A case study of the nurse practitioner consultation in primary care: communication processes and social interactions

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Abstract

Background: Nurse practitioners are increasingly conducting consultations with patients on the same basis as medical doctors. However little is known about communication within nurse practitioner consultations. Research on communication in nurse practitioner consultations has identified nurse practitioners communicate with patients in a hybrid style, combining biomedical information with the discussion of subjective information from everyday life. Research has not fully explained why this hybrid style occurs in nurse practitioner consultations, nor determined its links to consultation duration, patient expectations, satisfaction, and enablement. This study was developed to address these gaps in research of communication in nurse practitioner consultations.

Aim: This study aims to advance understanding of the discrete nature of the communication processes and social interactions occurring in the nurse practitioner consultation, including explicating the reasons for the occurrence of the particular communication processes and interaction styles observed in those consultations.

Methods: The study was conducted in a nurse-led primary care clinic providing general practice care. Within a case study research approach mixed methods were utilised, combining structured analysis of video recorded observations of nurse practitioner consultations, questionnaire-based measures of patient expectations, satisfaction, and enablement, and interviews with some of the participants of the consultations. The sample for video recording comprised three nurse practitioners employed at the clinic, and 30 patients registered at the clinic. Questionnaire responses were provided by 71 patients, including 26 whose consultations had been video recorded. All three nurse practitioners participated in post-consultation individual interviews, and 11 patient / carers participated in post-consultation individual interviews. The video recorded consultations were analysed with the Roter Interaction Analysis System (RIAS), a method of quantified interactions frequency analysis. The questionnaire responses were analysed with descriptive statistics. Transcripts of the interviews were analysed using computerised qualitative data analysis with *NVivo*.

Findings: A significant majority of observed social interaction in the consultations used patient-centred communication styles (p=0.005), with neither nurse practitioners nor patients or carers being significantly more verbally dominant. Nurse

practitioners guided the sequence of consultation interaction phases, but patients and carers participated through asking questions and involvement in negotiations for care planning. Patient / carers were highly satisfied with their consultations, and significantly higher general satisfaction was noted when participants expected the nurse practitioners to be able to diagnose their presenting problem (p=0.043). Patient / carers expressed significantly higher levels of enablement than have been seen in previous studies of enablement with other types of clinicians (p=0.003). The mean consultation time length of 10.97 minutes is comparable with studies of general practitioners. The participants' perceptions of nurse practitioner consultation communication processes and social interactions were represented through six themes; Consulting style of nurse practitioners; Nurse practitioner – GP comparisons; Lifeworld content or lifeworld style issues; Nurse practitioner role ambiguity; Creating the impression of time; and Expectations for safety netting.

Contribution to knowledge: This study reveals nurse practitioner consultations comprise collaborative openness to peoples' agendas and questions, expressions of everyday lifeworld experiences, expanded impressions of time, clear explanations augmented by integrated clinical reasoning, and participatory negotiations. These communicative features arise from a combination of social, ideological, and epistemological factors, prompting nurse practitioners to privilege how they interact with patients and carers, and to adopt a hybrid patient-centred style combining the nursing ideology of holism and their knowledge of biomedicine. This form of communication has been characterised as a stylistic exemplar for good consultation communication practice, which potentially facilitates shared decision-making. This research has resulted in new knowledge of the communication processes and social interactions used in nurse practitioner consultations, which demonstrates the importance of clinicians giving precedence to how they communicate and interact with patients so as to optimise their therapeutic outcomes without compromising the duration of consultations.

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Chapter 1 Introduction

1.1 Origins of the thesis

This thesis is concerned with analysis of an act central to healthcare practice; communication in consultations. In particular it focuses on the communication processes and social interactions occurring within nurse practitioner consultations in primary care. These types of nurse practitioner consultations have exponentially increased over the past 20 years due to the continually expanding workload demands of primary care, and also as a result of health policy initiatives supporting the ongoing development of advanced nursing practice. Since the mid-1990s there has been increasing policy and research attention in the United Kingdom (UK), upon nurses in advanced clinical roles, such as nurse practitioners. Nurses working in advanced clinical roles deliver both initial contact and ongoing health care, in order to bridge the gap between workload demands and service provision (Jenkins-Clarke and Carr-Hill, 2001; Bonsall and Cheater, 2008). Inherent in this provision is a need for these types of nurses to be directing clinical consultations, akin to those conducted by general practitioners, whereby a person presents with a health problem, which is then assessed and managed by the nurse practitioner (Barratt, 2005a). Despite this increase in the occurrence of nurse practitioner consultations in primary care, there is a relatively little empirical and theoretical literature regarding nurse practitioner consultations, in comparison to the wealth of such literature regarding the process of general practitioner consultations produced over the past 50 years (Balint, 1957; Mishler, 1984; Ong *et al.,* 1995; Pendleton *et al.,* 2003; Neighbour, 2005; Street *et al.,* 2008). Accordingly this thesis seeks to bridge this research gap by providing an empirical and theoretical analysis of the communicative nature and social interactivity of nurse practitioner consultations in the UK.

1.2 What is a 'nurse practitioner'?

A nurse practitioner can be defined as a registered nurse who is practising nursing at a level beyond that for which their initial training has prepared them, and who has been further prepared via a university-based programme of advanced nursing education. These educational programmes comprise clinical academic units pertaining to advanced clinical practice, such as clinical examination, physiology, pathophysiology, clinical diagnosis, and pharmacology. Crucially these nurse

practitioner educational courses are specially designed to develop the full range of competencies required for advanced clinical practice, as described in the competencies of practice for nurse practitioners presented by the RCN (2008; 2012)[1]. The successful completion of this advanced nursing education means that qualified nurse practitioners possess a unique blend of hybrid medical and nursing knowledge, which enables them to conduct clinical consultations and to see patients with undifferentiated and undiagnosed medical problems and make assessments of their health care needs and provide any required treatment or onward referral on much the same basis as medical doctors; typically in the way one would expect a general practitioner to perform (Griffith, 2008).

Whilst the nurse practitioner has been established in both the UK and North America for many years now it has been noted nurse practitioners are sometimes subjected to 'discounting' whereby they are negated either from a social psychological perspective or on a social structural basis, such as has been reported in research by Martin and Hutchinson (1999). In their grounded theory study of nurse practitioners views of their primary care role in the USA, Martin and Hutchinson (1999) found from a social perspective the nurse practitioners had been socially undermined through their decision making capacities being questioned, or being excluded from peer group membership as they are seen as neither a nurse nor a doctor, or being unfairly blamed for problems occurring with patients. From a micro social structural view Martin and Hutchinson (1999) found the nurse practitioners could be discounted by colleagues and patients having unclear expectations of the nurse practitioner role, with disagreements occurring over what activities they should be actually doing. From a macro social structural outlook Martin and Hutchinson (1999) noted the nurse practitioners in their study reported struggles with unnecessary local limitations on their scope of practice, and wider difficulties with legal recognition of their role.

Consideration of the current regulatory status of British nurse practitioners provides further evidence on a macro-social structural level of the denuded social status of nurses working in advanced clinical roles. Whilst in the UK, nurse prescribers, such as nurse practitioners have been granted full prescribing rights, virtually on par with

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[1] It is acknowledged that in the UK, the term 'Advanced Nurse Practitioner' (ANP) is increasingly being used to describe a nurse practitioner (RCN, 2008; 2012). However as this term is not used in other countries where nurse practitioners commonly practice, such as the USA, the term 'nurse practitioner' has been retained for usage in this thesis in order to have relevance for a wider audience, beyond the UK.

doctors[2], the wider regulation of advanced nursing practice has not yet occurred. At present in the UK any registered nurse can call themselves a 'nurse practitioner' or 'advanced nurse practitioner' as these titles are not protected, with the only regulatory requirements being to record their nurse prescribing qualification with the Nursing and Midwifery Council (2006), and from 2016 onwards participating in the Nursing and Midwifery Council's revalidation process for re-registration, which all nurses, regardless of their level of practice, need to complete (Merrifield, 2015).

There has been a degree of standardisation of how advanced level nursing across the UK is viewed since the introduction of the advanced level nursing position statement by the Department of Health in 2010. This defined the nature of advanced nursing practice, what its scope encompasses and how it is different from the level of practice at initial registration as a nurse. In particular the position statement has helped establish that nurses working as advanced practitioners should be educated to at least Masters Level (Department of Health, 2010). Despite the existence of this position statement, the lack of statutory regulation of advanced nursing practice contrasts starkly with the regulatory position of the specialist practice of doctors whereby the General Medical Council maintains discrete registers of medical specialists and GPs, which require the completion of expansive post-graduate education and vocational training programmes before admission to one of those registers is permitted (General Medical Council, 2015).

In comparison to doctors this lack of advanced nursing practice regulation can be interpreted as an example of social structural discounting of the nurse practitioner role. This is because if a GP needs to be specially registered before practising, why are nurse practitioners not required to be specially registered unless there is some perceptual discounting of the nurse practitioner role? This perception would lead regulatory governance leaders to view the role as not possessing a comparable level of independent clinical responsibility to that of a GP, and hence not needing further regulation, despite the reality of contemporary clinical practice for nurse practitioners showing that they do have very similar levels of independent clinical responsibility. Other countries, such as the USA, Australia, and New Zealand do have regulatory recognition of nurse practitioners and therefore social structural

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[2] The one remaining area of difference in the comparative scope of nurse independent prescribing and medical prescribing is that only doctors may hold a specially issued Home Office licence to prescribe either diamorphine, dipipanone, or cocaine for treating addiction (Joint Formulary Committee, 2015).

discounting via regulatory incognisance may be less likely to occur in those countries (Pulcini and Gul, 2010; Kleinpell *et al*., 2012).

A sense of ambiguity or uncertainty of meaning in relation to the nurse practitioner role is a recurrent theme in both the past and more recent nurse practitioner literature which has analysed the role in both primary care settings (Barnes *et al*., 2004; Bonsall and Cheater, 2007; McMurray, 2010) and secondary care settings (Martin and Hutchinson, 1999; Jones, 2005; Kilpatrick *et al.,* 2011). This uncertainty of role meaning has often arisen from the question of whether a nurse practitioner is still practising nursing or if they should be professionally aligned with medicine, which has sometimes caused some antagonism between nurses solely practising as nurses, and those practising as nurse practitioners (Kritek, 1997). For example, Rounds (1997) in a summary account of the development of the nurse practitioner movement in the United States of America, notes nursing faculties in American universities were initially very reluctant to accommodate nurse practitioner programmes within their educational provision as they perceived the nurse practitioner curriculum content to be medicine and not nursing. Rounds (1997) goes on to note this position has now changed in universities with a recognition that nurse practitioners occupy a hybrid role providing both nursing and medical care to their patients, and as such should be accommodated within the education programmes offered by nursing faculties. This feature of role hybridity is one that is also evident in the literature review of nurse practitioner consultation communication research presented in chapter 2 (section 2.4.1).

1.3 What is a 'consultation'?

Having clearly defined the conceptual nature of the nurse practitioner role in primary care it is also important to correspondingly have clarity of definition about the key concept in this thesis; the consultation. Put simply the consultation can be understood as a "…meeting between practitioner and patient … [and accordingly is] the fundamental activity of clinical practice", as without that meeting it is difficult to reliably find out what problem(s) a patient has, what they want to do about the problem(s), and what clinically needs to be done to help them (Hastings *et al.,* 2003, p. 202). From the perspective of medicine the medical consultation has been defined by Pendleton *et al*. (2003, p.48) as "a model of a single medical interview in which a patient presents with a problem, which is then diagnosed and managed".

This short definition conveys the basic purpose of a medical consultation, which the general public would typically be aware of, but it does have some shortcomings. First it is not always possible to definitively diagnose a patient's medical problem in a single consultation, and a patient may also present with more than one problem. Second patients do not always present themselves for a consultation, but instead may be brought to a consultation by carer, such as is often the case with children. Third patients do not always attend a consultation with a medical problem that needs to be diagnosed, but instead may attend with a social care problem, such as a request for a letter to support a council housing application.

A more detailed definition of the consultation has been provided by Professor Richard Street, an American health communication scholar who has published an extensive range of research related to health care provider-patient communication, consultation outcomes, and strategies for increasing patient involvement in their consultations. In collaboration with a researcher colleague, Street defines participation in the healthcare consultation as "a communicative event in which clinicians and patients use talk to exchange information, to share their expertise and points of view, to build a trusting relationship, and to make health-related decisions" (Street and Millay 2001, p.61). This participatory definition of the consultation is more expansive and inclusive than that of Pendleton *et al*. (2003) as it refers to joint decision making between clinicians and patients. However when compared against the reflective reality of working as a nurse practitioner it too poses some difficulties. For a clinician in a busy clinic, with many patients waiting, and perhaps running late behind the scheduled appointment times, this definition appears to depict an overly idealistic representation of a clinical consultation, as in a time-pressured consultation the abilities of both parties to either 'share their expertise' or 'build a trusting relationship' could well be constrained. The idealism of this consultation definition may arise from the fact that Street and Millay (2001) are both solely academic scholars who have researched clinical consultations, but have not actually faced the pressures of running a session of clinical consultations themselves.

In response to these disparate definitions of the nature of the clinical consultation the researcher developed an alternative definition of the clinical consultation, which integrates some of the salient features of both previous definitions, and also responds to the critique of the two definitions. This definition also emerges from preliminary analysis of video recorded consultation data the researcher collected in

a pilot study of video recording the nurse practitioner consultation in 2006-2007 (Barratt, 2007). This alternative definition is as follows:

A consultation is a health-related interview involving an interpersonal relationship, whereby a person with a health or social care concern or concerns, presents or is presented to a clinician, seeking either an explanation and / or possible improvement or review of the identified concern or concerns.

This alternative definition of the consultation acknowledges its interpersonal sociality, recognises that patients may either attend on their own or else may be presented by a carer, and that multiple health and/or social concerns can be a focus of a consultation, and furthermore that medical diagnosis and treatment can often be interpreted as flexible components dependent on the needs and preferences of the patient or their carer. Also from a practical perspective, in the context of the pressures of a busy clinic, this definition when applied to the reality of clinical practice as a nurse practitioner seems to convey a more realistic conceptualisation of what actually comprises typical primary care consultations on an everyday basis. Accordingly this integrative, more realistic definition of a clinical consultation has been applied as a baseline definition for this thesis.

In presenting this definition it is acknowledged that a consultation is not necessarily constrained to occurring in a primary care clinic, but also occurs in other settings such as patients' homes, hospitals, and public spaces. Also a meeting with a patient in different settings is not always called a consultation, particularly when considering nurse-patient meetings, where a variety of alternative terminologies are often deployed (Redsell, 2006). However the nursing context of this study is particularly concerned with face-to-face nurse-patient / carer meetings where the nurse participants of those meetings specifically have comparably similar levels of vicarious responsibility to that of medical doctors for assessing, diagnosing, and treating patients' presenting medical problems.

1.4 The historical development and empirical validation of nurse practitioner roles

Having clearly defined the prime units of analysis in this thesis attention is now turned to an historical and empirical consideration of how the nurse practitioner role has been developed and evaluated over time in both the United States of America

(USA) and the UK. From a global perspective the first roles discretely defined as nurse practitioner roles appeared in the USA in the mid-1960s. This was in response to the need to provide medical cover for people living in rural areas, due to a lack of available medical doctors to work in those rural areas. The usefulness of the new role was quickly recognised and nurse practitioner roles were soon established beyond rural areas to include urban primary care and secondary settings across North America (Mentink *et al*., 1980; O'Hara Devereaux, 1991). This type of role development is an example of recognition of the potential for nurses' role progression, and the opportunity for nurses to advance their practice driven by a public health need. In North America the early development of nurse practitioners was supported by research focused on validating the nurse practitioner role in patient consultations. This role validation analysis was directed at comparing nurse practitioners versus medical doctors with regard to cost effectiveness and clinical outcomes, and also measurement of patient satisfaction with nurse practitioner consultations.

An early example of a nurse practitioner consultation outcomes study was the nurse practitioner role validation randomised controlled trial (RCT) presented by Spitzer *et al.* in 1974. This study was based in Ontario, Canada, in two primary care practices, involving two doctors and two nurses comparing traditional family doctor care versus nurse practitioner care with a sample of 4325 patients. The results of the trial in relation to quality of care revealed that 70 per cent of the management of common conditions and prescribing decisions were rated as adequate across both groups. Analysis of clinician involvement in consultations disclosed that in the eight weeks of the main trial period, the physicians were involved in 45 per cent of the nurse practitioners' consultations, but that this fell to 33 per cent by the end of the year's measurement period. However, no details are given for the nature of the physicians' involvement, though presumably this may have been to give advice in cases where the nurse practitioner felt unsure as to how they should proceed. Measures of post-consultation physical functioning and health status revealed very similar results with no significant detriments or differences noted between groups. Post-consultation satisfaction levels were respectively reported as 97 and 96 per cent in the control and experimental groups; though the actual tool used to obtain these surprisingly high levels of patient satisfaction is not described. Overall this early RCT provided robust evidence that the participating nurse practitioners could provide "…first-contact primary clinical care as safely and effectively, with as much satisfaction to patients…" on a comparable level to their physician colleagues (Spitzer *et al.,* 1974,

p. 255). The key message of this paper that nurse practitioners could provide equal care to that of doctors, supported the findings of contemporary North American experimental research produced in the late 1960's and early 1970's, which found that other nurse practitioners could also provide effective and safe clinical care in both paediatrics and hospital outpatients (Lewis *et al.,* 1969; Charney *et al.,* 1971). These early experimental papers were influential, in conjunction with early observational papers of nurse practitioner practice development such as Silver *et al.* (1967) and Silver *et al.* (1968), in promulgating and stimulating the subsequent widespread development of nurse practitioner roles across North America (Spitzer *et al.*, 1990).

