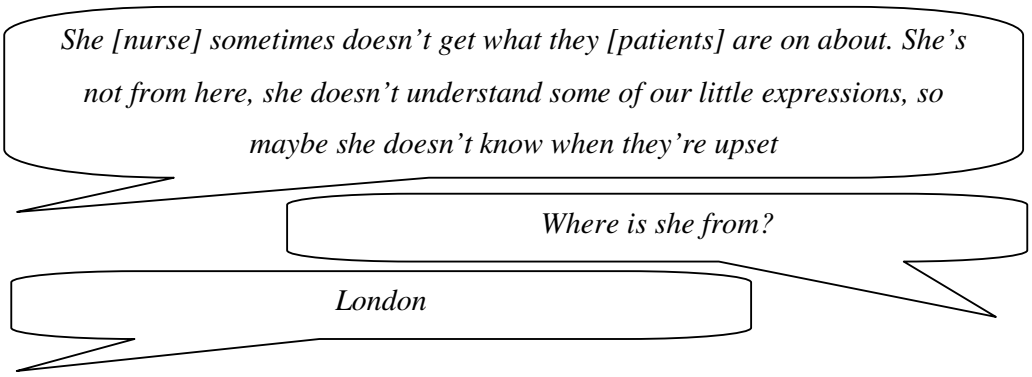
Summarising the thesis, key messages arising from this research are as follows:

1. There is a clear pattern of personality traits associated with empathy, which can be used in personal development work. However, a wider focus than the individual practitioner is needed with consideration of factors such as work engagement, team communication and work design.

2. Emotional intelligence is potentially a more useful concept than empathy as it is the management of one's natural emotional responses that helps practitioners to respond effectively in an emotional labour context.

3. Development interventions should include a patient perspective in their design, as the central recipients of the care experience.

4. Future work should consider how to develop empathy in practitioners trained in different cultures, including a more fine grained inspection of the impact of culture on behaviour. As was noted by one of the nurses in the hospital involved in study four in the North East of England:



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Appendix 1: Development of Research

This thesis began with the aim of designing an intervention to increase empathy in doctors. For several reasons, this aim altered. The first was that, upon reading evaluations of empathy training interventions, very little was found by way of detail or consensus on what empathy training or development interventions should look like in this context. The heart of this problem was a lack of consensus on a definition of empathy in healthcare settings. At times, literature took a very broad approach, but at times it was conflicting, with disagreement over the role of an emotional response to patients. Some (e.g. Hardee, 2003) would view detached concern for patients as insufficient, with a genuine emotional response required to demonstrate empathy. Others, including researchers at the Jefferson Medical School in the US (Hojat et al., 2004), view an emotional response as an interference in the process of accurate diagnosis.

After reviewing the literature, the decision was taken that this thesis should therefore take a step backwards. The research therefore seeks to build a model of empathy in medicine that came from empirical research as opposed to opinion or literature review. This model would then provide a solid foundation for designing interventions in the future. In deciding on a model and measure to test as the central theme of the thesis, Davis' multidimensional model and corresponding measure of empathy were chosen as an appropriate starting point.

The first data obtained were in fact the self report ratings of empathy and emotional intelligence (study two) alongside the behavioural ratings within an assessment centre context (study three). The aim of this study was to compare empathy with emotional intelligence, then comparing their relative criterion-related validities by examining the relationships with behaviour.

On completion of this study, it was noted that the measure being used would benefit from greater evidence of construct validity in terms of recent personality frameworks, namely the five factor model. At this stage then, the self report empathy and personality questionnaires were administered (study one). It was a shame not to

get access to detailed personality data for doctors; instead study one used a general population study. However, this was an issue of access at the time, in taking the decision to conduct a facet level analysis. It is certainly something for future research.

Study four represented a break in the research in several ways. Primarily, the methodology switched from quantitative to qualitative. This stemmed from a desire to employ a more authentic method for the topic in question: the research conducted using psychometric questionnaires was felt insufficient in fully capturing such an interpersonal dynamic concept. In addition, the study focused on patient perceptions of nurses' empathy. Again this was not ideal as the other research was more focused on empathy in doctors. However the hospital that agreed to take part in the project and granted me ethical approval were more interested in the question of empathy in nurses as they felt this was a more important issue for their practice. This is the reality of conducting applied research – designs must be agreed in partnership with organisations and as such need to be adapted to take their needs into consideration. In the end, the study was valuable and there is much research to suggest that it is not necessarily the role of the healthcare practitioner but the needs of the patient that dictate the characteristics of an empathic interaction.