A more up-to-date North American nurse practitioner empirical perspective is provided by Mundinger *et al.* (2000) in a comparative RCT of primary care outcomes in patients treated by nurse practitioners versus doctors. The premise of this study was that since the study of Spitzer *et al.* (1974) primary care nurse practitioners in the USA have achieved comparable clinical privileges to those of primary care doctors, such as prescribing rights, authority to admit patients to hospital, full financial reimbursement for their services, and the right to run practices solely staffed by nurse practitioners and supporting nurses. Consequently those nurse practitioner service innovations required contemporary comparative evaluation. Accordingly the aim of Mundinger *et al.'s* (2000) paper was to compare the satisfaction and health outcomes of patients attending a traditional doctor-led primary care clinic versus a new nurse practitioner-led primary care clinic, with both types of clinicians "functioning equally as primary care providers" (Mundinger *et al.*, 2000, p. 60). The trial was conducted in four clinics in New York City; one nurse practitioner-led clinic and three doctor-led clinics, and involved 7 nurse practitioners, 17 doctors, and 1981 patients.

The results of Mundinger *et al.* (2000) revealed a high participation rate of middle aged Hispanic women (80.05%) across all the practices. There were no significant differences in nurse practitioner versus doctor satisfaction. The sole exception to this was in the 'provider attributes' satisfaction subscale (technical skill, personal manner, and time spent with the patient) measured at the six month interval, for which patients were significantly more satisfied with the doctors. This finding of patients' similar satisfaction with both clinician groups corresponds with the earlier satisfaction findings of Spitzer *et al.* (1974). Self-reported health status was seen to improve significantly at the six month follow-up with no significant differences noted

between the patient groups. Secondary physiological measures for long term conditions generally showed no significant differences between the patient groups, with the exception of diastolic blood pressure in which the nurse practitioners' patients had a statistically significant slight reduction.

The overall findings of Mundinger *et al.'s* (2000) RCT indicate that when compared on an equal basis with doctors providing a similar service, nurse practitioners can provide equivalent care, and that both nurse practitioner-led and doctor-led primary care services have equable outcomes in terms of clinical effectiveness and patient satisfaction, when the two professional groups are compared on providing the same service.   Lenz *et al.* (2004) have presented details of a post-trial 2 year follow-up of 406 patients who participated in Mundinger *et al.'s* (2000) original trial. This follow-up study showed that at 2 years on from the initiation of the trial, there continued to be no significant differences in the health status of patients who saw nurse practitioners and patients who saw doctors, which reinforces the findings of Mundinger *et al.'s* (2000) original RCT.

1.4.1 The emergence and empirical validation of the nurse practitioner role in the UK

Despite the early work of Spitzer *et al*. (1974) it was 25 years before any similar experimental work was conducted in Britain, partly because the nurse practitioner role did not appear in Britain until the mid-1980's, and then when it initially appeared it was on a very small and local ad hoc basis, with no national strategy for nurse practitioner development (Drury *et al.,* 1988). The first recognised instances of nurses working as nurse practitioners in the UK occurred with the pioneering work of two nurses in the early to mid-1980s who were inspired by the nurse practitioner role in North America; Barbara Stilwell working in general practice, and Barbara Burke-Masters working with homeless men in London (Stillwell *et al*., 1987; Eve, 2005). Their pioneering work has been cited by commentators on advanced nursing practice, such as Maclaine (2009) as a possible influence on the recommendation made for the planned presence of nurse practitioners in primary care by the Cumberlege Report on community nursing in 1986 (Department of Health and Social Security). The first British educational course for nurse practitioner preparation was offered by the Institute of Advanced Nurse Education at the RCN in 1990, with the first British nurse practitioners qualifying from this course in 1992. Since then over 1000 nurses have graduated from this RCN programme, which in

2000 transferred to London South Bank University. Across the UK since the late 1990s there has been a corresponding proliferation of RCN accredited nurse practitioner courses across the UK with a resultant cohort of qualified nurse practitioners working in healthcare settings throughout the UK, with the balance of settings being predominantly in primary care, such as general practice, walk-in centres, and out-of-hours services (Maclaine, 2009).

The first British experimental work related to UK-based nurses working in advanced roles was three RCT papers published in the British Medical Journal in 2000, looking at the clinical and cost effectiveness of both nurse practitioner (Kinnersley *et al*., 2000; Venning *et al.,* 2000), and practice nurse (Shum *et al*., 2000) consultations in primary care. The RCTs of Kinnersley *et al.* (2000) and Venning et al. (2000) are now discussed as they both focused on comparing nurse practitioners with GPs.

The RCT presented by Kinnersley *et al*. (2000) compared the outcomes of nurse practitioner versus general practitioner care for patients requesting same-day consultations. In this trial, conducted in ten general practices in England and Wales, 1368 patients were recruited of whom 652 were seen by the nurse practitioners and 716 by general practitioners. At the two week interval, as would be expected for the type of medical problems which typically require same-day consultations, most patients reported symptom improvement and resolution of their concerns. Satisfaction levels for adult consultations were similar across both groups of clinicians, with significantly higher levels of satisfaction with nurse practitioner consultations being reported in three practices, whilst no significant differences were found in the seven other practices. For children's consultations significantly higher rates of satisfaction were found for nurse practitioner consultations across all the practices with a mean satisfaction score of 75.6% for general practitioners, and 80.4% for nurse practitioners. Across both groups similar usage rates of prescriptions, investigations and onward referrals were noted. Return consultation rates were also similar across both groups. In nine of the practices nurse practitioner consultations were significantly longer than general practitioner consultations with time ranges of 7 to 14 minutes and 4 to 8 minutes respectively. Importantly, in eight of the practices, even when interruptions in the nurse practitioner consultations, such as getting a prescription signed, were excluded, their consultation lengths were still significantly longer. A possible explanation for these increased consultation lengths may be seen in the significantly higher rates of medical information giving noted in the nurse practitioner consultations. As regards future choice of clinician

consultation type, in six practices no significant preferences were expressed for either group of clinician, whilst in the other four practices significantly more patients said they would prefer to see a general practitioner. Overall the work of Kinnersley *et al.* (2000) supports the use of nurse practitioners for the conduct of same-day consultations, with clear evidence of comparable clinical interventions and outcomes to those of general practitioner same-day consultations.

At a similar time to Kinnersley *et al.* (2000), Venning *et al.* (2000) conducted a RCT comparing the cost effectiveness of general practitioners and nurse practitioners in British primary care for managing same-day consultation appointments. This study took place in twenty general practices in England and Wales, and comprised 1301 patients. In Venning *et al.'s* (2000) trial the average length of a nurse practitioner consultation was 11.57 minutes compared to 7.28 minutes for the general practitioners. Additionally the nurse practitioner spent an average of 1.33 minutes per patient waiting to get a prescription signed. Similar rates of physical examinations were noted across both groups. Nurse practitioners issued fewer prescriptions than the general practitioners, but there was not a significance difference in their issue rate. Nurse practitioners requested more investigations than doctors, but some of these requests comprised opportunistic health screening, not directly related to patients' presenting problems, such as urine tests. The nurse practitioners were significantly more likely to ask patients to return for review, and in the two weeks post-consultation the nurse practitioners' patients were more likely to make a return visit. No differences in the status of patients' health were found at the two week post-consultation interval. In contrast to the mixed satisfaction rates noted by Kinnersley *et al.* (2000), Venning *et al.'s* (2000) comparative RCT found that patients were significantly more satisfied after nurse practitioner consultations in all measures except communication with children's parents, and adherence intent for children. The significant differences in doctor versus nurse practitioner consultation satisfaction were still present even after the longer consultation times of nurse practitioners were taken into account. The overall health service costs of a patient's consultation with a nurse practitioner were calculated to be 12.5% lower than those for a general practitioner consultation; but this was not a significant difference despite the divergent salaries of the two groups, as the trial was not large enough to have sufficient power to detect significance in this outcome measure. In overview, the findings of Venning *et al.'s* (2000) RCT provide further coherent experimental evidence for the usage of nurse practitioner consultations in primary care in terms of clinical outcomes post-consultation.

1.5 Systematic reviews and meta-analyses of nurse practitioners' roles

Validation of the nurse practitioner role has been further supported by the more recent presentation of systematic reviews and meta-analyses of the types of primary research discussed in the preceding sections. Currently there are three secondary research papers available which have attempted to objectively synthesise some of the previous experimental and observational work conducted on the outcomes of nurse practitioners. The three papers are: a meta-analysis of patient outcomes of primary care nurse practitioners compared with those of primary care doctors (Brown and Grimes, 1995), a systematic review of whether doctors working in primary care can provide equivalent care to doctors (Horrocks *et al.,* 2002), and a Cochrane Collaboration systematic review of the substitution of doctors by nurses in primary care (Laurant *et al.,* 2005). The systematic reviews of Horrocks *et al.* (2002) and Laurant *et al.* (2005) have been selected for discussion as they sampled both European and North American studies, whilst Brown and Grimes (1995) solely sampled studies conducted in North America.

The Cochrane Collaboration systematic review of Laurant *et al.* (2005) sought to evaluate the impact of nurses substituting for doctors in primary care on patient outcomes, care processes and use of resources. Laurant *et al*. (2005, p. 3) define substitution as a process whereby "… nurses … provide services which otherwise would be provided by doctors alone", with the aim of reducing demand for doctors. Their extensive literature search identified 4523 potential papers related to nurse substitution of doctors, of which 16 experimental-type studies met their inclusion criteria of research involving nurses providing substitute initial contact care, or on-going care, or management of long term conditions, which was then compared against doctors' performances for the same types of consultations. Consequently, a role definition difficulty arises, as the reviewed studies were not restricted to those solely involving qualified nurse practitioners, but also included studies of nurses providing first contact or on-going care, who were working in the style of a nurse practitioner, but without the co-requisite educational preparation.

Laurant *et al.'s* (2005) review noted that when health status outcomes were measured in their included studies they did not differ significantly between nurses and doctors, which concurs with the individual findings of the previously reviewed RCTs. Laurant *et al.* (2005) present a meta-analysis of patient satisfaction for

patients attending same-day appointments, which showed that patient satisfaction was higher for nurses' consultations than doctors' consultations, but that the effect size was highly variable between the three studies. Analysis of process of care in the same three studies showed that nurses provided significantly more information to patients. Further meta-analyses of the three studies revealed that nurses were more likely to ask patients to return for review, but as noted in the previously reviewed studies this does not mean the patients necessarily re-consulted. Furthermore there were no significant differences in prescribing rates between the clinician groups, and there were no significant differences between doctors and nurses in rates of referral to secondary care. In terms of consultation costs, the review found two studies: an RCT of nurse telephone consultations in out-of-hours primary care which showed a net cost reduction with using nurses (Lattimer *et al.,* 1998), with the other study being Venning *et al.* (2000), which as previously noted, was insufficiently powered to detect significance in consultation cost differences.

In overview Laurant *et al*. (2005) state nurse and doctor consultations appear to have similar non-detrimental health outcomes, and that patients appear generally more satisfied with nurse consultations for reasons not yet fully understood. However patient satisfaction with nurse-led consultations is not reflected in expressed future preferences for care, with some patients opting for nurses whilst others would seek a doctor. In terms of consultation productivity it was noted in some studies that nurses have significantly longer consultation times, which combined with higher review recall rates, would seem a less efficient way of working than that of doctors. Laurant *et al.* (2005, p. 19) go on to state that "It is self-evident that nurses must be adequately trained to act as substitutes for doctors". However this statement appears contradictory in comparison to the heterogeneity of the nurses participating in their reviewed studies, where their inclusion has been solely based on the doctor substitution roles performed by nurses, rather than their corresponding educational preparation for such advanced roles. This discrepant feature of Laurant *et al.'s* (2005) inclusion criteria must be regarded as a notable limiting feature on its implications for practice, as the review's findings "suggest that appropriately trained nurses can produce as high quality care as primary care doctors" with similar health outcomes (Laurant *et al*., 2005, p. 19). However scrutiny of the review reveals that not all the nurses in the included studies were prepared to the level of a nurse practitioner, which would for many professional observers, be the only type of appropriately trained nurse that could adequately substitute for a

medical doctor (Royal College of Nursing, 2008; National Organization of Nurse Practitioner Faculties, 2012).

The systematic review presented by Horrocks *et al.* (2002) has broadly the same findings of Laurant *et al.* (2005), which is not surprising given that they both review many of the same studies. Horrocks *et al.* (2002) additionally include 23 observational studies of nurse consultations, a decision which is criticised by Laurant *et al.* (2005) for potentially producing biased estimates of difference between nurse and doctor consultations. Horrock *et al.'s* (2002) meta-analysis of patient satisfaction reveals once again that patients report greater satisfaction with nurse consultations, apart from two studies involving Accident and Emergency department consultations, where there were no significant differences between either clinician types. No significant differences were found in the post-consultation health statuses of patients. A meta-analysis of consultation lengths showed that nurses had significantly longer consultations than doctors; 14.89 minutes versus 11.14 minutes respectively. Descriptive review of the quality of care provided revealed that nurses made more complete records, were rated higher for communication skills, and gave more advice on self-care of medical conditions. However, as with Laurant *et al.* (2005), the inclusion criteria of Horrocks *et al.* (2002) meant that the focus of inclusion was on what clinical activities the nurses were doing in the selected studies, rather than their educational preparation as potential nurse practitioners. This heterogeneous inclusion criteria means the title of Horrocks *et al.'s* (2002) paper is misleading as it uses the word 'nurse practitioner', which would suggest the review is solely comparing nurse practitioners against doctors.

Arising from their reviews, Horrocks *et al.* (2002) and Laurant *et al.* (2005) make a number of recommendations for future research of the nurse practitioner consultation including: a detailed examination of the underlying reasons for higher levels of patient satisfaction being expressed for nurse practitioner consultations, such as a comparative analysis of patients expectations in relation to subsequent satisfaction; a broadening of research sampling, comprising a more diverse range of patients with more complex health needs and also long-term conditions; an analysis of nurse practitioners working in predominantly nurse-led clinical settings, such as walk-in centres or nurse-led general practices, where general practitioners provide second line primary care medicine specialist advice; and a consideration of the educational differences existing between nurse practitioners and general practitioners.

1.6 Summary of introduction chapter

In summary the currently available empirical evidence of nurse practitioner consultation outcomes, indicates patients are often reporting higher satisfaction with nurse-led consultations than doctor-led consultations, though this is not a consistent finding in all studies. In most of the reviewed studies a mixed picture appeared for patients' future preferences for care, with some patients preferring to see nurses whilst others would prefer to see doctors. Importantly there were no significant differences in the health outcomes of patients attending nurse or general practitioner consultations. In some studies the nurse consultations were longer than the general practitioner consultations. It was also noted in some studies that the lower salary costs of nurses meant that consultation cost savings were sometimes evident, though this was not consistently a significant finding.

As regards the empirical investigation of nurse practitioner consultations the majority of available nurse practitioner consultation research has been primarily concerned with consultation outcomes, such as clinical effectiveness and satisfaction, as opposed to studies concerned with the interaction processes occurring within these types of consultations. Correspondingly it must be noted there has been less research of the communication processes of nurse practitioner consultations, and even less studies linking those communication processes with their subsequent outcomes such as patient satisfaction (Brykczynski, 1989; Johnson, 1993, Lawson, 2002; Kleiman, 2004; Barratt, 2005a; Gilbert and Hayes, 2005; Seale *et al.,* 2005, 2006; Williams and Jones, 2006).   Consequently a knowledge gap exists in current outcomes research of nurse practitioner consultations as it is not fully known what it is about the communication processes and social interactions of nurse practitioner consultations that potentially enhance outcomes such as patient satisfaction. Accordingly this current study was developed to advance understanding of the discrete nature of the communication processes and social interactions occurring in the nurse practitioner consultation, including explicating the reasons for the occurrence of the particular communication processes and interaction styles observed in those consultations.

The next chapter of the thesis provides an overview of research studies of nurse practitioner consultation interactions and communication processes, in conjunction with a consideration of the conceptual development of consultation communication research.

Chapter 2 Literature review

2.1 Introduction to literature review

This chapter provides an overview literature review of the theoretical and empirical literature which is of relevance to the development of the study. Firstly the details of the literature searching strategies used in the study are presented. Following the literature searching strategies the theoretical approaches used for research of communication in clinical consultations are discussed. The literature review then provides an overview of research scholarship of the nurse practitioner consultation, with a focus on the communicative attributes of those types of consultation. Developing from the overview literature review, the study's conceptual framework is introduced alongside the aims and objectives of the study, its associated propositions and related research questions.

An overview type of literature review was chosen for use in the thesis to provide a summary of the scope of literature related to communication in nurse practitioner consultations. Overviews of literature provide a wide-ranging summary of a field of study, and are particularly beneficial when aiming to engage with a subject area as a precursor to subsequent empirical investigation (Grant and Booth, 2009). In contrast to more systematised approaches to literature reviewing, such as systematic reviews, overviews of literature have variant gradations of rigour as they typically do not use systematic methods of searching and explicit reporting (Grant and Booth, 2009). Accordingly overviews of literature do not necessarily include quality assessments for appraisal of literature (Grant and Booth, 2009). Synthesis of the literature in overviews is usually presented in a narrative style with the analysis of the literature being structured chronologically, conceptually, or thematically (Grant and Booth, 2009). This overview of the literature has been synthesised in a narrative style, and the analysis has been structured to consider literature concerning the communication processes of nurse practitioner consultation in the following thematic areas: the contextual outline of consultation communication research; the nature of nurse practitioner consultation communication processes and social interactions; comparison of nurse practitioner consultation communication processes and social interactions with those of medical doctors; the effects of nurse practitioner consultation communication processes and social interactions on the measured outcomes of those consultations; and patients' evaluative and experiential perceptions of consulting with nurse practitioners.

2.2 Literature searching strategies

Literature searching of published research in the area of communication in consultations was undertaken in relevant electronic databases encompassing nursing, medicine, psychology, and sociology: Cochrane Library 1995 – 2015; Cumulative Index to Nursing and Allied Health Literature (CINAHL) 1982 – June 2015; Google Scholar 1950 – June 2015; Medical Literature On-Line (Medline) 1950 – June 2015; Psychological Information Database (PsycINFO) 1950 – June 2015, Science Direct 1950 – June 2015; Sociology Research Database (SocINDEX) 1950 – June 2015. A wide date range was chosen to encompass an expansive range of literature, which would not exclude any 'classic' or 'key', but probably older, studies in the scholarly field of research of communication in consultations. The search was ongoing throughout the duration of the study with regular six-monthly literature searches of the databases being made as the study progressed, particularly so for consultation communication literature related to nurse practitioners.