Overall, while the studies did not progress as originally intended, they do show clear progression in the exploration of a model of empathy in healthcare roles. They have hopefully built a solid foundation for the design and evaluation of empathy development interventions, as well as identifying many further opportunities for worthwhile and interesting research.

Appendix 2: The Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale: A, B, C, D, or E. When you have decided on your answer, circle the appropriate letter. Read each item carefully before responding, answering as honestly as you can.

	Does not describe me well				Describes me very well
1. I daydream and fantasize, with some regularity, about things that might happen to me.	A	B	C	D	E
2. I often have tender, concerned feelings for people less fortunate than me.	A	B	C	D	E
3. I sometimes find it difficult to see things from the "other guy's" point of view.	A	B	C	D	E
4. Sometimes I don't feel very sorry for other people when they are having problems.	A	B	C	D	E
5. I really get involved with the feelings of the characters in a novel.	A	B	C	D	E
6. In emergency situations, I feel apprehensive and ill-at-ease.	A	B	C	D	E
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.	A	B	C	D	E
8. I try to look at everybody's side of a disagreement before I make a decision.	A	B	C	D	E
9. When I see someone being taken advantage of, I feel kind of protective towards them.	A	B	C	D	E
10. I sometimes feel helpless when I am in the middle of a very emotional situation.	A	B	C	D	E
11. I sometimes try to understand my friends better by imagining how things look from their perspective.	A	B	C	D	E
12. Becoming extremely involved in a good book or movie is somewhat rare for me.	A	B	C	D	E
13. When I see someone get hurt, I tend to remain calm.	A	B	C	D	E

	Does not describe me well				Describes me very well
14. Other people's misfortunes do not usually disturb me a great deal.	A	B	C	D	E
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	A	B	C	D	E
16. After seeing a play or movie, I have felt as though I were one of the characters.	A	B	C	D	E
17. Being in a tense emotional situation scares me.	A	B	C	D	E
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	A	B	C	D	E
19. I am usually pretty effective in dealing with emergencies.	A	B	C	D	E
20. I am often quite touched by things that I see happen.	A	B	C	D	E
21. I believe that there are two sides to every question and try to look at them both.	A	B	C	D	E
22. I would describe myself as a pretty soft-hearted person.	A	B	C	D	E
23. When I watch a good movie, I can very easily put myself in the place of a leading character.	A	B	C	D	E
24. I tend to lose control during emergencies.	A	B	C	D	E
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	A	B	C	D	E
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	A	B	C	D	E
27. When I see someone who badly needs help in an emergency, I go to pieces.	A	B	C	D	E
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	A	B	C	D	E

Thank you for your participation.

Appendix 3: Information Sheet (doctors)

My name is Helen Wilkin. I am a PhD student in the Psychology department of Goldsmiths College, working with Professor Jo Silvester. We are currently investigating empathy in the role of doctors. Empathy is an important concept within medical roles as it has been shown to be an important factor in developing relationships to gain trust and confidence. This can enhance delivery of care and increase patient satisfaction.

As part of my PhD, I am conducting a study to investigate empathy to better understand the meaning of the concept and how it is measured. Information obtained from this study will be used to build a greater understanding of how empathy can be measured in a medical setting.

Within the Wales Deanery psychometric tests are currently being piloted as part of the selection centre process. This pilot work is entirely separate from the actual selection and recruitment process. None of the results from the psychometric tests will be used in the decision-making process.

Your Participation
I would be very grateful if you could spare around two hours to be involved in this piloting of psychometric materials as part of the selection centre. Your participation is entirely voluntary. Your decision about whether or not to participate will have no bearing whatsoever on the selection and appointments process. If you choose not to participate, you will not be adversely affecting your chances of being selected.

The Use of Information Collected
None of the information from the psychometric tests will be used to make decisions about appointments to posts.

For the project, I will be asking you to complete 2 questionnaires, the Interpersonal Reactivity Index which is a measure of empathy and the Bar-On EQ-I measure of emotional intelligence. I would like to look at how your performance on the psychometric tests relates to your performance in the selection centre exercises.

It should be stressed that all questionnaires will be anonymous. Findings will be discussed in general terms only. Participation is voluntary and all information will be kept strictly confidential.

If at any stage you wish to withdraw from the project, you are entirely free to do so. This will in no way have any bearing on the outcome of this assessment centre. If you wish to receive further information about the project following your participation, please provide details on the following page so that I can send this to you.

I would very much appreciate your participation in this project.

Yours faithfully,

Helen Wilkin

Appendix 4: Consent Form (doctors)

Piloting of Psychometric Tests
Wales Deanery GP selection centre

Record of Consent

Print Name: **Date:**

	Signed
I confirm that I have volunteered to participate in the piloting of psychometric tests.	
I understand that my performance on the psychometric tests will not be used to make decisions in today's selection process.	
I consent that information about my performance on the psychometric tests may be used in Helen Wilkin's PhD regarding the measurement of empathy in a medical setting. I understand that this may involve looking at how my performance on psychometric tests today relates to my performance in other selection centre exercises.	

You may withdraw your consent at any time during or after completion of the psychometric tests.

If you would like to receive a summary of the findings of this project, please leave an address where this can be sent (this will not be used for research purposes and will be kept strictly confidential).

Address (email or postal):

Appendix 5: Factor loadings for the Bar On EQ-i items

	Factor Loadings							
Items	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Factor 1								
Item 56	**0.82**	0.08	0.03	0.07	-0.09	-0.10	-0.01	-0.01
Item 100	**0.70**	0.00	-0.01	-0.08	0.06	0.14	0.12	-0.25
Item 114	**0.68**	0.05	-0.05	-0.09	0.05	0.05	0.02	-0.21
Item 70	**0.68**	0.19	0.08	0.19	-0.04	-0.07	-0.05	-0.03
Item 85	**0.67**	-0.01	0.09	0.08	0.14	-0.07	-0.11	-0.08
Item 129	**0.65**	0.13	0.01	-0.15	0.09	-0.08	0.11	-0.05
Item 47	**0.65**	0.13	0.02	0.09	0.05	-0.20	-0.07	0.08
Item 40	**0.63**	-0.02	0.09	-0.15	-0.01	-0.16	0.04	0.08
Item 106	**0.59**	-0.03	-0.08	-0.05	0.26	0.05	-0.10	0.12
Item 91	**0.57**	-0.01	0.11	0.18	0.06	-0.22	-0.14	-0.03
Item 26	**0.51**	-0.10	-0.10	-0.17	0.02	-0.11	-0.17	-0.21
Item 77	**0.49**	0.22	0.09	0.01	-0.12	-0.02	-0.17	0.11
Item 02	**0.49**	-0.02	0.02	0.21	0.01	-0.28	-0.27	0.09
Item 24	**0.46**	0.00	0.16	-0.15	-0.26	-0.21	0.01	-0.19
Item 54	**0.45**	0.02	-0.09	-0.07	**0.36**	0.09	-0.04	0.02
Item 11	**0.44**	-0.10	0.07	-0.28	-0.09	0.05	-0.11	-0.09
Item 51	**0.39**	0.21	0.16	0.08	0.17	-0.15	0.04	-0.14
Item 80	**0.38**	-0.13	0.09	-0.18	0.17	-0.04	0.08	-0.13
Item 81	**0.36**	-0.13	0.16	-0.20	**0.33**	-0.02	0.00	-0.09
Item 21	**0.33**	0.08	0.11	0.02	-0.08	-0.16	-0.04	-0.11
Item 127	**0.30**	0.17	0.08	-0.10	0.10	0.05	-0.08	-0.14
Factor 2								
Item 86	0.06	**0.64**	0.04	-0.09	-0.04	-0.11	-0.15	0.08
Item 102	0.06	**0.61**	-0.14	-0.09	0.03	0.02	-0.03	-0.11
Item 83	0.13	**0.55**	0.19	-0.20	-0.22	-0.10	0.02	0.06
Item 58	-0.06	**0.51**	0.02	0.03	0.16	0.13	-0.13	-0.12
Item 42	0.10	**0.50**	-0.08	-0.04	0.11	-0.17	-0.17	0.07
Item 76	0.15	**0.50**	-0.16	-0.03	0.09	-0.07	0.17	-0.14
Item 97	0.04	**0.45**	0.15	-0.04	0.07	0.26	-0.11	-0.23
Item 53	0.02	**0.39**	0.14	0.23	0.07	**-0.37**	0.00	-0.07
Item 104	0.16	**0.36**	-0.11	-0.24	0.10	0.00	0.14	-0.18
Item 38	-0.09	**0.35**	0.29	0.09	0.03	-0.20	-0.12	0.13
Item 39	0.26	**-0.33**	0.01	-0.11	0.08	-0.24	**-0.30**	-0.04
Factor 3								
Item 107	0.10	0.07	**0.58**	0.09	-0.06	0.12	-0.05	-0.15
Item 48	0.14	0.12	**0.56**	-0.17	-0.05	0.09	0.07	-0.04
Item 92	-0.04	**-0.31**	**0.55**	-0.04	-0.14	-0.12	-0.10	-0.09
Item 19	0.04	0.00	**0.55**	-0.07	0.14	-0.01	0.16	0.07
Item 111	-0.03	0.00	**0.55**	0.00	0.03	-0.17	0.06	-0.16
Item 118	0.06	0.10	**0.54**	-0.14	0.05	0.09	-0.16	-0.09
Item 126	0.13	-0.07	**0.54**	-0.07	0.11	-0.24	0.02	0.00
Item 03	0.00	-0.12	**0.52**	0.07	0.05	0.07	-0.05	0.02
Item 32	0.00	-0.01	**0.51**	-0.20	-0.15	-0.07	0.06	-0.20
Item 67	0.15	-0.24	**0.42**	-0.06	-0.01	-0.14	-0.05	-0.08
Item 121	**0.31**	0.12	**0.38**	-0.06	0.03	0.11	0.03	-0.03
Item 82	-0.07	0.12	**0.36**	0.05	-0.27	-0.29	-0.13	-0.14
Item 93	-0.09	-0.01	**0.36**	-0.08	-0.14	-0.10	-0.21	**-0.31**
Item 75	-0.02	0.11	**0.35**	-0.16	-0.11	-0.07	-0.19	-0.22
Item 46	-0.01	0.12	**0.34**	-0.03	0.19	-0.17	0.03	0.07
Item 68	0.04	0.22	**0.32**	0.08	0.15	-0.23	-0.07	0.02
Item 66	0.09	0.00	0.25	0.19	0.23	-0.12	-0.19	-0.11