The key words used both singly or in combination for literature searches were: 'advanced nurse practitioner'; 'advanced nursing practice'; 'consultations; 'expectations'; 'lifeworld'; 'nurse practitioner'; 'nurse practitioner-patient communication'; 'nurse practitioner-patient consultations'; 'nurse practitioner general practice'; nurse practitioner primary care'; 'patient satisfaction'; 'patient enablement'; and 'patient participation'. These key words were generated as likely sources of pertinent information for the topic of enquiry for the study, based on the researcher's previous reflective readings of research literature in this area.

In relation to nurse practitioner research the primary inclusion criterion used was empirical and theoretical literature that analysed communication processes in nurse practitioner consultations in any countries where nurse practitioners commonly practice. This inclusion criterion generated a focus on research originating mostly from the USA and the UK, with a much smaller amount originating from the Australia and New Zealand, which is a reflection of the longer history of development of the nurse practitioner role in both the USA and UK

Following initial electronic searching manual searches of reference lists of studies identified through database literature searching were undertaken to pick up any relevant papers that had not already been noted in the electronic searching.

Scouring of reference lists from different papers in the same area of study also enabled identification of frequently cited papers, which when found to be frequently cited by other researchers, was taken as an indication of their potential importance to the field of enquiry. Additionally the tables of contents of issues of the journal *Patient Education and Counseling* were directly searched, looking for any papers of relevance to the study published in the journal (1995-2015), that may not have been picked up on electronic searching. This journal in particular was selected for direct searching as it can be viewed as the cross-disciplinary 'house' journal for scholars of consultation communication, with many influential papers in that field of study being published in the journal. As the researcher had previously published a research paper related to communication in nurse practitioner consultations (Barratt, 2005a), subsequent citations of the paper were monitored, as it was envisaged those citations would probably be included in papers and books that would be of interest to this current study.

These literature searching strategies generated more books and papers than could be discussed in the review. Therefore the literature selection finally included in the review was selected primarily on the criteria of being English language research, published in peer-review journals, and of direct relevance to the study's topics of enquiry. The exception to these criteria was the selection of key texts such as Mishler (1984), which were required for the theoretical exposition of the study. Alongside nurse practitioner oriented research, some of the literature regarding doctor-patient consultations was also included to some extent in the literature review, as inclusion of that discrete area of enquiry enabled contextualisation of some of the parallel issues in research of communication and related activities in nurse practitioner consultations, such as patient enablement, which has been less investigated in a nurse practitioner context.

2.3 The contextual outline of consultation communication research

In order to understand the context of the research presented in this thesis, it is first necessary to have an outline understanding of the nature and intent of existing research in the field of enquiry. Consultation communication research can be seen as a discrete area of scholarship, concerned primarily with the dyadic communicative nature of the consultation relationship, whereby a patient with a

health concern presents to a health care provider seeking an explanation and resolution of the identified concern (Northouse and Northouse, 1998; Usherwood, 1999). This is in contrast to general health communication research, which considers for example, interpersonal communication skills such as listening and non-verbal communication, or models of the communication process, or counselling skills within a therapeutic relationship (Morrison and Burnard, 1997; Lees, 1999; Ellis *et al.,* 2003). It must be noted that consultation communication research is not primarily concerned with the nature of clinical decision making and clinical reasoning in patient care and that those areas of enquiry form a discrete component of research distinct from that of consultation communication research (Offredy, 2002). Accordingly this thesis, being focused on communication processes and social interactions is also not primarily concerned with analysis of the processes of clinical decision making and clinical reasoning in consultations.

A significant amount of consultation communication research has investigated doctor-patient communication, and accordingly there is a wide and diverse range of empirical and theoretical literature available regarding the nature of the doctor-patient consultation. The smaller available range of consultation communication research concerned with the outcomes of nurse practitioner consultations has been reviewed in chapter 1, whilst research of the communication processes of nurse practitioner consultations has been reviewed in this chapter. The available range of doctor-patient consultation communication scholarship encompasses many different areas of enquiry. Typical topics are: analyses of medical social interactions and their relationship to consultation outcomes such as patient satisfaction and adherence; the ethics and ideologies of the doctor-patient relationship; developing theoretical models of the structure of medical consultations; analysing the presence of subjective everyday lifeworld information in medical consultations, investigating the extent of patient participation and patient-centredness in medical consultations; discovering communication problems such as misunderstandings between patients and doctors; and examining decision making in medical consultations, such as a decision to prescribe a medicine (Balint, 1957; Clarke, 1981; Mishler, 1984; Ong *et al.,* 1995; Street and Millay, 2001; Pendleton *et al.,* 2003; Neighbour, 2005; Kim *et al.,* 2010).

Whilst comprising a large body of literature across the academic fields of health and social psychology and medical sociology, and to a slightly lesser extent, in academic medicine, research on doctor-patient consultations has been subject to critique.

These critiques have noted some of the research is 'under-theorised' with a preoccupation for identifying factors that predict consultation outcomes such as patient satisfaction or medication adherence; due regard is not always given for the surrounding social support structures of medical consultations, such as the privileged position of medicine in society; and ascendant policy priorities sometimes randomly influence the direction of future research in this field (Scambler and Britten, 2001).

As a result of the expansive body of literature regarding the doctor-patient consultation a significant link has repeatedly been established between the style of doctors' interactions (independent variable), affecting the dependent variables of patient satisfaction, and adherence with recommended medical treatments (Stewart, 1984; Ong *et al.,* 1995; Jackson and Duffy, 1998). Typically these types of studies, are based upon quantitatively-orientated analyses of audio or video recordings of primary care medical consultations combined with questionnaire measures of patient satisfaction. Such studies have shown that a consultation style receptive to the patient's agenda is significantly associated with higher patient satisfaction and increased compliance with recommended medical treatments. A closed or directive communication style has been significantly associated with patient dissatisfaction and subsequent decreased compliance with recommended medical treatments (Ong *et al.,* 1995).

Patient dissatisfaction, aside from doctors' communication styles has also been co-associated with patients misunderstanding information conveyed in medical consultations and being unable to recall much of the misunderstood information (Ley and Llewelyn, 1995). More recently Stevenson (2007) in a qualitative study of general practice consultations based upon 53 post-consultation interviews with general practice patients found that those patients characterised both 'good' and 'bad' consultations with medical doctors. Good consultations were viewed positively by patients as they provided opportunities for their participation such as being able to ask questions, feeling that they were being listened to, and feeling comfortable to express their concerns and opinions. Experiences of bad consultations included feeling like the doctors had no time to attend to their needs, doctors not giving their full attention to patients, and not giving explanations regarding medical treatment.

As a consequence of such empirically-based discoveries of beneficial communication strategies an applied output of consultation communication research

has been the consultation communication training skills literature. This applied sub-set of consultation communication research integrates the positive features of consultation communication processes and social interactions as strategies for enabling clinicians to operationalise optimal communication with patients in consultations (Hastings and Redsell, 2006; Moulton, 2007; Silverman *et al.,* 2013). Whilst it is acknowledged the applied training literature makes an important contribution to the preparation of clinicians for conducting consultations this current study is not concerned with evaluating the effectiveness of such training interventions.

The contrasting quantitative and qualitative approaches to empirical enquiry of the medical consultation considered in this section illustrate the approaches to the study of medical social interactions that have occurred over the past 50 years. Overlapping theoretical overviews of research approaches to the study of communication processes and social interactions in consultations have been presented by the primary care researchers Bower *et al.* (2001), the psychologists Marks *et al*. (2005), and the general practice academics Greenhlagh and Heath (2010). Bower *et al.* (2001) conceptualise four domains of consultation communication research: psychodynamic; clinical-observational; social psychological; and sociological. In Bower *et al.'s* (2001) typology the psychodynamic and clinical-observational domains are also categorised as being 'internal' to a consultation as they arise from the interaction dynamics between consultation participants, whilst the sociological and social-psychological domains are categorised as being 'external', as they comprise pre-existing theories that are applied to the dynamics of consultations.

To assist understanding of the different domains Table 2.1 displays a typology map of the different perspectives in consultation communication research based on Bower *et al.'s* (2001) domains. This table shows the focuses, key questions, theoretical frameworks, methodologies, outcome measures, and indicative studies of each domain. The four subsections 2.3.2 to 2.3.4 explain in more detail the features of each of the four domains and their relevance to contemporary consultation communication research and to this thesis.

Table 2.1: Typology map of different perspectives / domains of enquiry in consultation communication research

Psychodynamic domain (internal)	Social-psychological domain (external)
Focus: 'Deviant' features of doctor-patient consultation communication. **Key questions:** What are the abnormal or 'deviant' communication patterns of doctor-patient consultations? **Theoretical frameworks:** Psychodynamic interactions between doctors and patients. **Methodologies:** Direct observations of consultations and interviews with clinicians. **Outcomes:** Identification of 'deviant' characteristics of patients. **Indicative studies:** Balint (1964); Jeffery (1979). **Applied in thesis?** No, as it is an historical remnant of the beginnings of consultation communication research.	**Focus:** Patients' attitudes, beliefs, and cognitions regarding health and illness, and clinicians' influences upon those processes. **Key questions:** How is consultation communication responsive to the social-psychological context of illness? **Theoretical frameworks:** Attitudes, health beliefs, self-efficacy. **Methodologies:** Questionnaires measures of patients' attitudes, health beliefs, and self-efficacy. **Outcomes:** Measurements of patients' attitudes, health beliefs, and self-efficacy associated with health behaviours arising from consultation interactions. **Indicative studies:** Capone and Petrillo (2014). **Applied in thesis?** No, as it is a disputed, divergent domain, and there is currently no nurse practitioner consultation communication research within this domain
Clinical-observational domain (internal)	**Sociological domain (external)**
Focus: Identifying features of either clinician-centred or patient-centred consultation interactions. **Key questions:** To what extent do clinicians control consultation interactions? How are consultation interactions related to patient satisfaction, enablement or adherence? **Theoretical frameworks:** Social authority of clinicians, particularly doctors. **Methodologies:** Interaction analysis systems, and questionnaire measures of patient satisfaction, patient enablement, or adherence. **Outcomes:** Frequency counts of interaction types, and / or measurements of patient satisfaction, patient enablement, or adherence. **Indicative studies:** Buller and Buller (1987); Roter and Larson (2002); Agosta (2005). **Applied in thesis?** Yes, as it is an ongoing area of enquiry which has been used for contemporary analysis of nurse practitioner consultation communication.	**Focus**: Language usage in consultations, and analysis of the social process of consultations linked to social roles and status. **Key questions:** How does language used in the consultation reflect the social power of the clinician versus patients or other clinicians? Which voice or social system predominates in consultations? **Theoretical frameworks:** Critical theory and the concept of the lifeworld which, if ignored, diminishes patients' perspectives in consultations. **Outcomes:** Effects of competing voices in consultations on outcomes such as provision of information, adherence, and expressions of patient satisfaction and enablement. **Indicative studies:** Mishler (1984); Brykczynski (1989) Johnson (1993); Barry *et al.* (2001); Defibaugh (2014a, 2014b). **Applied in thesis?** Yes, as this is a very influential domain in consultation communication research in which many studies of nurse practitioner consultations have been framed.

2.3.1 The psychodynamic domain

The psychodynamic domain is seen as an earlier first approach to studying doctor-patient interactions which emerged from the psychodynamically influenced work of Balint (1964) which considered "…the unconscious and irrational forces underpinning the intersubjective relationship between patient and practitioner" (Greenhalgh and Heath, 2010, p. 7). Marks *et al.* (2005, p.274) alternatively describe the psychodynamic domain as the "deviant patient perspective" as it was often concerned with uncovering the aberrant communication patterns and characteristics of patients. Greenhalgh and Heath (2010, p.7) further alternatively classify the psychodynamic domain as "psycho-dynamic analysis", within a "subjectivist" approach which seeks to interpret the meaning of the therapeutic relationship between clinician and patient. An example of work in the psychodynamic domain is a classic paper presented by Jeffery (1979, pp. 347-348), based on field observations of consultations and interviews with doctors in three emergency departments, through which four typologies of "rubbish" or "deviant patients" were identified: "Trivia"; "Drunks"; "Overdoses"; and "Tramps".

The psychodynamic domain can now be seen as a historical approach that was used to particularly analyse doctor-patient consultations, but is now not used in contemporary in consultation communication research, and has also not been applied to investigation of nurse practitioner consultations. Consequently psychodynamic domain studies of consultation communication have not been included in this literature review.

2.3.2 The clinical-observational domain

The clinical-observational domain is focused on identifying specific communication behaviours that comprise either doctor-centred or patient-centred interactions, which in turn are then often linked with quantifiable consultation outcomes such as measures of adherence, health status, or satisfaction (Bower *et al.,* 2001). Marks *et al.* (2005, 274) categorise the clinical-observational domain as the "authoritarian doctor perspective", because research in this domain has often analysed the extent to which doctors utilise their social authority to control consultation interactions. Greenhalgh and Heath (2010, p.7) notate the clinical-observational domain as a sub-category of an "objectivist" approach called "interaction analysis" concerned

with producing numerically-derived 'facts' such as frequency counts of interaction types.

Within this clinical-observational domain two data collection methods are commonly used; quantified interaction analysis systems and questionnaires (Marks *et al.,* 2005; Greenhalgh and Health, 2010). Interaction analysis systems are consultation observation instruments which can be used to systematically analyse the medical encounter through the identification, categorisation, and quantification of pertinent features of clinical social interactions (Ong *et al.,* 1995). Questionnaires as data collection tools within the authoritarian doctor analogy tend to focus on physician behaviour within a consultation (Marks *et al.,* 2005). For example, questionnaires in this context are commonly used either to analyse patients' evaluation of communication within a medical consultation or to measure patient satisfaction post-consultation (Buller and Buller, 1987; Agosta, 2005).

Much of the clinical-observational / authoritarian doctor research which substantively identified the links between doctors' consultation communication styles, patient satisfaction, and treatment adherence was carried out in the 1980s (Buller and Buller, 1987; Ong *et. al.,* 1995). Whilst now being over 30 years old examples of the findings of this early research are still relevant for review due to their seminal influence on the direction of consultation communication research, and the subsequent improvements in the delivery of consultation communication with patients, and the creation of educational programmes used to develop clinicians' communication styles, particularly so for medical doctors (Silverman *et al.,* 2013).

Whilst clinical-observational / authoritarian doctor type consultation communication research has been able to establish a significant link between doctors' communication styles and patient satisfaction some limitations do exist in its data collection methods. For example in many Interaction Analysis Systems, particularly the earlier examples, the timing and order of patient and doctor statements is not analysed, which does not allow for turn taking and initiation sequences to be recorded and their subsequent effects analysed (Marks *et al.,* 2005). In using questionnaires time delays may occur between the initial consultation and their subsequent questionnaire response (Buller and Buller, 1987). At this juncture a patient's recollection of the consultation may not be complete, or could have changed from how it was immediately post-consultation and hence could lead to unintentional misrepresentative questionnaire responses. It has also been noted the

use of questionnaires with only Likert scales or multiple-choice response questions does not allow respondents to express their own qualitative appraisals of consultation communication (Marks *et al.,* 2005).

The literature search revealed clinical-observational domain studies of nurse practitioner consultations have been previously conducted, examples of some of those are included in the succeeding literature review in section 2.4.

2.3.3 The social-psychological domain

In contrast to the doctor-focused orientation of the clinical-observational domain, the social-psychological domain emphasises analysis of patients' attitudes, beliefs and cognitions about their health and illnesses, being grounded in psychological theories such as the Health Belief Model and self-efficacy (Bower *et al.,* 2001). Research in this domain also considers the communication processes used by clinicians to expedite positive changes in health behaviours such as increased self-efficacy (Bower *et al.,* 2001). For Marks *et al.* (2005), the social-psychological domain is not recognised as a discrete component of consultation communication research; it is instead seen as part of the wider consideration of illness beliefs and explanations, and illness and personality within the theory and practice of health psychology. Alternatively Greenhalgh and Heath (2010, p.7) obliquely place the social-psychological domain in a subjectivist sub-category of "socio-technical analysis", which analyses the extent to which consultation relationships are responsive to the contextual nature of illness. An example of a study within the social-psychological domain is presented by Capone and Petrillo (2014) who devised a questionnaire to measure patients' communication self-efficacy beliefs about their ability to communicate effectively with doctors in medical encounters.

Social-psychological domain studies often just focus on patients' perspectives in consultations, rather than also including clinicians, as the scope of the domain is particularly concerned with patients' attitudes, health beliefs and cognitions. Those social-psychological domain studies which include clinicians in their analyses have typically not researched patients seeing nurse practitioners, but instead have studied patients being cared for either by doctors, or nurses practising at their initial level of registration. Accordingly, as the existence of the social-psychological domain with consultation communication research is disputed and divergently interpreted by scholars, and because literature searching revealed no studies of

nurse practitioner consultations that could be categorised within the social-psychological domain, studies within this domain have not been included in the literature review of this thesis.

2.3.4 The sociological domain

Bower *et al.* (2001, p. 6) observe two themes in the sociological domain: discourse and conversation analysis studies concerned with language usage in consultations; and analysis of the "social process" of consultations focused on linking sociological concepts such as 'power' and 'knowledge' and social variables such as "…socio-economic status, gender or ethnicity". Marks *et al*. (2005, p.275) alternatively conceptualise the sociological domain as the "interactive dyad perspective" This alternative approach has an emphasis on the realisation that consultation communication is an interactive process between clinicians and patients and / or their carers (Marks *et al.,* 2005). Within this perspective consultation communication research has an equal emphasis on the contributions of all parties in a consultation with recognition that different people may give different accounts of the same communicative event. Accordingly the interactive dyad approach commonly appraises clinical consultations via analysis of the combined communication strategies and styles of clinicians and patients and /or their carers. Furthermore in order to elicit maximum information about all perspectives within clinical consultations the interactive dyad approach also includes other clinicians in addition to medical doctors, such as nurses, and sometimes also combines qualitative data collection techniques of qualitative textual analysis such as discourse analysis, observations, and interviews, with quantitative techniques such as interaction analysis systems and questionnaires (Barry *et al.,* 2001; Roter and Larson, 2002; Kenny *et al.,* 2010). Greenhalgh and Heath (2010, p.7) view the sociological domain as part of a subjectivist sub-category called "critical consultation analysis". This sociological approach to consultation communication research attempts to take account of both 'micro (interpersonal) and macro (socio-political)' processes in clinical consultations (Greenhalgh and Heath, 2010). This approach is situated at the interface of sociological analysis of social roles, identities, and interactions in consultations, and sociolinguistic analysis of talk in consultations. This conjoined approach of macro and micro analysis enables the contextualised meaning of observed consultation communication processes and interaction to be discursively analysed in a wide context of social roles and power relationships.