	Factor Loadings							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Factor 4								
Item 45	0.04	0.16	-0.03	**-0.64**	-0.04	-0.07	-0.01	-0.14
Item 15	-0.20	0.21	0.10	**-0.55**	0.13	-0.08	-0.04	-0.06
Item 29	0.00	0.20	0.04	**-0.51**	0.01	-0.14	0.05	-0.16
Item 60	0.06	-0.03	0.13	**-0.47**	0.27	-0.15	0.19	-0.26
Item 89	-0.07	0.03	0.13	**-0.45**	0.24	-0.05	0.15	-0.25
Item 20	0.20	-0.09	0.27	**-0.41**	0.04	0.14	-0.18	0.05
Item 04	0.00	-0.05	0.18	**-0.41**	0.01	-0.03	-0.20	-0.04
Item 108	0.25	-0.09	0.18	**-0.40**	0.13	-0.05	-0.10	-0.11
Item 78	0.15	0.07	0.21	**-0.39**	0.16	0.18	-0.23	-0.01
Item 08	0.25	0.26	0.02	**-0.39**	-0.21	-0.07	0.12	0.10
Item 30	-0.04	0.16	0.10	**0.36**	0.33	0.03	-0.06	-0.15
Item 88	0.13	-0.07	-0.09	**-0.31**	0.27	-0.04	-0.22	0.00
Item 06	0.25	-0.11	-0.05	-0.29	0.18	-0.06	0.12	-0.28
Item 63	0.02	-0.12	0.07	-0.29	0.29	-0.15	-0.28	0.15
Item 36	0.23	0.10	0.19	0.26	0.08	-0.21	-0.13	-0.22
Factor 5								
Item 98	0.05	0.06	-0.02	0.01	**0.65**	-0.05	0.08	-0.10
Item 72	0.06	-0.04	-0.12	0.05	**0.58**	-0.08	-0.05	-0.16
Item 124	0.05	0.19	-0.16	0.01	**0.55**	0.09	-0.01	-0.21
Item 84	-0.06	0.01	0.11	0.10	**0.49**	-0.17	-0.19	0.08
Item 55	0.05	0.03	0.01	-0.14	**0.49**	-0.19	0.16	0.15
Item 90	0.06	0.09	0.11	-0.03	**0.45**	0.05	-0.07	-0.07
Item 110	**0.31**	-0.07	0.18	-0.10	**0.43**	0.03	-0.09	-0.07
Item 95	**0.34**	-0.08	0.18	-0.06	**0.40**	-0.01	-0.09	0.11
Item 44	-0.03	0.01	-0.05	-0.27	**0.35**	-0.05	-0.20	0.01
Item 128	0.14	0.00	0.24	0.08	0.28	-0.24	0.10	0.01
Item 112	0.08	0.06	0.18	-0.23	0.27	0.03	-0.10	0.02
Item 69	0.18	0.02	0.17	0.11	0.26	-0.20	-0.23	-0.06
Factor 6								
Item 23	0.02	0.13	-0.05	0.02	0.05	**-0.68**	0.05	-0.18
Item 07	-0.05	-0.16	-0.10	-0.25	0.02	**-0.68**	-0.08	0.01
Item 52	0.02	0.07	0.11	0.11	0.01	**-0.61**	-0.03	-0.14
Item 116	0.12	0.19	-0.13	-0.07	-0.07	**-0.61**	-0.04	-0.18
Item 10	0.04	0.05	0.01	0.07	0.30	**-0.56**	0.11	0.08
Item 37	0.09	-0.11	0.11	-0.22	-0.13	**-0.48**	0.10	0.09
Item 96	0.17	-0.14	0.14	-0.18	0.08	**-0.45**	-0.06	-0.14
Item 35	0.23	0.26	0.01	-0.04	-0.01	**-0.40**	-0.14	-0.08
Item 31	0.30	-0.08	-0.20	-0.08	0.05	**-0.39**	-0.35	-0.06
Item 113	0.18	-0.21	0.12	-0.10	0.30	**-0.31**	-0.15	0.02
Factor 7								
Item 13	0.03	0.21	-0.26	0.06	0.10	0.00	**-0.60**	-0.14
Item 64	0.28	0.06	0.14	0.04	-0.13	-0.01	**-0.53**	-0.13
Item 130	0.03	0.27	-0.18	-0.01	0.25	0.06	**-0.51**	-0.14
Item 117	0.08	**0.35**	-0.21	-0.02	0.14	0.05	**-0.50**	-0.22
Item 33	0.21	0.00	0.12	-0.44	-0.15	0.09	**-0.45**	0.02
Item 14	-0.02	-0.18	0.18	0.05	-0.08	-0.15	**-0.44**	-0.27
Item 122	0.37	0.01	0.10	0.04	-0.14	0.06	**-0.43**	-0.18
Item 49	0.15	0.12	0.26	-0.25	-0.12	0.10	**-0.40**	-0.08
Item 17	0.05	0.05	-0.03	0.12	0.17	-0.25	**-0.39**	0.00
Item 18	-0.08	0.18	0.14	-0.06	0.18	-0.03	**-0.34**	-0.01
Item 62	0.07	-0.29	0.27	-0.09	0.22	-0.20	**-0.30**	0.12

	Factor Loadings							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Factor 8								
Item 28	0.03	-0.03	-0.07	-0.02	-0.05	-0.19	-0.15	**-0.61**
Item 103	0.04	0.07	0.06	-0.03	0.16	-0.12	-0.08	**-0.55**
Item 87	0.07	0.14	0.08	-0.04	0.10	-0.20	-0.02	**-0.52**
Item 131	-0.01	-0.11	0.11	-0.03	-0.07	0.07	-0.06	**-0.48**
Item 74	0.16	-0.01	0.09	-0.06	0.12	-0.05	0.12	**-0.46**
Item 73	0.05	0.15	-0.13	-0.04	-0.03	0.04	-0.17	**-0.45**
Item 43	-0.02	0.20	0.12	0.27	0.13	0.07	-0.18	**-0.42**
Item 59	0.28	-0.27	0.18	-0.05	0.03	0.00	-0.01	**-0.38**
Item 01	-0.04	0.13	0.03	-0.29	0.11	-0.16	0.09	**-0.32**
Item 125	0.25	0.09	0.07	-0.04	0.09	-0.19	0.10	-0.28

Note: Factor loadings of 0.30 and greater are in boldface

Appendix 6: Information sheet (patients)

Title of Project: Investigating empathy in the nurse-patient relationship

My name is Helen Wilkin. I am a PhD student in the Psychology department of Goldsmiths College, working with Professor Jo Silvester. We are currently investigating empathy in the role of nurses. I am inviting you to take part in a research study as part of my PhD. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Purpose of the study
Empathy is important for nurses as it is needed for patients to have trust and confidence in them. However very little research has looked at differences in people's ability to empathise. One possible reason for this is that research sometimes takes a narrow approach and doesn't focus on the things which are meaningful to nurses or patients.