In the critical consultation approach the neo-Marxist critical social theories of the German philosopher and sociologist, Habermas (1981a, 1981b), are noted to be influential for his emphasis on interpreting social talk within its wider social context, and the power dynamics of interpersonal relationships within social systems (Greenhalgh and Health, 2010). In his 'theory of communicative action' Habermas (1981a, 1981b) is concerned with explaining the overall nature of human potential and human activity in modern society, particularly so the importance of communicative action or interactions as a profound human phenomenon for the betterment of modern society (Ritzer, 2008).

How does this discussion of critical theory relate to analysis of consultation communication? The relationship arises from Habermas (1981a) highlighting a distinction within our society between 'purposive-rational' or 'instrumental' actions and 'communicative' actions. Purposive-rational actions are seen as technical, empirical knowledge supported by consistent, objective decision making. Communicative actions are related to the use of language in social interactions with a focus on "comprehensibility, truth, appropriateness, and sincerity" (Scambler, 1987, p. 170). Habermas (1981b) goes on to present two further competing distinctions in our social world, which he calls the 'lifeworld' and the 'system'. The lifeworld is conceived as the 'symbolic space' of communicative action, being based on 'social integration', involving language and communication strategies, through which culture, social cohesion and personality are maintained and continued (Scambler, 1987). Conversely the system relates to purposive-rational actions, and is based on 'system integration' such as the functions of market economies and the state, operated through the 'steering media' of money and power. The lifeworld and system are seen as two interrelated, but not interchangeable concepts. Habermas (1981b) is concerned that increasingly the system is colonising the lifeworld, which can subsequently lead to social dysfunction. This colonisation of the lifeworld is seen to occur through a growth of instrumental rationalisation, with the system becoming increasingly independently from and dominant over lifeworld discourses; hence threatening to subsume the lifeworld.

The theoretical distinction Habermas (1981b) identified between the lifeworld and the system has been applied in critical consultation research of communication in medical consultations, most notably in the work of the American social psychologist, Elliot Mishler (1984, p.59), who analysed "…about 25 tapes" of doctor-patient consultations selected from a larger sample of 481 pre-transcribed audio recorded

doctor-patient primary care consultations in North America. In his influential research monograph *The Discourse of Medicine: Dialectics of Medical Interviews,* Mishler (1984) disputed the then common (authoritarian doctor) research focus on patient compliance with medical instructions as representing a medical system bias, because conversely researchers never asked if doctors had been compliant with patients' expectations. Trying to break away from this medical system bias in social medicine research, Mishler (1984) developed two concepts, based on the work of Habermas (1981b): the 'voice of the lifeworld', and the 'voice of medicine'. The voice of the lifeworld represents people's subjective everyday life experiences of daily events and problems, and correlates with Habermas' (1981b) communicative action. Correspondingly the voice of medicine represents system-based objective scientific-technological knowledge and can be substituted for Habermas' (1981b) purposive-rational action. Building on his applied interpretation of Habermas' (1981b) critical theory Mishler (1984) postulated that doctors' observed dominance of communicative interactions in medical consultations means that patients' lifeworld experiences and understanding of their medical problems are compromised, and instead are pushed toward the system context of scientific-technological rationality, which is realised in the voice of medicine by doctors. Mishler (1984) speculates that this disparity of focus between doctors and patients in consultations results in dehumanised, ineffective medical care, as patients feel that their concerns and expectations are not being met. This has a subsequent detrimental effect on patient satisfaction, which in turn adversely affects patients' adherence with suggested medical treatments. Conversely Mishler (1984) contends an attention to lifeworld matters may result in more effective medical care through being attentive and responsive to patients' combined biopsychosocial needs (Barry *et al.,* 2001).

Mishler's (1984) work whilst now over 30 years old still has resonance for contemporary consultation research with his Habermasian-influenced analysis of lifeworld inclusion in clinical consultations continuing to be a recurrent topic of enquiry (Barry *et al.,* 2001; Greenhalgh *et al.,* 2006). A contemporary sociological critique of Mishler's (1984) work noted he has subsequently commented that he did not emphasise enough the importance of providing humane care in medical practice and that also the power dynamic asymmetry of the doctor-patient relationship needs to be considered in its wider social context, beyond just looking at the interactions that occur in consultations (Thomas, 2010). Moreover some principles from Mishler's (1984) methodological approaches to interpreting transcripts of consultations are still being analytically applied in more recent sociological research

of illness narratives (Thomas, 2010). Nevertheless, the time factor is also a point of critique for Mishler's (1984) work, as essentially it was re-analysis of primary data originally collected nearly 40 years ago in the early 1970s. Given this time lapse and the subsequent improvements over time in communication in clinical consultations, facilitated through increased communication research knowledge and its subsequent application in educational preparation of clinicians, are contemporary clinical consultations still so neglectful of lifeworld perspectives? To answer this question on-going analysis of the integrative status of the lifeworld in clinical consultations is required with all of the different types of clinicians now responsible for providing consultations involving advanced level clinical decision-making such as medical doctors, nurse practitioners, and some types of allied health professionals. More recently Mishler's (1984) adapted Habermasian critical theory perspective has been applied in critical consultation studies of both nurse practitioner and general practitioner consultations, in order to determine how the tensions existing between the competing voices of the lifeworld and medicine are managed by both patients and clinicians, for example, Johnson (1993), Barry *et al.* (2001), and Clarke *et al.* (2011). As the sociological domain continues to be influential domain within consultation communication research of both nurse practitioner and medical doctor consultations, such studies of nurse practitioner consultations have been included the literature review of this thesis in section 2.4.

2.4 What is the nature of nurse practitioner consultation communication processes and social interactions?

This section of the literature review has been structured around the sociological critical consultation and clinical-observational domains of consultation communication research. Those two domains are where the current scope of nurse practitioner consultation communication research can be categorised. Whilst many of the studies to be presented do not explicitly state the domain of consultation communication research they are working in, it is possible to retrospectively categorise the studies within Bower *et al.'s* (2001) domains to provide illustrative examples of empirical work within those domains. No studies of nurse practitioner consultations were found that could be categorised as being either in the psychodynamic or social-psychological domains. In contrast to the nurse practitioner consultation outcomes research discussed in Chapter 1 there are fewer available studies concerned with the associated processes of nurse practitioner consultations.

Examples of some of these nurse practitioner-focused studies are now critically discussed.

In 1993, following on from Mishler's (1984) research monograph Johnson presented a qualitative study of the communicative process of the nurse practitioner consultation, utilising discourse analysis of 24 audio taped nurse practitioner-patient consultations and observations of a medical outpatient clinic in the United States of America. This critical consultation analysis category study was based, in part, on Mishler's (1984) theoretical model of medical interviews as Johnson (1993) sought to discover if the voice of the lifeworld was also present in nurse practitioner-patient consultations. Johnson's (1993) analysis is framed in four identified stages of the consultation: establishing the agenda; history formulation; physical examination; and developing the plan of care. At the beginning of the consultation the establishment of the agenda was seen to be collaborative, with the nurse practitioners responding positively to patients' attempts to focus the agenda. In the history phase, the nurse practitioners allowed the patients to present a personal dialogue, and attended to the patients' life-world through the use of open-ended questioning, and attentive listening related to history cues from the patients. During the physical examination the nurse practitioners were first of all concerned with patient comfort, and secondly provided a commentary during the examination, through which the patient was made to feel part of the examination process. Finally, developing the plan of care resulted in opportunities for health education and personalised solutions based on the everyday experiences presented by the patients.

Overall, Johnson (1993) found that in the consultations she studied, the nurse practitioners acknowledged the voice of the life-world as presented by patients, and responded appropriately by an attention not only to medical matters, but also to an incorporation of the patients' everyday experiences in the process and outcomes of the consultation. This dual response has been cited as providing personalised, quality health care (Brykczynski, 1993). In conclusion, Johnson (1993) suggests that her study adds a new dimension to Mishler's (1984) model of medical interviews; the 'voice of nursing' in which nurse practitioners are seen to respond to patient dialogues by combing the everyday subjectivity of the voice of the lifeworld with the scientific objectivity of the voice of medicine. A practical deficit of Johnson's (1993, p. 145) study is that she only considered consultations with female patients on the basis that she had an interest in "woman to woman talk", even though this was the not the focus of her study. As a result, it is not possible to ascertain from

this study if the voice of nursing also exists in either male patient or male nurse practitioner consultations. Furthermore, from a theoretical perspective, can it be said that the hybrid communication exemplified by the 'voice of nursing' is unique to nursing? What would stop other clinicians such as doctors or allied health professionals also communicating in a similarly hybrid style? The consultation dialogue findings of Johnson's (1993) research corresponds with the increased amount of verbal interactions noted in nurse practitioners' consultations compared to GP consultations noted in the subsequent RCTs of nurse practitioner consultations and the systematic reviews considered in sections 1.4.1 and 1.5. This observation provides some explanation as to why those studies have found that nurse practitioners' consultations often last longer than doctors' consultations.

This feature of patient centred talk is an iterative finding of research regarding the nurse practitioner consultation, which has been identified again more recently in an observational study of the nurse practitioner consultation in the UK (Barratt, 2005a). This sociological domain investigation of the nurse practitioner consultation sought to examine the process of interpersonal health communication occurring in nurse practitioner consultations by analysing a specific feature of the communicative process of the nurse practitioner consultation; styles of patient self-presentation. The term 'self-presentation' arises from the sociological interactionist concept of 'impression management', which is concerned with the ways that people, present themselves and their activities to others, in order to guide and control the impressions people form of them (Goffman, 1959). The aims of the study were to identify if there were any different styles of patient self-presentation in the nurse practitioner consultation, and to describe their effects, if any, on the process and outcomes of the nurse practitioner consultation. The research comprised multiple methods of qualitative data collection in a nurse-led primary health care clinic, including direct observations of consultations, semi-structured interviews and an accompanying field journal.

Five styles of patient self-presentation were identified after analytical comparison of similarities and differences in interactions and outcomes across the observed consultations. These groups were: 'Seekers', people seeking specific medical treatments such as antibiotics; 'Clinical Presenters', people who recounted brief, yet precise histories of their clinical symptoms; 'Confirmers', people checking that they only had a minor illness and whether or not they required any medical interventions, with adjunctive discussion of life-world issues; 'Seekers to Confirmers', who were a

transformational group of people as can be seen in their initial presentation as per the seekers group at the outset of their consultations, only to change to a Confirmer self-presentation style, as their consultations progressed, once discussion of underlying life-world issues had been discussed with them; and finally 'Anticipators', people who had an evident anticipation of their need for medical treatment, such as antibiotics, based on their prior experiences of similar illnesses (Barratt, 2005a).

A finding of particular interest is that, as with Johnson's (1993) identification of nurse practitioners' use of the 'voice of nursing', the nurse practitioner participants in this case study, also utilised the voice of nursing. This utilisation was evident in a combination of the subjectivity of the life-world and the objectivity of medicine as a successful consultation communication strategy in response to the Confirmers and the Seekers to Confirmers self-presentation styles. A key feature of the nurse practitioners' interactions is that they were observed on more than one occasion, and were seen to modify their consultation interaction behaviours in response to the variant self-presentation styles used by the patients. This use of consultation behaviour modification was speculated to be a communication strategy used by the nurse practitioners to maximise the patient-centred outcomes of their consultations, in relation to their perceptions of the patients' help-seeking behaviours, as reflected by the patient's self-presentational attempts to express their needs. From a methodological perspective, with only one nurse-led primary health care clinic being sampled, and small non-probability samples of nurse practitioners and patients, it is not possible to say that the findings of the case study were representative of either the clinic studied or of other nurse-led primary care clinics (Barratt, 2005a).

Focusing on the experiences of nurse practitioners in their consultations Kleiman (2004) has provided a sociological domain phenomenological study of the nature of nurse practitioners' lived experiences of interacting with patients. This study was based on data arising from six unstructured interviews with qualified nurse practitioners in the United States of America, regarding their experiences of consultation interactions with patients in three primary care settings and three secondary care type settings. Phenomenological analysis of the interview data revealed eight essential meanings the nurse practitioners commonly applied to their consultation interactions.

The first meaning of 'openness' related to the nurse practitioners being receptive to their patients' concerns and once again, as noted in the previously reviewed studies,

acknowledging the importance of subjective life-world experiences. The second meaning, 'connection', further develops 'openness' through the patient and nurse practitioner being comfortable with each other via the sharing of the subjective lifeworld, so that they can communicate effectively together. The third meaning of 'concern' had two components; the nurse practitioners' concern for attending to their patients' health-related needs, and then also concern for their own actions adversely affecting patients, such as the side effects of a medication they may have prescribed. The fourth meaning of 'respect' involved acknowledging patients' health concerns and involving them in care planning. The fifth meaning of 'reciprocity' related to the nurse practitioners' consultation interactions being acknowledged by patients, such as expressing gratitude, which in turn helped the nurse practitioners to develop their personal knowledge of the caring experience. The sixth meaning of 'competence' comprised the combination of propositional, practical and intuitive knowledge nurse practitioners apply in their consultation interactions, and subsequently knowing when a particular patient presentation would fall outside of their competence. The penultimate meaning of 'time' emphasises the importance of increased time being available for nurse practitioner consultations, and the ensuing facility for attending to all of a patient's concerns in one consultation. The final meaning of 'professional identity' related to the hybrid nursing-medical role utilised by the nurse practitioners for their consultation interactions. Their hybrid roles permitted the nurse practitioners to retain the social identity of a nurse, reflected in their consulting styles, whilst concurrently being able to make medical care decisions such as ordering investigations or prescribing medications.

The work of Kleiman (2004) reflects the hybrid nature of nurse practitioner practice arising from the interplay of nursing, medical and experiential knowledge used by nurse practitioners in their consultations with patients. This knowledge interplay enables nurse practitioners to attend to the subjective lifeworld reality of patients in combination with making autonomous medical decisions, as has been exemplified in the studies reviewed thus far.

Continuing with a phenomenological approach, this time in relation to the communicative aspects of nurse practitioner clinical decisions, Brykczynski (1989) has presented a sociological domain study entailing phenomenological analysis of the clinical judgements used by nurse practitioners in ambulatory care consultations in the USA. Brykczynski's (1989) interpretive study has been cited as a landmark paper in the field of nurse practitioner scholarly inquiry due to her key finding that in

their consultations nurse practitioners are able to assess both acute and chronic illnesses, whilst concurrently also attending to patients' experiences of the same illnesses (Brown, 1989). This combined consultation communication style is seen as a replacement of the scientifically orientated biomedical model of care with a whole person orientation. Brykczynski (1989) conceptualises the nurse practitioner role as that of a healer versus the dominant model of clinicians being viewed as applied scientists (Brown, 1989).

Brykczynski's (1989) findings are based on a phenomenological analysis of the contextual nature of the clinical practice of nurse practitioners. The research comprised semi-structured interviews and participant observation of 22 experienced nurse practitioners working in four hospital-based ambulatory care clinics Using an 'interpretive approach' for data analysis developed by Benner (1984), Brykczynski (1989) identified eight representative themes of the nurse practitioner consultation.

The first theme, 'practical knowledge' related to the high levels of 'practical know-how' the nurse practitioners exhibited in their consultations such as diagnostic acumen arising from skilfully eliciting health histories and conducting physical examinations of patients. The second theme, 'assessing, monitoring, co-ordinating, and managing the health status of patients over time: being a primary care provider', corresponds with the continuity of care similarly exemplified by the nurse practitioners' practice in the work of Kleiman (2004). The third theme, 'detecting acute and chronic diseases while attending to the experience of illness', relates to the observed abilities of the nurse practitioners to differentiate between pathological presentations of diseases and the human experience of illness. Brykczynski (1989) speculates that this dual incorporation of disease and lifeworld recognition provides a whole person 'holistic' consideration as opposed to the traditional mind-body split characteristic of specialty divided biomedicine. It is pertinent at this point to contextualise 'holism' in nursing as it can be perceived as a nebulous concept (Archibald, 2012). The nursing ideology of holism places preferential emphasis on personalised interactions with patients, often with biomedical knowledge being seen as of secondary importance for successful provision of holistic nursing care, conceptualised as a "bio-psycho-social-spiritual model" of care in which biomedical, psychological, social, and spiritual elements conduce a patient's symptoms, disease, or illness (Dossey *et al.,* 2000, p.8). The fourth theme, 'selecting and recommending appropriate diagnostic and therapeutic interventions and regimens with attention to safety, cost, invasiveness, simplicity, acceptability, and efficacy', is

a convoluted way of saying that the nurse practitioners demonstrated evidence based practice. The fifth theme was 'providing a back-up system to ensure safe medical and nursing care and developing fail safe strategies when concerns or clinical uncertainty arise in consultations'. The sixth theme, 'building and maintaining a therapeutic team to provide optimum therapy' identified that occasionally the nurse practitioners had contested relationships with some of their registered nurse and medical colleagues, either through lack of cooperation from nurses, or role demarcations being retained by doctors. The seventh theme, 'maximising the patient's participation and control in his or her own health/illness care' highlights the prominence of patient participation in the observed consultations. This theme involved the nurse practitioners openly acknowledging to their patients when they felt clinical uncertainty was present in their consultations. The final theme, 'timing: capturing a patient's readiness to learn – motivating a patient to change', illustrates the nurse practitioners' abilities to identify in their consultations patients' "potential readiness for [health] change" within the context of the patients' everyday lives (Brykczynski, 1989, p. 101).

In overview Brykczynski's (1989) phenomenological analysis of nurse practitioner consultations provides credible qualitative evidence of how nurse practitioners apply their hybrid medical and nursing knowledge in their interactions with patients in order to achieve "holistic personalized assessments" (Brykczynski, 1989, p. 101). However, Brykczynski's (1989) study, whilst being a classic investigation of the nature of nurse practitioner consultation practices, does not tell us why the eight themes arose in their observed consultation interactions. On a methodological point of critique whilst the part of the study's data collection included participant observation, scant details are given of the actual process of observation, other than saying it consisted of "80 hours of observation (yielding 66 clinical situations)" with three patient visits per nurse practitioner, and an average four hour observation period per nurse practitioner (Brykczynski, 1989, p. 80).

More recently working within the sociological / critical consultation domain, Defibaugh (2014a; 2015) has considered the social status of nurse practitioners in relation to their consultation communication strategies. In an 'ethnographic discourse analysis' study of nurse practitioner consultation interactions, Defibaugh (2014a) has observed nurse practitioners occupy a mid-level social position in the healthcare hierarchy between doctors, other clinicians and patients, which results in the negotiation of authority and the facilitation of affinities with patients/carers by

nurse practitioners. Defibaugh's (2014a) study comprised audio recordings of 20 patient consultations with a diabetes specialist nurse practitioner based in a hospital in the USA. These audio recordings were supplemented by direct observations of the consultations made by the researcher using the 'sitting-in' method, and pre and post-consultation interviews with the nurse practitioner. Defibaugh (2014a) found that the nurse practitioner and her patients engaged in a lot of 'small talk', regarding everyday life, which was not necessarily related to the patients' medical problems. Clinical decision making in the consultation became a shared experience through the use of specific words, particularly "first-person plural pronouns, most notably 'we' and our'" (Defibaugh, 2014a, p.268). For example, when discussing a medication dosage the nurse practitioner said, "'We know that we found your dose'" (Defibaugh, 2014a, p.268). Additionally the nurse practitioner allowed the patients to share stories either about themselves or their experiences of illness. Defibaugh (2014a) states these three strategies of small talk, shared decision making language, and story impartation decreased social distance between the participants and fostered a sense of unified togetherness, which permitted the sharing of power in the consultations and an attention to the patients' individual identities, rather than just being another patient with diabetes. According to Defibaugh (2014a) the observed negotiation approach occurred as the nurse practitioner and her patients perceived she did not possess the same level of authority as her senior medical colleagues, and that she consequently had to use the identified communication strategies to convince her patients to follow her guidance on medical therapeutics.

The possibility of a Hawthorne effect occurring in the consultations Defibaugh (2014a) sat-in on needs to be taken into account when considering her findings, as the genuineness of the interactions she observed cannot just be accepted at face value. Because Defibaugh (2014a) herself was also present in the consultations, that could have potentially altered the interactions from how they would have occurred naturally without a non-participant observer being present in the consulting room. This observer effect could have been avoided by using a video camera to record the consultations, as has been done in other similar studies of clinician-patient interactions (Barratt, 2007). Nevertheless Defibaugh's (2014a) ethnographic discourse study clearly illustrates the perceptual discrepancies of the role status of nurse practitioners. These discrepancies mean they have to navigate between what they are actually required to do for patients, in terms of medical therapeutics decision making, such as diagnosis and prescribing, and the commonly held

perception amongst patients that nurse practitioners have less authority than doctors to be making such decisions independently.

2.4.1 How do nurse practitioner consultation communication processes and social interactions compare with those of medical doctors?

Whilst the preceding studies in section 2.4 have focused on analysing nurse practitioners' interactions in relation to the communication processes within nurse practitioner consultations, there is a minimal amount of consultation processes research which directly compares the interaction styles of medical doctors and nurse practitioners in their respective consultations. This is in contrast to the nurse practitioner consultation outcomes research detailed in Chapter 1, which is largely based around analysis of the comparative outcomes of GP and nurse practitioner consultations. However, Seale *et al.* (2005; 2006), working within the clinical-observational domain, using some of the audio-recorded consultation data collected in the earlier RCT of Kinnersley *et al.* (2000), provide a comparative interaction analysis study of the different communication patterns used by GPs and nurse practitioners in their consultations with general practice patients. Seale *et al.'s* (2005; 2006) analysis was based on the audio-recordings of 33 nurse practitioner and 22 general practitioner consultations. This analysis comprised coding of clinician interactions using *NVivo* software, which resulted in summary categories representing different types of clinician interactions such as 'proposing a treatment' or 'explanations of how to apply/carry out a treatment'. Their findings indicate, once again, that nurse practitioners conduct longer consultations with increased usage of talk by both patients and nurse practitioners alike. Seale *et al.* (2006) particularly noted that the nurse practitioners spent longer explaining how to take or use recommended treatments, and speculate that these additional interactions may explain the higher levels of patient satisfaction reported for nurse practitioner consultations.

Seale *et al.'s* (2005; 2006) analysis also revealed that the nurse practitioners' interactions had more of an emphasis on 'social / emotional / patient centred talk' in their consultations. Consultation interactions characterised as 'social / emotional / patient centred talk' can be seen as corresponding to the meaning of the voice of the lifeworld as has been correspondingly identified in sociological domain studies such as Bryczynski (1989), Johnson (1993), Kleiman (2004), and Barratt (2005a). It

must be noted that Seale *et al.'s* (2006) secondary analysis was based on older data collected 8 years previously in 1998, and so could not take account of the significant policy development of extended nurse prescribing which occurred during that intervening time period (Barratt, 2006).

More recently Paniagua (2011) has presented a sociological domain / critical consultation discourse analysis study of the comparative consultation interactions and practices of nurse practitioners and general practitioners in primary care. This study was based at general practice clinic in the UK comparing the consultations of two nurse practitioners and two general practitioners working at the clinic. 37 consultations were video recorded, comprising 13 doctor-patient consultations and 24 nurse practitioner-patient consultations. The discourse analysis of the video recordings revealed that the nurse practitioners structured their consultations in a generally similar way to general practitioners, but that the nature of their interactions with the patients differed. The main difference noted was that patients interacted more with the nurse practitioners and the style of their consultations was mostly 'chatty', characterised by both patients and nurse practitioners engaging in conversational topics and turns, such as notations of social similarity, within the overall medically-directed structure of the consultation such as history taking, clinical examination, diagnostics, and treatment decisions. In comparison the general practitioner consultations were found to be more formal and less chatty, with a pre-dominant focus on managing patients presenting problems, which was achieved by the doctors tending to control the consultation interactions.

Paniagua (2011) goes on to suggest that the nurse practitioners created a hybrid 'medico-nursing world' in which to base their consultations, successfully encompassing both medical and nursing domains at the same time. In turn, this hybrid feature enabled the patients to have increased levels of active participation in their consultations with the nurse practitioners, whilst still having their medical problems dealt with. This re-discovery of hybrid medical-nursing interactions supports the earlier findings of Johnson's (1993) discourse analysis study of nurse practitioner consultations, which similarly identified a combined attention to both medical and patients' perspectives, and also Kleiman's (2004) concept of nurse practitioner professional identity hybridity. An example of enabled patient participation in Paniagua's (2011) study was the nurse practitioners' strategy of thinking aloud and 'online' during their consultations, which means they verbalised their cognitive clinical reasoning and diagnostic uncertainties, as was previously

noted by Brykczynski (1989). These verbalisations led to the patients being able to share in clinical decision making, such as jointly deciding with a nurse practitioner whether to have immediate or delayed script for antibiotics. At the diagnostic stage of the consultations Paniagua (2011) says that in contrast to the doctors the nurse practitioners were tentative about definitive diagnostic statements. However her presented findings seem to contradict this assertion as in some of her consultation dialogue examples the nurse practitioners do appear to either make a definitive diagnosis or else give a verbal description of a diagnosis. An alternative way of interpreting the nurse practitioner's decreased usage of definitive diagnostic statements could be that the nurse practitioners do give diagnoses, but in a collaborative, interpretive manner which is more understandable to their patients, rather than just stating a diagnostic label to the patients, as the GPs did in the study. A key feature of Paniagua's (2011) work is the comparison of the two clinician groups on a 'like-for-like' basis, meaning that only on-the-day urgent appointments were sampled, as the nurse practitioners and general practitioners alternately provided those every day. This like-for-like basis meant that the observed variation in consultation interactions would not be due to pre-existing differences between the appointment types, such as duration or purpose, but instead could be attributed to the differences in the interactions of the participants in the consultations.

This feature of evident hybridity that Paniagua (2011) and others (Brykczynski, 1989; Johnson, 1993; Kleiman, 2004; Barratt, 2005) note in relation to the nurse practitioner role and the conduct of their consultations, provides a comparative alignment with the social and cultural concept of postmodernism (Appignanesi and Garratt, 2004). This alignment arises, particularly in relation the hybrid identity of nurse practitioners, as recognition of hybrid social identities are an intrinsic part of postmodernist thinking (Holmes and Warelow, 2000). The prevalence of patient-centred styles of communication underpinned by lifeworld-oriented social talk in nurse practitioner consultations (Seale 2005; 2006; Charlton *et al.,* 2008; Paniagua, 2011), also reveals a further postmodernist feature of nurse practitioner consultations, whereby those clinicians can be seen to be emphasising social narratives via their consultation interactions, in preference to what many postmodern theorists critique as a normally dominant epistemological 'metanarrative' in society; namely scientific discourse (Lyotard, 1984; Stajduhar *et al.,* 2001; Patton, 2015). In many ways, in contrast, to the more settled social status of doctors, nurse practitioners can be seen as a postmodern phenomenon exemplifying recent fluid changes in the role demarcations and traditional identities of healthcare

professionals, such as the breaking down of the previously discrete boundaries of the clinical functions doctors and nurses (Prosser and Olson, 2013). However, even though nurse practitioners are breaking role boundaries between doctors and nurses there is still, as noted by Defibaugh (2014a), evident equivocation arising as to the precise social status of the nurse practitioner role within that new way of working, which again highlights the ambiguous postmodern hybridity of nurse practitioners' everyday practice.

2.4.2 What are the effects of nurse practitioner consultation communication processes and social interactions on the measured outcomes of those consultations?

So far the preceding research reviewed in this section of the literature review has not linked analysis of the observed communication processes of nurse practitioner consultations with the outcomes of those consultations. There are fewer such studies available, but an example of that type of study is a clinical-observational domain study presented by Lawson (2002). This linked processes – outcomes study was based on audio recordings of "124 provider-patient interactions of five nurse practitioners and four physicians" obtained in a medical referral clinic of a hospital in New England, where nurse practitioners and doctors worked closely together in collaborative teams (Lawson, 2002, p. 61). The study sought to investigate whether the clinicians' communication styles were either 'informational' ("being attentive, answering questions, soliciting opinions") or 'controlling' ("absence of explanation, giving directions/commands, predominance of provider talk"), and to determine if either of those styles were associated with patient satisfaction or perceived support for patient autonomy (Lawson, 2002, p. 60). The audio recorded consultations were analysed using a validated 'Provider Communication Style Rating Scale', which quantitatively examined the recordings for instances of either informational or controlling style interactions. Patient satisfaction and perceived support for patient autonomy were measured with validated questionnaires (Lawson, 2002).

The results of Lawson's (2002) study showed that both types of clinicians tended to use an informational style of communication, with only 8% of the consultations having a controlling interaction style. Interestingly, on comparison, it was found the doctors tended to use an informational style slightly more often than the nurse practitioners, though there was considerable variation within the clinician groups. Furthermore it was found both clinician types used a more controlling style when

consulting with patients with either unhealthy lifestyles or long-term conditions, but were not responding to advice on positively changing their health behaviours. It was found there were high reported levels of patient satisfaction and perceived support for autonomy, but there were no significant associations between those measures and either informational or controlling styles of communication. As such this study shows that nurse practitioners and medical doctors working in the same setting can both use very similar styles of communication, but that using an informational or participatory style of interaction does not necessarily increase patients' sense of satisfaction and their perceived support for autonomy. Lawson (2002) in part attributes the lack of association between communication styles and outcomes to the lack of variability in scores for patient satisfaction and perceived support for autonomy, as those outcomes measures were generally reported as being high across the sample of patients. This study does also show that nurse practitioners do not necessarily have a monopoly on using participatory communication styles, and that their medical colleagues, when working together with nurse practitioners, can also use more participatory communication styles when interacting with patients.

Another clinical-observational domain research paper linking analysis of nurse practitioner communication processes with outcomes, is a study of patients' and nurse practitioners' communication compared with the outcomes of: patients' immediate evaluations of their consultations including post-consultation satisfaction; intention to adhere to care recommendations; improvements in the presenting problem; and a longer term measure of health and well-being from the patient's point of view (Gilbert and Hayes, 2009). This USA-based study involved analysing video recorded consultations of 155 older people with 31 nurse practitioners using a validated interaction analysis system. The study data was analysed using multiple regression modelling to investigate the relationship between the interaction analysis of consultation communication and the measured outcomes. The study data comprised 62 independent variables, such as setting types and components of interaction styles, and five dependent variables, including satisfaction and intention to adhere as well as longer term outcomes of changes in physical and mental health. Through using sequential selection methods the number of independent variables included in the final regression models was reduced to 47.

Gilbert and Hayes (2009) findings revealed most patients were highly satisfied (mean score 9.68 out of a possible maximum satisfaction score of 10) after consulting with a nurse practitioner and intended to adhere (mean score 4.75 out of

a maximum possible adherence score of 5) to the nurse practitioners' recommended care plans. The regression modelling showed that nurse practitioners communicated effectively with patients in relation to interactions such as collecting and giving biomedical and psychosocial information, which were the interaction types associated with greater intentions to adhere, and also improvements in mental health ($p < 0.01$). In turn, enhanced intentions to adhere were associated with greater long term improvements in presenting problems ($p < 0.01$). However, variations in the associations between interactions were found, for example, interactions related to lifestyle discussions either by patients or nurse practitioners were found to be associated with lower rates of intentions to adhere, and also less long term improvements in presenting problems.

In an integrated literature review of nurse practitioners' communication styles and their impact on patient outcomes Charlton *et al.* (2008, p. 383) characterise nurse practitioner styles as exemplifying biopsychosocial or patient-centred style of consultation communication, which, in relation to nurse practitioner consultations, are often found to be associated with positive consultation outcomes such as increased patient satisfaction, and increased adherence to recommended treatments with subsequently improved patient health. Charlton *et al.* (2008) describe biopsychosocial or patient-centred communication styles as "… actively [engaging] patients in discussion and decision-making processes regarding their own care …" with patients and clinicians working as partners, sharing ideas, and taking account of social and emotional contexts. Charlton *et al.'s* (2008) review comprised analysis of a mixed sample seven sociological and clinical-observational studies of nurse practitioner communication, which were selected from a sample of 26 research studies of nurse practitioner communication, on the basis of their suitability for linking nurse practitioner communication styles with outcomes. Charlton *et al.* (2008) note researchers do not use similar definitions of biomedical and patient-centred communication styles, nor consistent outcome measures such as satisfaction, which is a limiting feature of the research studies they reviewed as comparability is reduced. An example of inconsistencies of definition of patient-centred styles of communication arises in a clinical-observational domain study of nurse practitioner communication styles presented by Berry (2009), using a simplified version of the validated interaction analysis system, found only a minority of the observed nurse practitioners used patient-centred communication styles in their consultations. In Berry's (2009) study 53 North American nurse practitioner primary care consultations were audio recorded. Berry's (2009) Interaction system

analyses of those consultations showed 30.2% of nurse practitioners used a patient-centred communication style, while 69.8% used a clinician-centred style. However, Berry's (2009) study does not appear to be using a definition of patient-centred communication that is correspondent with how other clinical-observational studies of consultation communication have defined patient-centred communication (Roter and Larson, 2002; Cooper *et al*., 2003; Seale 2005; 2006; Gilbert and Hayes, 2009). For example, Berry (2009) excludes interactions related to social conversation and partnership building as being categorised as patient-centred, whereas such interactions would be classified as being patient-centred in most other clinical-observational studies. The researcher's re-interpretation of Berry's (2009) findings based on the study's published figures, in line with the consensus definition of patient-centred communication, indicates that a majority (58.6%) of nurse practitioners in the study did use patient-centred communication styles, which would be consistent with the findings of other studies of nurse practitioner communication styles such as Charlton *et al.* (2008).

The consultation processes and outcomes studies of Lawson (2002), Charlton *et al.* (2008), and Gilbert and Hayes (2009) provide evidence that some linkages do exist between social interactions occurring in nurse practitioner consultations and the subsequent short and longer term outcomes of those consultations. They do not however, tell us why some types of interactions observed in nurse practitioner consultations have subsequent beneficial effects such as increased intentions to adhere. Accordingly this current study attempts to explicate why some of the interaction styles observed in nurse practitioner consultation are associated with positive patient outcomes.

2.5 What are patients' evaluative and experiential perceptions of consulting with nurse practitioners?

This section of the literature review moves the discussion from analysing the communicative processes of nurse practitioner consultation to consider patients' evaluative and experiential perceptions of consulting with nurse practitioners. Patients' evaluative and experiential perceptions of consultations have been analysed in consultation communication research via four main areas of enquiry: expectations, experiences, satisfaction, and enablement. These areas of enquiry

can be aligned as sequentially occurring: pre-consultation for expectations; during a consultation for experiences; and post-consultation for satisfaction and enablement.

The term patients' expectations is linked to that of patient satisfaction, as evaluative satisfaction with healthcare is often dependent on the type of care a patient expected to receive, which would imply that expectations of care must be assessed before measuring satisfaction. Comprehending the formation of patient expectations and their subsequent effects on consultation interactions and outcomes has been noted as important to ensure a complete understanding of patient-clinician consultations (Staniszewska and Ahmed, 1998; 1999; Staniszewska, 1999; Stevenson, 2000). It has been noted patients' expectations can be categorised as either 'probability expectations' of what patients contemplate will occur, or 'value expectations' of what patients hope will happen in a clinical encounter (Redsell *et al.,* 2007a).

Patient satisfaction is a multi-dimensional and dynamic process, involving judgement of the interrelated physical, psychological and social elements of a consultation, which does not always have to end in the production of a list of dissatisfied or satisfied features of healthcare service provision, but instead can also strive to analyse and understand patients' experiences of healthcare (Staniszewska, 1999). It has been noted that assessment of patient satisfaction can serve three discrete practical purposes: comparison of different modes of health care; evaluation of the quality of delivered care; and to note which aspects of a service may require enhancement to boost patient satisfaction (Jackson *et al.,* 2001).