As part of my PhD, I am conducting a study to better understand empathy, by talking patients. Information obtained from this study will be used to build a greater understanding of how empathy is shown to patients by nurses. I aim to contribute to the training and development of nurses in a way which focuses on the things that mean most to patients.

What is involved
I am talking to a range of patients, to find out how and when nurses are able to show empathy to them. Participation is voluntary. 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 be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect the standard of care you receive.

For the project, I would like to interview you for 30 minutes to talk about nurses who are good at empathising with patients as well as those who find it more difficult. I will ask for examples of how these people differ from each other. You will not need to mention names and all interviews will be confidential. Following the interviews, if you have any questions or concerns, you will able to contact me to discuss them. I will be tape recording the 30 minute interview to make sure that I record all of the information accurately. These tapes will be kept securely until I have written up the information which I need, all of which will be anonymous. I will then destroy the tapes so that they are unusable.

If you have had a bad experience or find it upsetting to talk about this, please do not feel you need to take part. If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of the study, the normal National Health Service complaints mechanism should be available to you.

If you consent to take part in this study I will not have access to your medical records. Your name will not be disclosed, you will not be recognised from the written information and all information will be kept strictly confidential. If you take part, a copy of the consent form will be kept on your hospital notes.

The results of the research will be written up as part of my PhD. They may also be published in a journal for other psychologists. You will not be identified in any written or published reports.

The research is being funded by Goldsmiths College, University of London. The James Cook University Hospital will not be paid for the study, nor will I.

The Research Ethics Committee here at the James Cook University hospital has reviewed this study to make sure it is ethical.

You can keep this copy of the information sheet and also a copy of your signed consent form if you agree to take part.

I would very much appreciate your participation in this project. If you are interested in taking part, please contact me by either telephone or email (details above) and we will arrange a time to meet. I look forward to hearing from you,

Yours faithfully,

Helen Wilkin

Appendix 7: Consent form (patients)

CONSENT FORM - Patients

Title of Project: Investigating Empathy in the nurse-patient relationship
Name of Researcher: Helen Wilkin, Goldsmiths College, University of London

	Please initial box
1. I confirm that I have read and understand the information sheet 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, without my medical care or legal rights being affected.	
3. I understand that the researcher will not need to have access to my medical notes as these are not relevant to the research.	
4. I agree to take part in the above study.	

_____	_____	_____
Name of Patient	Date	Signature
_____	_____	_____
Name of Person taking consent (if different from researcher)	Date	Signature
_____	_____	_____
Researcher	Date	Signature

1 for patient; 1 for researcher; 1 to be kept with hospital notes.

Appendix 8: Study four interview schedule

1. Welcome, Introduction [My role, confidentiality, right to withdraw, Interviews will be recorded and will last approximately 30 minutes].

2. Can you describe what you understand by the term empathy?
[If absolutely unable to do this, interview will not continue]

3. Please can you tell me about an incident you have experienced here when one of the nurses was able to empathise with you?

Prompts: Can you give a specific example?
What was the situation?
What did the nurse do?
Why did that happen?
What was the outcome?