Partly in response to critiques of the diverse multidimensional nature of patient satisfaction, the more specific concept of patient enablement has been developed in consultation communication research (Howie *et al.,* 1997). Patient enablement goes further than the concept of patient satisfaction as it moves beyond the consultation to consider whether patients feel more able to manage their health as a result of consulting with a clinician, rather than solely focusing on an evaluation of the care provided by their clinician, as measures of patient satisfaction can sometimes do (Collins *et al.,* 2007). The basis of patient enablement is that post-consultation patient outcomes such as satisfaction and adherence are determined by how patients feel after their consultations. That is to say do they feel more enabled, than before their consultation, to comprehend and/or cope with their medical problem

(Andén *et al.,* 2006). The premise being that patients who do feel more enabled will exhibit higher levels of satisfaction and adherence.

Evaluative measures of outcomes of consultation such as patient satisfaction or patient enablement, often form part of the clinical-observational domain of consultation communication research, and are sometimes also integrated in the interactive dyad approach within the sociological domain. In the succeeding sections the empirical underpinnings of patients' expectations, experiences, satisfaction and enablement are discussed in relation to consultation communication research, with a focus mainly on nurse practitioner consultations, though where necessary similar research of GP consultations is also discussed.

2.5.1 Patients' expectations of nurse practitioner consultations

In relation to patient expectations, Redsell *et al.* (2007a, p.5) have conducted a qualitative study of "Patient expectations of 'first-contact care' consultations with nurse and general practitioners in primary care". This study, following up on the previously discussed reports of increased patient satisfaction with nurse practitioner care, sought to investigate further the comparative patient expectations for "GP and nurse consultations … in an attempt to explain the higher reported satisfaction rates with nurse consultations" (Redsell *et al.,* 2007a, p.6). Redsell *et al.* (2007a) have been directly quoted here as the title of their paper "… consultations with nurse and general practitioners …" would appear to suggest their sample included nurse practitioners, but they only describe their nurse participants as "… nurses treating patients attending for first-contact care consultations …" (Redsell *et al.,* 2007a, p.7). So from this description it is not clear if the nurses included in the study were actually nurse practitioners. However, moving on from this unclear nomenclature issue, Redsell *et al.* (2007a) from analysis of pre and post-consultation interviews with 28 patients from two clinics, found that the patients knew what to expect from general practitioner care, and were generally satisfied; they were less certain about what to expect from seeing the nurses, and subsequently had lower expectations of the nurses. For example, some of the patients thought that seeing the nurse was just an interim care measure, and that they would then later need to see the doctor for definitive care. Despite this uncertainty many patients expressed post-consultation satisfaction with the nurses, even though unexpected interventions occurred when seeing the nurses such as elicitation of a detailed history of their presenting problem, or a physical examination, such as chest auscultation.

Redsell *et al.* (2007a) conclude that the clinical autonomy and knowledge of nurses working in advanced roles is not expected or understood by some patients, and consequently they have lower probability expectations of seeing a nurse than doctor, and that if these lowered probability expectations are exceeded patients may have greater comparative satisfaction with nurse consultations over doctor consultations. However, presumably it can be determined that once a patient has consulted with nurses working in advanced roles on a number of occasions they would know what to expect from those nurse consultations, and subsequently their pre-consultation expectations would be similar to those for consulting with a medical doctor.

2.5.2 Patients' experiences of consulting with nurse practitioners

Patients' experiences of consulting with nurse practitioners are often elucidated within the sociological domain of consultation communication research; focusing on how patients perceive the experiential reality of actually consulting with a nurse practitioner. Barnes *et al.* (2004) and Williams and Jones (2006) have presented two papers concerned with patients' experiential perceptions of the nurse practitioner consultation. Barnes *et al's*. (2004) sociological domain paper is a qualitative study concerned with patients' and nurse practitioners' perceptions of 'clinical uncertainty' in nurse practitioner consultations. It particularly tried to identify if patients noted any nurse practitioner uncertainty and the effect this had on their confidence of consulting with a nurse practitioner. The study comprised 43 post-consultation semi-structured interviews with patients linked to a short questionnaire completed by three qualified, RCN accredited nurse practitioners based in three general practices involved in the study, which was used to identify any clinical uncertainty in their consultations. Clinical uncertainty in this study was defined as a consultation "where there is no obvious diagnosis, treatment or where the outcome of the consultation is not definite" (Barnes *et al.* 2004, p. 1352).

Barnes *et al.'s* (2004) findings revealed a wide discrepancy between patients' and nurse practitioners' perceptions of uncertainty with only with two patients noting any uncertainty, whilst the three nurse practitioners identified 30 consultations with elements of defined clinical uncertainty. In their interviews patients accepted that the nurse practitioners could manage clinical uncertainty as they thought the nurses

would consult with a doctor if they felt unsure. The researchers also asked the patients about their expectancy perceptions of the nurse practitioner role and if they themselves felt any uncertainty when booking a nurse practitioner appointment. This questioning revealed a degree of confusion regarding nurse practitioners with many respondents using the terms 'practice nurse' and 'nurse practitioner' interchangeably, as though there were no differences between the two roles. Other patients did not even realise they were consulting a nurse practitioner, whilst others felt that it should be publically stated more clearly that nurse practitioners, whilst using medical knowledge and skills, are not actually doctors. This lack of perceived role certainty by patients of the nurse practitioners echoes the later similar findings of Redsell *et al.* (2007a). Conversely, whilst nurse practitioner role confusion was evident amongst patients, most of them said they would consult a nurse practitioner about any medical complaint. Continuing familiarity with a clinician was seen as an important feature, transcending any professional role demarcations. Patients in the study also perceived that the nurse practitioners had more available time and ease of access, and subsequently would prefer to consult with a nurse practitioner. This finding corresponds with the previously identified results of the increased time lengths of nurse practitioners' consultations noted in the prior systematic reviews and RCTs discussed in Chapter 1; it may begin to explain why patients sometimes express higher satisfaction with nurse practitioner consultations versus doctor consultations.

Patients' perceived increased time availability for nurse practitioner consultations is also a key finding of a sociological domain qualitative study presented by Williams and Jones (2006) which explored five women's and five men's experiences of consulting with one female qualified RCN accredited nurse practitioner in a general practice clinic via in-depth interviews. Patients reported that they enjoyed what they perceived to be lengthier consultations, as this permitted an attention to complex emotional needs and also the provision of quality medical information. The range of the nurse practitioner's actual consultation timings was ten to fifteen minutes, which does not seem an excessive amount of time. These findings support those of Johnson (1993) and Barratt (2005a), as 'complex emotional needs' can be equated to subjective lifeworld discussions. In addition to increased consultation time lengths patients also liked the perceived ease of access to the nurse practitioner and her receptive style of consulting. Importantly from a resource utilisation perspective, some patients identified that the receptive consulting style of the nurse practitioner enabled them to ask about all their current concerns in one consultation, rather than

returning for subsequent consultations. Corresponding with the findings of Barnes *et al.* (2004) patients in the study also identified the importance of an ongoing relationship with the same clinician. However an ongoing relationship is normally only possible in general practice settings, as in walk-in or urgent care clinics patients often may attend on a 'one-off', rather than a continuing basis. Whilst providing interesting data for debate of nurse practitioner primary care consultations, it must be noted that caution must be used if generalising from this small study of one nurse practitioner.

2.5.3 Patient satisfaction with nurse practitioner consultations

As regards analysis of patient satisfaction with nurse practitioner consultations in contrast to the previously reviewed research such as Kinnersley *et al.* (2000), Venning *et al*. (2000), and Horrocks *et al.* (2002), which all investigated patient satisfaction with nurse practitioner consultations as one outcome measure amongst many, there is a group of studies available with a prime focus on patient satisfaction with nurse practitioner consultations in North America (Bear and Bowers, 1998; Cole *et al.,* 1999; Knudtson, 2000; Pinkerton and Bush, 2000; Hayes, 2007; Agosta, 2009a, 2009b). These studies have used questionnaires tested for their reliability and validity for measuring patient satisfaction specifically with nurse practitioner primary care consultations. Such questionnaire specificity is in contrast to the doctor-based measures of patient satisfaction used in British studies such as Kinnersley *et al.* (2000), and Venning *et al.* (2000). Key examples of these nurse practitioner satisfaction studies are critically discussed below.

Knudtson (2000) presented a study concerned with measuring patient satisfaction with nurse practitioner consultations by testing a specific nurse practitioner satisfaction questionnaire in four rural primary care clinics. The research sought to examine levels of patient satisfaction, and to relate these to patients' demographics, their service expectations being met, and the likeliness of the patients recommending the nurse practitioner clinics to others. Satisfaction was measured with the specially developed Nurse Practitioner Satisfaction Instrument. This 15 item Likert scale questionnaire was adapted from the Home Care Client Satisfaction Instrument-Revised, via a literature review of nurse practitioner satisfaction research, and linking this to a conceptualisation of measurement of patient satisfaction being dependent upon knowledge of patients' expectations of a service. The content validity of the Nurse Practitioner Satisfaction Instrument was then

assessed by a panel of four nurse practitioners, and through piloting with 15 patients participating in a pilot study. Only minor changes were made to the questionnaire after piloting. The questionnaire has two main areas of enquiry: direct measurement of patient satisfaction, and patients' expectations of a quality nurse practitioner service. Cronbach's alpha reliability coefficients for these two areas of the questionnaire were 0.90 and 0.88 respectively, indicating a high degree of reliability for the test items of satisfaction and expectations.

A convenience sample of 100 adult patients or parents completed the questionnaire, with 93 satisfactorily completed for subsequent data analysis. Out of a total possible satisfaction score of 60, the mean for the sample was 56.05, suggesting high levels of patient satisfaction in this small sample. There was a negative correlation between patient age and satisfaction and also between familiarity with the nurse practitioner service and satisfaction. Older patients and those familiar with the nurse practitioners' clinics satisfaction were less satisfied, whilst younger patients appeared more satisfied, and patients less familiar with the nurse practitioners' clinics were more satisfied. Patients with a higher educational level also reported greater satisfaction levels. Unsurprisingly there was a significant positive correlation between patients' expectations being met and their subsequent satisfaction. Satisfied patients were also significantly more likely to recommend the nurse practitioners' clinics. Examination of the detail of patients' satisfaction revealed that they were most satisfied with the interpersonal communication provided by the nurse practitioners.

Knudtson (2000) conjectures that patients familiar with the clinics may have been less satisfied, as the nurse practitioners replaced doctors who had previously run the clinics, and that newer patients may have been unaware of this role substitution. Contrarily it could be surmised that newer patients were surprised by the level of consultation service provided by the nurse practitioners, and hence reported higher levels of satisfaction, whilst the other patients had become familiar with the nurse practitioners' capabilities and no longer reported greater satisfaction. This possibility of patient familiarisation with nurse practitioner care and the resultant increased expectations supports the previous appraisal of Redsell *et al.'s* (2007a) expectations study.

Knudtson (2000) recommends a broadening of sampling for her questionnaire in order to further determine its validity and reliability in other populations. Responding

to this recommendation Pinkerton and Bush (2000) have used Knudtson's (2000) questionnaire in a comparison study of patient satisfaction with nurse practitioner versus doctor consultations in a public hospital primary care clinic. Their study used a convenience sample of 160 patients. No significant differences in patient satisfaction between the two clinician groups were found. The questionnaire was again found to be reliable for assessing patient satisfaction with a Cronbach's alpha reliability coefficient of 0.91. Accordingly Pinkerton and Bush (2000) recommend the future use of the Nurse Practitioner Satisfaction Instrument in other studies of nurse practitioner consultation patient satisfaction.

More recently Agosta (2009a, 2009b) has examined patient satisfaction with nurse practitioner primary care consultations in North America through the use of the Nurse Practitioner Satisfaction Survey (NPSS). The NPSS is a 28 item Likert scale questionnaire which developed by reviewing other patient satisfaction scales, a review of the relevant literature, and eliciting professional opinion, via a panel of clinical academic nurse practitioners. The draft survey was subsequently piloted with 39 patients attending a primary care clinic employing a nurse practitioner, after which minor textual amendments were made. Her study reports on the testing of the survey with a larger group of patients seeing a larger group of nurse practitioners. The survey has three areas of focus: general satisfaction, nurse practitioner communication, and accessibility and convenience of seeing a nurse practitioner. Tested with Cronbach's alpha, high internal consistency reliability coefficients for those three areas were noted, with scores of 0.98, 0.83, and 0.76 respectively.

A convenience sample of 300 adults patients registered at a hospital-based primary care service completed the satisfaction survey in the main part of Agosta's (2009a) study. This clinic was staffed by nurse practitioners, doctors, and physicians' assistants. The majority of the respondents were younger (26 to 35 years of age), white patients, who tended to be either married or cohabiting. The overall consultation satisfaction score was 86.86 per cent. The majority of patients reported being most highly satisfied with nurse practitioner consultations (69.4 per cent). In particular married and cohabiting patients were significantly more satisfied with nurse practitioner consultations than single people. Reflecting the findings of the previously reviewed studies, nurse practitioners were noted to give substantially more health education information than doctors (79.5% for nurse practitioners versus 20.2% for doctors). Agosta (2009a) comments that whilst the NPSS was found to reliably and specifically measure patient satisfaction with nurse practitioner

consultations, and that its findings correspond with previous research, it does not explain why favourable patient satisfaction is often reported for nurse practitioner consultations. Accordingly she recommends that concurrent qualitative investigation of the complexities of enhanced patient satisfaction with nurse practitioner consultations is also required to understand the phenomenon further.

2.5.4 Patient enablement after consulting with clinicians

An example of a study which has considered patient enablement after consulting with a nurse practitioner is the previously discussed RCT of Venning *et al.* (2000), in which patient enablement after consulting with a nurse practitioner or GP was measured and compared with a widely used and reliable measure of patient enablement, the Patient Enablement Instrument (PEI). Analysis of enablement scores in Venning *et al.'s* (2000) study revealed no significant differences in comparative levels of patient enablement after consulting with either a nurse practitioner of a GP. There are few other studies of patient enablement in relation to nurse practitioner consultations (Charlton *et al.,* 2008), which means detailed empirical understanding of this concept has to be mainly gleaned from studies of doctor-patient consultations. Pawlikowska *et al.* (2012) provide an example of a frequently cited clinical-observational domain medical consultation study measuring degrees of patient-centred interactions versus doctor-centred interactions and their effects on patient enablement. In this study 88 video recordings of patients' primary care consultations with three doctors were analysed. The patients in the study were asked to complete the PEI post-consultation to measure their enablement levels. The recorded consultations were assessed using an established instrument for analysing consultation verbal interactions, the Roter Interaction Analysis System (RIAS), whilst non-verbal communication was evaluated with the commonly used Medical interaction Process System (MIPS). The results of the combined PEI, RIAS, and MIPS analysis demonstrated that higher levels of patient enablement were associated with consultation communication related to the patients' agendas, patients' verbal dominance, doctors acknowledging patients' feelings, and relaxed body language exhibited by doctors, such as not writing. However Pawlikowska *et al.* (2012, p.75) note only one third of the variance in enablement scores could be accounted for by their selected analysis instruments, and hence go on to speculate that other aspects of "… interpersonal exchange …" not measured by those instruments must affect patient enablement. They conclude that further research to determine the unexplained variances in patient enablement is required.

2.6 Gaps in knowledge about the nurse practitioner consultation and the conceptual framework underpinning the research study

This overview literature review of the communication processes and social interactions of nurse practitioner consultations has noted the following gaps in research knowledge of this subject: the existence of only emergent investigations of the linkages between nurse practitioner consultation processes and outcomes such as satisfaction and enablement; minimal questioning as to why nurse practitioners integrate everyday 'lifeworld' information in their consultations; and only partial explorations of patients' perceptions of consulting with nurse practitioners and the inclusion of lifeworld information in their consultations. In response to these knowledge gaps this study was designed to examine the links between the processes and outcomes of nurse practitioner consultations, by investigating and explaining why the interactions observed in nurse practitioner consultations actually arise.

This section of the literature review chapter presents the conceptual framework for the study which guided the development of the study's overall aims and objectives, and the consequent study propositions, and related research questions. Before moving to the detail of the conceptual framework it is first necessary to understand what is meant in this instance by a conceptual framework. This thesis follows the frequently cited ideas of Ravitch and Riggan (2012) in applying reason and rigour to research via conceptual frameworks utilised as mechanisms for guiding the research process (Durham *et al.,* 2015). A conceptual framework is viewed as a tripartite composition of: researcher personal interests arising from their "…own curiosities, biases … ideological commitments … and epistemological assumptions"; topical research derived from literature of relevance to the topic of enquiry in the research study; and theoretical frameworks expounded in scholarly literature that support "…the relationships embedded in the conceptual framework" (Ravitch and Riggan, 2012, pp.10-12).

In relation to researcher personal interests the development of the conceptual framework has been influenced by the researcher's clinical academic work as a nurse practitioner in primary care and as a senior lecturer in advanced nursing, where an interest in the different ways patients interacted in their consultations was developed. Reflectively, a common theme emerging from those personal

perspectives of conducting nurse practitioner consultations was an observed enduring emphasis on the presence of social interactions concerned with everyday life information combined with scientific medical information. Consequently this study was established to provide a detailed analysis of the nature of these combined forms of discrete information in nurse practitioner consultations, and to elucidate the origins of their influence on the communication processes, social interactions, and outcomes of nurse practitioner consultations.

From the scholarly literature of communication theories the conceptual framework draws on the Habermasian influenced ideas of the existence of two competing voices in clinical consultations, which links to a macro-level of interpretation within the sociological / critical consultation analysis domain of consultation communication research, taking account of social factors beyond the immediacy of consultation interactions, such social status and power (Habermas 198a, 1981b; Mishler, 1984; Johnson, 1993). It is also recognised nurse practitioners function in a hybrid capacity, combining nursing knowledge, medical knowledge, and everyday lifeworld perspectives together in their consultation encounters, as has been previously identified in existing nurse practitioner consultation communication research (Brykczynski, 1989; Johnson, 1993; Kleiman, 2004; Barratt, 2005a; Paniagua, 2011). In turn it is accepted this role hybridity reveals a perceptual ambiguity of the purpose of the nurse practitioner role, as has been noted by Barnes *et al.* (2004) and Redsell (2007a). This feature of nurse practitioner role ambiguity has therefore also been recognised in the development of the propositions of this current study. Perceptual ambiguities of the nurse practitioner role are intrinsically linked to patients' expectations of consulting with a nurse practitioner, particularly so their probability expectations of what patients envisage will occur in those consultations; accordingly investigation of patients' expectations of nurse practitioner consultations is important to integrate in a study of communication in nurse practitioner consultations. In relation to measured outcomes of nurse practitioner consultations this study acknowledges that some studies have reported high levels of patient satisfaction with nurse practitioner consultations (Knudtson, 2000; Pinkerton and Bush, 2000; Venning *et al.,* 2000; 2002; Agosta, 2005; Charlton, *et al*., 2008). However, it is also noted when compared to GP consultations higher satisfaction with nurse practitioner consultations is not always a consistent finding (Horrocks *et al.,*2002; Lawson, 2002).