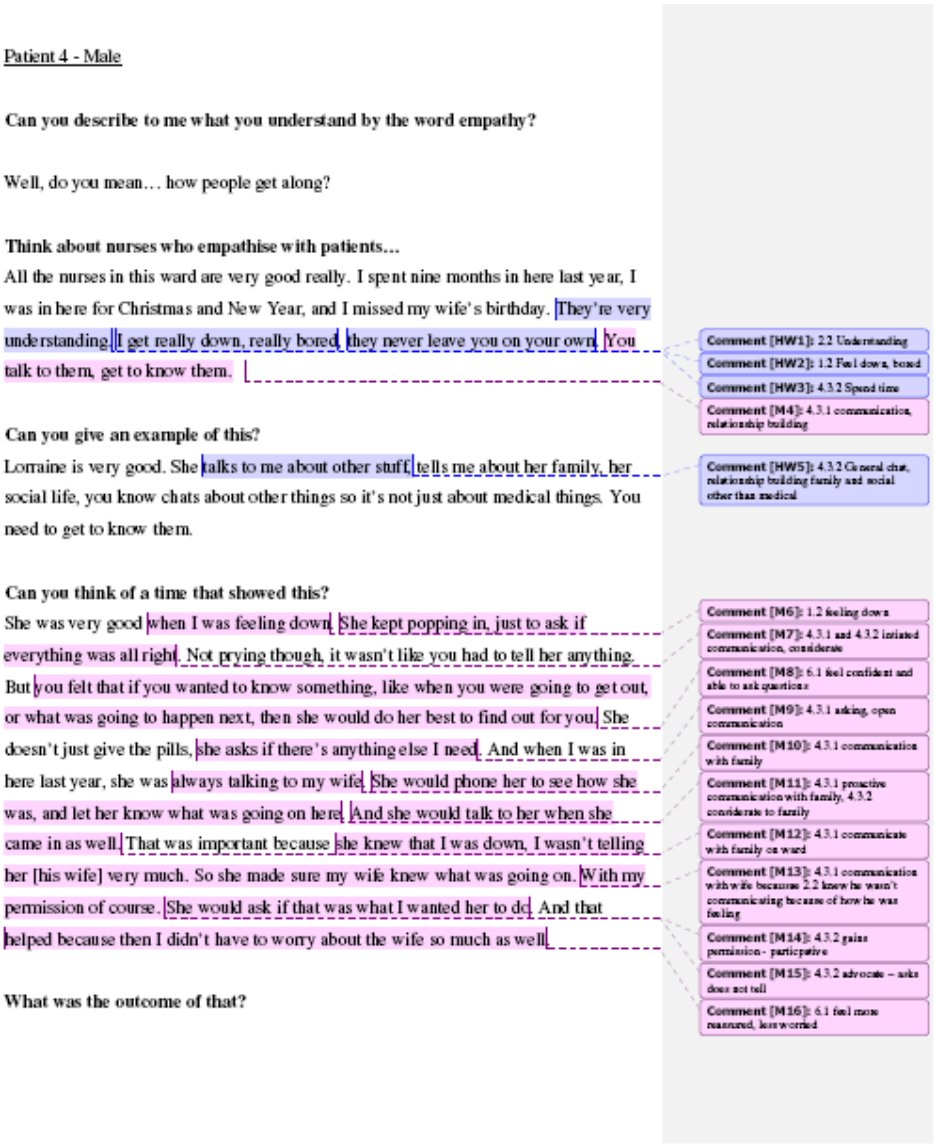
3. Please can you tell me about an incident you have experienced here when one of the nurses was NOT able to empathise with you?

Prompts: Can you give a specific example?
What was the situation?
What did the nurse do?
Why did that happen?
What was the outcome?

4. Finally, I will be sending summary of the research to anyone who wishes to see it. Would you like to receive this? If so, please leave contact details which will be kept strictly confidential.

5. Thanks for participating.

Appendix 9: Coded Interview



Patient 4 - Male

Can you describe to me what you understand by the word empathy?

Well, do you mean… how people get along?

Think about nurses who empathise with patients…

All the nurses in this ward are very good really. I spent nine months in here last year, I was in here for Christmas and New Year, and I missed my wife's birthday. They're very understanding. I get really down, really bored, they never leave you on your own. You talk to them, get to know them.

Comment [HW1]: 2.2 Understanding
Comment [HW2]: 1.2 Feel down, bored
Comment [HW3]: 4.3.2 Spend time
Comment [M4]: 4.3.1 communication, relationship building

Can you give an example of this?

Lorraine is very good. She talks to me about other stuff, tells me about her family, her social life, you know chats about other things so it's not just about medical things. You need to get to know them.

Comment [HW5]: 4.3.2 General chat, relationship building family and social other than medical

Can you think of a time that showed this?

She was very good when I was feeling down. She kept popping in, just to ask if everything was all right. Not prying though, it wasn't like you had to tell her anything. But you felt that if you wanted to know something, like when you were going to get out, or what was going to happen next, then she would do her best to find out for you. She doesn't just give the pills, she asks if there's anything else I need. And when I was in here last year, she was always talking to my wife. She would phone her to see how she was, and let her know what was going on here. And she would talk to her when she came in as well. That was important because she knew that I was down, I wasn't telling her [his wife] very much. So she made sure my wife knew what was going on. With my permission of course. She would ask if that was what I wanted her to do. And that helped because then I didn't have to worry about the wife so much as well.

Comment [M6]: 1.2 feeling down
Comment [M7]: 4.3.1 and 4.3.2 initiated communication, considerate
Comment [M8]: 6.1 feel confident and able to ask questions
Comment [M9]: 4.3.1 asking, open communication
Comment [M10]: 4.3.1 communication with family
Comment [M11]: 4.3.1 proactive communication with family, 4.3.2 considerate to family
Comment [M12]: 4.3.1 communicate with family on ward
Comment [M13]: 4.3.1 communication with wife because 2.2 knew he wasn't communicating because of how he was feeling
Comment [M14]: 4.3.2 gains permission - participative
Comment [M15]: 4.3.2 advocate – asks does not tell
Comment [M16]: 6.1 feel more reassured, less worried

What was the outcome of that?

It makes the days go quicker, just to know that someone is going to be coming in every now and again, you're not just going to be on your own all day. I can get quite depressed in here. I felt completely suicidal last year when I was in for so long. She would come and sit with me and let me talk, she was here when I was upset. She let me talk and she tried to cheer me up, you know making jokes and that. It makes a real difference to me. If I need anything, all I have to do is ask and it gets done. Like if I feel sick they get me some tablets straight away. Or if I want to speak to a doctor, they go and try to find one. And if they can't find one, they'll come back and tell me what time they will be coming next so I know. Some wards, you can ask and ask, and they say they'll do it for you but it doesn't happen. They're not like that here. There's no point in asking if they aren't going to do it for you I think. But here they're genuinely bothered. And I know that because when I've been out of hospital I've seen them and they come over to you and ask how you are. They're really chatty with you, it's not like it's just work for them. You can tell that they're all really outgoing people, because you hear about when they've all been out with each other. And they never argue with each other or anything.

Comment [M17]: 6.1 less bored and less depressed
Comment [M18]: 6.1 reassured
Comment [M19]: 4.3.1 spend time talking
Comment [M20]: 4.3.2 spend time when upset
Comment [M21]: 4.3.2 listening
Comment [M22]: 4.3.2 humour
Comment [M23]: 6.1 makes a real difference
Comment [M24]: 6.1 feel confident to ask
Comment [M25]: 4.1 if I ask it gets done – solve problems and issues
Comment [M26]: 4.1 DO what I ask
Comment [M27]: 4.3.1 Even if they can't solve problems, explain why and communicate
Comment [M28]: 1.1 bothered about you
Comment [M29]: 1.1 outgoing
Comment [M30]: 1.1 agreeable

Now can you tell me about an incident you have experienced here when one of the nurses was NOT able to empathise with you?

Not on this ward. They're all great here, really take the time to get to know you. On the AAU (Acute Admissions Ward) they never do that. You're only supposed to be there until they can find you a bed so they never bother to get to know you. Last time I was on there, I had to complain to the patient liaison people about a nurse. I felt like I was being neglected, I was really depressed. I was on there for 2 days and the nurse who was supposed to be looking after me, she came and gave me my medication but that was it. I went a whole day without talking to anyone and I was really down. I got really angry about it so I complained. You don't know what's going on, what's happening. I can understand that they're busy like, and you're not going to be there for very long so maybe there's no point but I just felt neglected and really down. As soon as I got up here I felt better [Ward 11].

Comment [M31]: 4.3.2 take the time to get to know you
Comment [M32]: 4.1- neglected lead to 6.2 - depressed
Comment [M33]: 4.3.1 no communication outside medication lead to 6.2 feeling down
Comment [M34]: 6.1 angry and complained
Comment [M35]: 6.1 don't know what's going on

Why do you think that happened?

I don't know, I suppose it's just that they don't have the time down there. Mind you, they don't really have the time up here but they always seem to make time for you, just to pop in and see if you're OK, if there's anything you need. You know you're not going to get lonely up here.

Comment [M36]: 1.3 – not enough time
Comment [M37]: 1.1 make time for you
Comment [M38]: 4.3.1 pop in, ask if you need anything