Accordingly further investigation of patient satisfaction with nurse practitioner consultations is required to determine its interrelationships with patient expectations, styles of interaction in consultations, consultation time durations, and patient enablement. It has been qualitatively reported patients perceive nurse practitioner consultations as having a greater sense of available time than medical doctor consultations (Williams and Jones, 2006; Redsell, 2007a). It has also been quantified in prior, though not all, studies of nurse practitioner consultations, that they are often longer than GP consultations, sometimes significantly so (Horrocks *et al.,* 2002). Consequently it is also necessary to further evaluate the time length durations of contemporary nurse practitioner consultations and their predictive relationships with the outcomes of consultation interaction styles, patient satisfaction, and patient enablement. It is also realised that levels of patient enablement after consulting with a nurse practitioner have only previously been minimally investigated. Therefore they require further examination including exploration of patient enablement levels in relation to patient expectations, styles of interaction in consultations, consultation time durations, and patient satisfaction.

The tripartite conceptual framework of this study is described as a '*sociological critical consultation interaction analysis*' approach to research of the nurse practitioner consultation, which focuses on analysing the interactions of nurse practitioners and patient / carer participants in those consultations, from both micro-social and macro-social perspectives. This methodological approach, combines micro-social interpretations of discrete interactions within consultations, with macro-social interpretations of consultation communication processes. This conceptual framework enables an understanding of the communication processes and social interactions of nurse practitioner consultations, which moves beyond describing those processes and interactions to explaining why they actually occur. It is within this conceptual framework of sociological critical consultation interaction analysis that the propositions for this case study have been developed, based on current knowledge of the nurse practitioner consultation emerging from the preceding overview literature review.

A focus on analysing micro-social interactions arises from a desire to research the nurse practitioner consultation as it actually occurs in practice; face-to-face social interactions in an everyday frame of reference. This micro-level of interpretation necessitates direct analysis of consultation interactions, thus also creating an association with the clinical-observational / interaction analysis domain of

consultation communication research. The interactionist theoretical perspective derives from sociology, and is concerned with determining the nature of social encounters and relationships occurring between people in those encounters. It is characterised by analysis of: people's perceptions of social situations; the process of communication between people, whereby other's perceptions of a social situation are elicited; the roles we adopt as social actors in a particular situation; and self-evaluations of our own perceptions of ourselves, which allow us to perform roles in social situations bounded by our own standards and those of our society (Prasad, 2005). Interactionist theories in sociology originate from the work of interaction theorists, such as the sociologists Erving Goffman (1959) in his influential book, 'The Presentation of Self in Everyday Life', and Harold Garfinkel (1967) in his key work, 'Studies in Ethnomethodology', both of which the researcher was introduced to during his prior undergraduate studies in sociology and psychology.

Goffman's (1959) interactionist approach to research of social encounters is ideally placed for application to the study of the process of face-to-face interactions in everyday situations, such as a clinical consultation, through its emphasis on the importance of detailed micro-sociological analysis of everyday social encounters (Giddens and Sutton, 2013). Goffman's (1959) micro-sociological approach has also been characterised as a 'dramaturgical tradition' because of his interpretation that our lives comprise everyday dramas whereby we present ourselves in the "…frontstage and backstage of social life", with the frontstage being synonymous with public life and the backstage with private life (Prasad, 2005, p.45). In this sense, the social interaction of self-presentation is viewed from a dramaturgical perspective as a 'performance', or 'impression management', shaped by the environment (for example, the setting of the consultation) and the audience (for example, the patient or carer), which seeks to provide others with impressions that are consistent with desired goals of the social actor giving the performance (for example, a nurse practitioner seeking to gain the respect and trust of a patient). This dramaturgical micro-level emphasis facilitates analysis of how individuals present themselves in any given social encounter, and also allows macro-level discursive exploration of the intricate social and power relations occurring between people in an everyday social encounter, such as a clinical consultation (Nettleton, 2013). Also of relevance is Garfinkel's (1967) alternative approach to analysis of social encounters, ethnomethodology, which seeks to establish how people negotiate their everyday activities in order to comport in socially accepted modes of interaction (Patton, 2015). As such ethnomethodology provides a framework for discursive

interpretation of the interaction methods ordinary people use to accomplish success in everyday social encounters, again, as with Goffman (1959), such as the example of a clinical consultation.

Table 2.2 presents a map of the conceptual framework, showing its tripartite derivations of personal interests, topical research, and theoretical frameworks, which have been merged in this study as sociological critical consultation interaction analysis.

Table 2.2: Map of conceptual framework

Personal interests	Topical research	Theoretical frameworks
• Researcher's practice experiences of working as a nurse practitioner in primary care in a variety of clinical settings including minor injuries units, walk-in centres, general practice, and emergency departments. • Researcher's practice-derived fascination with the different social interactions that occur between clinicians and patients and how those interactions subsequently affect the communication processes and patient-centred outcomes of those consultations. • Researcher's pedagogical experiences of being a clinical academic nurse practitioner. • Ideological influence of prior studies in sociology and psychology.	• Voice of the lifeworld versus the voice of medicine in consultations. • Patient centred versus biomedical styles of interaction in consultations. • Hybridity of nurse practitioners and the related perceived ambiguity of the social status of the nurse practitioner role. • Patients' expectations of consulting with nurse practitioners. • Patient satisfaction and patient enablement after consulting with clinicians. • Time length durations of nurse practitioner consultations.	• *Sociological - Interactionist theories* (Goffman, 1959; Garfinkel, 1967): the importance of studying interactions in social encounters from a micro-social perspective to elucidate their macro-social implications. • *Critical theory - The Theory of Communicative Action* (Habermas 1981a, 1981b): the importance of interpreting micro-social talk within its wider macro-social context, incorporating the status and power dynamics of interpersonal relationships within social systems.
The tripartite components of personal interests, topical research, and theoretical frameworks have been combined together to develop the conceptual framework of: **Sociological critical consultation interaction analysis**, which seeks to investigate the nature of the communication processes and social interactions of nurse practitioner consultations from both micro-social and macro-social perspectives.		

2.7 Aim and objectives of the study

Arising from the overview of research knowledge of the nurse practitioner consultation, and the related conceptual framework, the aim and objectives of the study were developed. The study's aim and objectives were intended to provide both a micro and macro sociological interpretation of the nurse practitioner consultation, by combining micro-analysis of the nature of communication processes and social interactions with macro-explications of the reasons for their occurrence. The study provides an understanding of the communication processes within nurse practitioner consultations in UK primary care, but the study cannot demonstrate that those communicative characteristics are unique to nurse practitioner consultations, as they may also be used by other types of clinicians. Returning to Bower *et al.*'s (2001) typology of 'internal' and 'external' factors in the domains of consultation communication research, this study's division of micro-analysis and macro-explication can be seen as considering the internal social factors of consultation dynamics for discursive micro interpretations, and external social factors affecting consultation dynamics for discursive macro interpretations of nurse practitioner consultations.

Aim of the study

This study aims to advance understanding of the discrete nature (micro-social) of the communication processes and social interactions occurring in the nurse practitioner consultation, including explicating the reasons (macro-social) for the occurrence of the particular communication processes and interaction styles observed in those consultations.

Objectives of the study

a) To determine the discrete nature of the communication processes and social interactions occurring in the nurse practitioner consultation, and to explicate the reasons for the occurrence of those discrete processes and interactions.
b) To explore the nature and acceptability of the lifeworld in nurse practitioner consultations.
c) To explore the influence of patient/carer pre-consultation expectations, consultation time length durations, and consultation social interaction styles on patient satisfaction and patient enablement in nurse practitioner consultations.

2.7.1 Study propositions and related research questions

Emerging from the literature review and reflecting the study's aim and objectives are seven propositions each with related research questions to be addressed by the study in the ensuing data analysis.

Proposition 1: Nurse practitioners emphasise patient-centred styles of communication in their consultations

Justification from the literature review for this proposition:

Nurse practitioners emphasise patient-centred styles of communication in their consultations in preference to biomedical style of communication, which also integrate lifeworld information, and their patients correspondingly respond with similar lifeworld oriented patient-centred interaction styles. This phenomenon has been noted repeatedly in studies of nurse practitioner consultations such as Brykczynski (1989), Lawson (2002), Kleiman (2004), Williams and Jones (2006), and Charlton *et al.* (2008). However current research has not clearly determined whether nurse practitioners and patients use similar frequencies of patient-centred interaction styles, nor has it ascertained where in their consultations nurse practitioners are more likely to use either patient-centred or biomedical style interactions.

Research questions:

Q1.1   *Do patient-centred styles of communication occur more frequently than biomedical styles of communication in nurse practitioner consultations?*

Q1.2   *Do nurse practitioners and patients use similar frequencies of patient-centred and biomedical interaction styles in their consultations?*

Q1.3   *Where in the consultation do nurse practitioners and their patients use patient-centred interactions and where do they use biomedical style interactions?*

Proposition 2: The discrete features of styles of communication and social interactions used in nurse practitioner consultations have not been fully elucidated and nor have patients', carers', and nurse practitioners' views of such styles of communication

Justification from the literature review for this proposition:

Discrete features of styles of communication and social interactions in nurse practitioner consultations have not been fully elicited, nor fully explicated, as there has only been a few clinical-observational domain studies of nurse practitioner consultations involving interaction analyses previously conducted such as Lawson

(2002), Seale (2005, 2006), Berry (2009), and Gilbert and Hayes (2009). Whilst those studies have quantifiably investigated the nature of those interactions, none of those studies have then gone on to qualitatively explicate the reasons why the observed communication styles and interactions actually occur. Accordingly the discrete features of styles of communication and social interactions occurring in nurse practitioner consultations need to be further elicited and explicated. Furthermore studies, such as Johnson (1993), Barratt (2005), Paniagua (2009), and Defibuagh (2014a, 2014b) have repeatedly shown patients often introduce lifeworld issues and interact in a lifeworld oriented interaction style in their consultations, and that nurse practitioners correspondingly respond with similar lifeworld oriented interaction styles. However relatively little can be gleaned from the current nurse practitioner consultation communication literature about patients' and carers' opinions and preferences for the inclusion of lifeworld information and interaction styles in their consultations with nurse practitioners. Therefore those opinions and preferences should be elicited from patients and carers who have consulted with nurse practitioners.

Research questions:

Q2.1   What are the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations?

Q2.2   What are patients', carers', and nurse practitioners' perceptions regarding the inclusion of lifeworld information in nurse practitioner consultations?

Q2.3   What are patients', carers', and nurse practitioners' perceptions regarding the interaction styles used by nurse practitioners in their consultations?

Proposition 3: Patients have uncertain expectations of the nurse practitioner consultation and an ambiguous understanding of the nurse practitioner role
Justification from the literature review for this proposition:
Patients sometimes have uncertain expectations of consulting with nurse practitioners (Redsell, 2007a), and the precise nature of the nurse practitioner role is viewed ambiguously by some patients, as has been noted in prior studies of patients' perceptions of nurse practitioners (Barnes *et al.,* 2004; Bonsall and Cheater, 2007; Redsell *et al.,* 2007a; McMurray, 2010). It has also been speculated that patients' lowered expectations of consulting with nurse practitioners may affect patients' subsequent evaluations of satisfaction, though this relationship has not yet been fully examined (Horrocks *et al.,* 2002; Redsell *et al.,* 2007a). Accordingly it is necessary to quantitatively and qualitatively examine patients' expectations and perceptions of consulting with nurse practitioners, and also to determine the

relationship between the independent variable of patients' expectations, and the dependent variables of patient satisfaction and patient enablement.

Research questions:

Q3.1   What are patients' and carers expectations of consulting with nurse practitioners?

Q3.2   What are patients', carers', and nurse practitioners' perceptions of the status of the nurse practitioner role?

Q3.3   Do patients' and carers' expectations (independent variable) of consulting with nurse practitioners affect their subsequent evaluations of post-consultation satisfaction (dependent variable)?

Q3.4   Do patients' and carers' expectations (independent variable) of consulting with nurse practitioners affect their subsequent evaluations of post-consultation enablement (dependent variable)?

Proposition 4: Patients will report high levels of satisfaction with nurse practitioner consultations.

Justification from the literature review for this proposition:

It has frequently been noted in North American studies of nurse practitioner consultations that many patients report high levels of satisfaction after consulting with a nurse practitioner (Knudston, 2000; Pinkerton and Bush, 2000; Agosta, 2009a, 2009b). However, in the UK, whilst high levels of patient satisfaction with nurse practitioner consultations have also been recorded, in comparison with patients consulting with medical doctors, higher levels of patient satisfaction with nurse practitioner consultations are not always consistently found in UK-based studies (Kinnersley *et al.,* 2000; Horrocks *et al.,* 2002). A point of difference is that in North American studies of patient satisfaction with nurse practitioner consultations, satisfaction has often been measured using specially designed instruments for measuring patient satisfaction with nurse practitioner consultations (Agosta, 2005), whilst in the UK patient satisfaction with nurse practitioner consultations has typically been measured with instruments originally developed to measure patient satisfaction with medical doctor consultations (Kinnersley *et al.,* 2000; Venning *et al.,* 2000: Horrocks *et al.,* 2002). Consequently it is important to also investigate patient satisfaction with nurse practitioner consultations in the UK with an instrument specifically devised for measuring satisfaction in those types of consultations.

Research question:

Q4.1   From a UK perspective how satisfied are patients and carers after consulting with nurse practitioners when satisfaction is measured with an instrument

specifically devised for measuring satisfaction with those types of consultations?

Proposition 5: Patients will report high levels of enablement and those patients with the highest levels of satisfaction will be most enabled

Justification from the literature review for this proposition:

In comparison to what is already known about patient satisfaction with nurse practitioners, little is known about how enabled patients are to manage their health after consulting with a nurse practitioner, as there has been only minimal investigation of this phenomenon (Charlton *et al.,* 2008). Therefore it is appropriate to further investigate how enabled patients feel after consulting with a nurse practitioner. Furthermore there has been no investigation of the potential associative relationship between patient satisfaction and patient enablement after consulting with nurse practitioners, so that relationship should also be examined.

Research questions:

Q5.1   *How enabled are patients to manage their own health after consulting with a nurse practitioner?*

Q5.2   *Do the outcome variables of patient satisfaction and patient enablement after consulting with nurse practitioners have any associative relationship?*

Proposition 6: Levels of satisfaction and enablement are affected by the interaction style with patient-centred styles of interaction increasing satisfaction and enablement.

Justification from the literature review for this proposition:

Prior studies of patient satisfaction and patient enablement after consulting with nurse practitioners have tended to examine those dependent variables in isolation, without relating them to the independent variables of the discrete styles of communication and social interactions occurring in nurse practitioner consultations (Kinnersley *et al.,* 2000; Knudston, 2000; Pinkerton and Bush, 2000; Venning *et al.,* 2000; Horrocks *et al.,* 2002;; Agosta, 2009a, 2009b). Hence it is appropriate to determine if there is a relationship between the independent variables of interaction styles in nurse practitioner and the dependent variables of patient satisfaction and patient enablement.

Research question:

Q6.1   *Do interactions styles (independent variables) used in nurse practitioner consultations affect subsequent patient satisfaction and enablement (dependent variables) after consulting with nurse practitioners?*

Proposition 7: Patients have a sense of more time in the consultation when they consult a nurse practitioner

Justification from the literature review for this proposition:

Patients have often qualitatively reported the sense of having more time to speak with nurse practitioners in consultations than they do with medical doctors (Barnes *et al.,* 2004; Williams and Jones, 2006), and nurse practitioners have also qualitatively recounted a similar sense of having more time to consult with patients (Kleiman, 2004). Quantifiably, in systematic reviews of the outcomes of nurse practitioner consultations, the mean time lengths of nurse practitioner consultations are significantly longer than those of medical doctor consultations (Horrocks *et al.,* 2002; Laurant *et al.,* 2005). Such findings have led some researchers to speculate that the increased time lengths of nurse practitioner consultations and the resultant space they allow for additional social interactions to occur, may explain the higher levels of patient satisfaction reported for nurse practitioner consultations (Seale, 2005; 2006), though that relationship has not yet been explored in research of nurse practitioner consultations. It is important to determine the time length of contemporary nurse practitioner consultations, as the prior systematic reviews of the outcomes of nurse practitioner consultations were conducted some time ago (Horrocks *et al.,* 2002; Laurant *et al.,* 2005). It is also important to determine if there is a relationship between predictor variable of consultation time length and the outcomes of styles of interaction in those consultations. Furthermore as it has not yet been objectively determined if there is a relationship between the independent variable of consultation time length and the dependent variables of either patient satisfaction or patient enablement, it is appropriate to examine those consultation time length relationships.

Research questions:

Q7.1   *What is the mean time length of nurse practitioner consultations?*

Q7.2   *Does the frequency occurrence of different communication and interaction styles (independent variables) in the consultations affect the time length (dependent variable) of nurse practitioner consultations?*

Q7.3   *Does the time duration (independent variable) of nurse practitioner consultations affect the outcomes of patient satisfaction and enablement (dependent variables)?*

Q7.4   *What are patients', carers', and nurse practitioners' perceptions of the usage of time in nurse practitioner consultations?*

Chapter 3 Methodology

3.1 Introduction

This chapter describes the research methodology used in the study. The guiding theoretical perspective that informs this study's methodological approach is first considered. This is then followed by a discussion of the selection of a case study design, a description of the case study setting and gaining access to it. The data collection methods are presented, including details of the fieldwork conducted for the study. The methods of data analysis are introduced, followed by discussion of the trustworthiness of the study. Finally ethical issues in the conduct of the study are considered.

3.2 Theoretical influences upon the development of the methodology

In recognising the theoretically derived importance of studying social interactions this study acknowledges that the perceived realities of social interactions in an event, such as a consultation, may differ between the persons involved in that event. Accordingly the methodological development of this study has been influenced by the need to collect and analyse the co-existing multiple realities of communication processes and social interactions occurring within nurse practitioner-patient consultations, from the viewpoints of patients, carers, and nurse practitioners. As noted in the preceding chapter the conceptual framework of the study is situated in the consultation communication research domains of sociological critical consultation interaction analysis. Whilst the four domains of consultation research (psychodynamic; clinical-observational; social-psychological; sociological) have been presented as discrete entities Bower *et al.* (2001), Marks *et al.* (2005), and Greenhalgh and Heath (2010) all recognise that none of the approaches are mutually exclusive. Bower *et al*. (2001, p. 9) note "…cross-domain research…" can often enhance analysis of consultation communication processes and social interactions. This is particularly so when quantitative and qualitative data collection techniques are combined to quantitatively determine broad communication patterns within consultations, whilst correspondent qualitative analysis provides explication of the quantified communication patterns. Greenhalgh and Heath (2010, p. 31) observe that a consultation is "…a complex, intersubjective and dynamic phenomenon…" that cannot easily be reductively analysed within a constrained methodological

approach. Marks *et al*. (2005) note convergence of different perspectives in consultation communication research can facilitate determination of similarities across the findings of consultation communication research studies.

Accordingly this thesis has taken the standpoint of methodological pluralism in consultation communication research as its baseline for development in an attempt to capture of the complexities of consultation communication processes and social interactions. Consequently the study's methodological approach has been influenced by a pluralistic theoretical stance which combines the clinical-observational (interaction analysis) domain with the sociological (interactive dyad / critical consultation analysis) domain to provide an analysis of nurse practitioner consultation communication processes and social interactions linked to outcomes of those consultations.

3.3 Selection of a research case study design

The theoretical orientation of this study required the development of a joint methodological focus on the perspectives of both nurse practitioners and patients in the consultations; a case study approach was deemed to be most suitable for this. The selection of case study design was also influenced by the researcher's successful usage of case study for analysis of social interactions in prior studies (Barratt, 2001; 2004; 2007).

In overview research case studies can be seen as combinations of varied methodological approaches for empirical inquiry of defined areas selected for study (Sandelowski, 2011). More specifically Yin's (2009, p. 13-14) definition of a case study has been applied in the development of this thesis: "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context … [which] relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as [a] result benefits from the prior development of theoretical propositions to guide data collection and analysis". Yin's (2009) definition has been selected as it is a commonly cited consensus definition within the case study research methods literature, which explicates the typical multiplicity features of a research case study (Sangster-Gormley, 2013).

A case study research approach has also been chosen to facilitate in-depth empirical analysis of the nurse practitioner primary care consultation within its real-

life clinical context. The selection of a case study research approach was guided by the need to examine the multiplicity of participants' social interactions existing within nurse practitioner consultations and the previously stated aim and objectives of the study. The use of case study for research of medical consultations, through its emphasis on multiple methods of data collection, facilitates analysis of the different realties of clinical consultations as seen by patients, clinicians and researchers (Barry, 2002). Yin's (2009) conception of case study methodology has been applied in this study as a research approach which enables an understanding of everyday events, roles, relationships in the case being studied; for this particular case study in relation to the competing perspectives of the lifeworld and biomedicine occurring in the communication processes and social interactions of the contemporary nurse practitioner consultation in primary care.

A fundamental question in case study research is: "What is the case?" (Taylor, 2013, p.4). In this thesis the case selected for inquiry is that of the nurse practitioner consultation occurring within the British primary care general practice setting. To clearly define this prime unit of analysis of this case study the definitions of 'nurse practitioner' and 'consultation' presented in sections 1.1 and 1.2 of the thesis have been applied in the case study. The clinical context of the nurse practitioner consultations in this case study is general practice in primary care. The term 'general practice' refers to the provision of first point-of-contact primary care for the assessment and management of both acute and ongoing medical problems for either individuals or families. Clinicians working in general practice, such as general practitioners and nurse practitioners, diagnose and treat illnesses and injuries within the community, promote improved health and help prevent disease, certify notifiable diseases, monitor long-term conditions, and refer patients to specialist services (Simon *et al*., 2005). In the United Kingdom general practice is differentiated from other forms of primary care provision such as walk-in centres, urgent care centres, and out-of-hours services by the pre-registration and resultant specified allocation of patients to a general practice clinic; most normally on a long-term basis.

A case study approach was chosen due to its flexibility as a research design, and its concentration on a particular instance of a phenomenon (for example, the presence of lifeworld interactions), which permits in-depth study of social relationships and processes within a natural setting (in this instance, nurse practitioner consultations in a general practice clinic), using multiple sources of evidence, and methods of data collection (Anthony and Jack, 2009; Denscombe, 2010). In common with other

research approaches, such as ethnography, case study allows a focus on the research phenomenon in its actual everyday context. This focus was seen as beneficial, in terms of seeking realism, and considering the interactionist orientation of the study (Gangeness and Yurkovich, 2006; Holloway and Wheeler, 2010). Case study researchers are often familiar with the case they seek to investigate and its overall context, which can be of benefit in selecting an appropriate sample to be studied (Hakim, 2000; Gangeness and Yurkovich, 2006). Familiarity with the case arose from the researcher's previous experiences of working as a nurse practitioner and of conducting consultations in primary care clinics. Some field researchers consider that unfamiliar cases should be chosen as it may be easier to observe the dynamics of social events in unfamiliar cases (Bailey, 2007). However, it was felt that this knowledge of the case would allow the researcher to establish a professional rapport with study participants, and also facilitate consideration of prior analytical observations of the nurse practitioner consultation.

This case study can be further characterised as a "case study of events, roles, and relationships" which is one of six commonly used case study classifications described by Hakim (2000). Events, roles and relationships case studies focus on interactions in a specific social event, of which Hakim (2000) cites the example of doctor-patient consultations. Looking further at the case study classifications of Yin (2009), this case study can also be characterised as an "embedded single-case" design, as the study took place in a nurse practitioner-led general practice clinic, with multiple subunits of different nurse practitioner consultations within the overall case of the nurse practitioner consultation being selected for detailed analysis via multiple mixed methods of both qualitative and quantitative data collection.

3.3.1 The mixed methods orientation of the case study

Having stated in the preceding section this study "comprises multiple mixed methods of both qualitative and quantitative data collection", it is expedient at this point to define the nature of mixed methods research, to clearly identify the mixed methods approach being used, and explicate its underpinning philosophical worldview. However, before doing that, it must be emphasised this study is a case study utilising mixed methods of data collection, rather than solely being a mixed methods study.

Creswell (2014, p.2) defined mixed methods research as: "an approach to research … in which the investigator gathers both quantitative (closed-ended) and qualitative (open-ended) data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems". This definition has been applied in this study as a consensually representative opinion of mixed methods research, which in turn has guided the developmental mixed methods design of the study. Aside from defining mixed methods research Creswell (2013; 2014) has also delineated three basic design approaches for mixed methods research: convergent parallel; explanatory sequential; and exploratory sequential. A *convergent parallel* design involves the separate collection and analysis of both quantitative and qualitative data, followed by comparative merging and interpretation of the data sets in a succeeding discussion.

In this study a convergent parallel mixed methods design was selected so as to enable concurrent collection of quantitative and qualitative data during field visits, thus making an expedient use of limited time available for data collection. This design also enables a researcher "to gain multiple pictures of a problem from several angles" (Creswell, 2014, p.37), which in this case study is the nurse practitioner consultation, and therefore also supports convergence of data collection upon the phenomenon being studied. Creswell and Plano Clark (2010, p.73) note the overall purpose of a convergent parallel design is to facilitate a more "complete understanding of a topic" and in doing so equal emphasis is normally placed on the priority of qualitative and quantitative strands within a convergent mixed methods design.

Both Creswell (2013; 2014) and Morgan (2014) situate convergent mixed methods designs within the philosophical umbrella of pragmatism. The pragmatic worldview can be understood as seeking to use all necessary "… approaches to understand the problem" being researched (Creswell, 2013, p. 10). In this regard a pragmatic approach to mixed methods research utilises elements of both qualitative and quantitative research assumptions, and so pragmatic researchers select data collection and analysis techniques that optimally meet their requirements for understanding a research problem, rather than being limited to using only techniques associated with a particular worldview (Creswell, 2013). Overall a pragmatic approach to mixed methods research enables a researcher to make expedient use of multiple different forms of data collection and analysis and their underpinning assumptions for optimising understanding of the subject of enquiry.

Thus in this case study a pragmatic approach has been taken to investigate the communicative nature of the nurse practitioner consultation using a convergent parallel mixed methods design.

3.3.2 Consideration of other research approaches

Whilst a research case study has been selected as the research approach in this study, it is not the only approach that was considered for possible implementation. Before discussing the other research approaches that were considered it is necessary to define what is meant by 'research approach'. In this thesis the term 'research approach' has been taken to mean an "overarching research intent and methodological … purpose, which affects what methods are chosen to gather data" (Simons, 2009, p. 3). Consequently methods are the data collection and data analysis techniques, whilst research strategy relates to the negotiation and practicalities of actually doing the case study fieldwork (Simons, 2009).

Three alternative research approaches were considered: ethnography, discourse analysis, and conversation analysis. The overlap between ethnography, particularly focused ethnography, and a research case study are acknowledged in their discrete emphases on intensive study of cases in their natural settings (Sandelowski, 2011). However ethnography was rejected as a research approach because the focus of the study was not investigating how nurse practitioner consultations are operationalised on an everyday basis within the cultural setting of a general practice clinic. Nor was this study seeking to undertake the three main purposes of focused ethnography in nursing research: revealing how health beliefs and practices are integrated in people's lives, understanding the meanings members of a culture apply to their experiences, or studying nursing practice from a cultural aspect (Cruz and Higginbottom, 2013; Molloy *et al.,* 2015). Instead the research focus was on understanding the multiple interactions occurring with nurse practitioner consultations and the consequences of those interactions both during consultation and post-consultation. Consequently an approach enabling analysis of multiple consultation interactions, without an accompanying analysis of the cultural nature of the research setting or its participants, was required, such as a research case study.

It could be then argued that either conversation analysis or discourse analysis would be ideal approaches for the analysis of consultation interactions, especially as they form part of the sociological domain of consultation communication research.

Consequently conversation analysis and discourse analysis approaches were also considered as they have been successfully used in multiple studies of the consultation communication of both doctors and nurses over a long period of time, with important and resonant findings being generated (Coupland *et al.,* 1994; Cordella, 2004; Chatwin, 2008; Paniagua, 2009). However, whilst conversation analysis and discourse analysis both enable an understanding of the rules, mechanisms, and structure of social interactions within structured social talking, such as clinical consultations, by virtue of their significant emphases on speech and talk analysis respectively, they do not easily facilitate investigation of multiple perspectives within consultations. Accordingly as this thesis is concerned with the analysis of multiple realities within consultations, a research approach enabling multiple methods of data collection, beyond that of solely speech or talk analysis of the participants in nurse practitioner consultations, such as that of a research case study, was selected.

3.3.3 The multiple methods of data collection used in the case study

The multiple methods of data collection selected for use in the case study were: observations, interviews, and questionnaires, supplemented by a field journal.

For the observations the sampling method of 'event sampling' was used to select the specific event of the nurse practitioner consultation (Polit and Beck, 2010). The observational technique of video recording was used, as this method allows the observation of everyday social encounters in their natural settings, whilst minimising any potential observer effects that could occur from direct observation such as 'sitting in' on consultations (Pendleton *et al*., 1984; 2003). Video recorded observation was also chosen as it is the 'gold standard' of consultation communication research, being the most prevalent form of data collection used. Furthermore the analysis of video recorded consultation observations is supported by established interaction analysis systems (Roter and Larson, 2002). Solely audio recording the nurse practitioner consultations was also considered, but this method of data collection, whilst allowing analysis of verbal interactions, does not enable direct observation of consultations and therefore inclusion of non-verbal interactions to further contextualise the verbal interactions. Also video recordings can be analysed without transcription via interaction analysis systems (Roter and Larson, 2002). Furthermore I was familiar with the process of collecting video recorded

observations through conducting a previous pilot case study of the feasibility of video recording nurse practitioner consultations (Barratt, 2007).

For the interviews, which were undertaken with patients / carers and nurse practitioners, a semi-structured interview technique was chosen to allow respondents their say on a particular topic. Semi-structured interviews also enabled exploration of information relevant to the study's aims and objectives, and any subsequent areas of mutual interest that emerged (Arksey and Knight, 1999; Dearnley, 2005). A research interview differs from a normal social conversation in that it is characterised by: the participant overtly giving informed consent to take part; an understanding that the interviewee's responses will be analysed and discussed by the researcher, possibly in a public domain; and that the agenda for the interview is established by the researcher (Clarke, 2006; Denscombe, 2010). A semi-structured interview is further characterised by the researcher having a list of preplanned questions or discussion topics, which can be altered or added to as an interview progresses, dependent on the respondents' replies (Robson, 2002; Bulpitt and Martin, 2010; Denscombe, 2010).

Questionnaires were chosen for the third method of data collection as this method of data collection has typically been used to generate information about patient satisfaction and enablement in many other examples of consultation communication research with both doctors and nurse practitioners, some of which has been discussed in chapters one and two. It was decided that in combination with consultation observations, and participants' interviews, the additional use of questionnaires would allow another dimension of the nurse practitioner consultation to be examined, thus enabling further analysis of multiple realities within the selected consultations.

A field journal was maintained throughout the duration of the study to reflectively supplement the data arising from the observations, interviews, and questionnaires.

3.4 Research setting

The setting for the case study was nurse practitioner consultations derived from a primary care clinic providing general practice services located in an urban area of England. For purposes of this study to maintain anonymity the clinic has been referred to as the 'Lime Tree Way' clinic. Lime Tree Way clinic was selected as it

provided a typical example of nurse practitioner consultations within a general practice clinical setting. Nurse practitioners provide the majority of medical care for patients registered at the practice, which means a diverse range of nurse practitioner-patient consultations could be included in the study. A focus on one clinic facilitated an in-depth contextual analysis of the nurse practitioner consultations occurring within the clinic. From a practical perspective, working in just one research setting also permitted participatory immersion within the everyday functioning of the clinic, which in turn aided the strategic progression of data collection. Accessing more than one clinic would of course have increased the sampling diversity of the case study, and permitted cross-clinic comparisons, but at an early stage of the research planning it was decided to focus on one clinic due to the prospective burden of a lone researcher collecting data.

Lime Tree way clinic was at the time of the case study data collection phase located in a converted 3-bedroom 1930s terraced house in a quiet residential street, which leads off a main road. Lime Tree Way used to be a traditional doctor-led general practice clinic, but when the doctors running the clinic decided to retire, the nurses at Lime Tree Way made an application to run the clinic themselves and were, in 2005, awarded a contract by the local Primary Care Trust to provide General Medical Services at the clinic. The clinic is run by nurses with GP's, nurse practitioners, practice nurses, health care assistants, and administrative staff working closely as a team. As with most urban areas in England the clinic serves a socio-economically and ethnically diverse population range, with a mix of small to large private houses and social housing being within the vicinity of the clinic.

At the start of the study approximately 4000 patients were registered at Lime Tree Way, which is a typical list size for a small-medium sized primary care clinic such as Lime Tree Way (Kelly and Stoye, 2014). The clinic is different from most primary care general practice clinics in the UK as it mainly staffed by nurse practitioners replacing general practitioners, with the majority of patients being seen and dealt with solely by the nurse practitioners. This is in contrast to the overwhelming majority of primary care general practice clinics in the UK where patients are mainly seen and dealt with by general practitioners. That is not to say that in other general practice clinics nurses are not involved in patient care; on the contrary all primary general practice clinics employ practice nurses, and many will also additionally employ nurse practitioners to see patients. Also some of those practice nurses and nurse practitioners at other clinics will also be partners in their clinics, having an

integral leadership role and oversight in the running of the clinics. For example, a primary care general practice clinic run in collaboration by three nurse practitioner partners and two GP partners is cited in an ethnographic research study of the nurse practitioner role in general practice by McMurray (2010). The nurse practitioners at Lime Tree Way also have an integral leadership role and oversight in the running of the clinic, with two of its six nurse practitioners being clinical and operational directors of the clinic respectively. Three general practitioners are also employed at the clinic, but solely on a part-time basis, dealing primarily with patients referred to them by the nurse practitioners for a medical doctor opinion. Other team members at Lime Tree Way include three practice nurses, seven receptionists including one who also works as a health care assistant, one practice administrator, and one housekeeper.

The interior of Lime Tree Way partially retained the feeling of a former residential property with some of the 'cosiness' associated with being in a small house still being present. Entry to the clinic was through its original 1930s front door, once inside on the immediate left was the reception area, and after that a waiting area with padded bench seating, which could accommodate approximately 10 patients/carers. Beyond the waiting room were one consulting room and one treatment room. Also on the ground floor was a small kitchen, the patient toilet, and an under stairs area for buggy parking. Located upstairs were two small offices, two further consulting rooms, and the staff toilet. Patients were called to their consultations either by a dot matrix display in the waiting room, or by being vocally called in the waiting room. Music from an easy listening radio station was normally quietly played in the reception area and waiting room.

The clinic is open Monday to Friday, 08:00 to 13:00 and 14:00 to 18:00. A mix of pre-booked and same day appointments are offered to patients. The nurse practitioner pre-booked appointments are 15-minutes long, and the nurse practitioner same day appointments are 10-minutes long. A same day appointment can either be booked on the day of attendance or alternatively once all the same day appointment slots have been used, patients can just turn up and wait to be seen at the end of an appointment list 'session'. A typical morning, afternoon, or evening 'session' comprises approximately ten appointments per nurse practitioner. On arrival patients can either check in via reception or electronically using a touch screen adjacent to the waiting room. During fieldwork at the clinic it was noted the

majority of patients appeared to be seen in near approximation to their booked appointment times, with only occasional extended waiting times occurring.

3.5 Overall structure of the research case study

The case study design was divided into three discrete components of data collection. The first component comprised observing in detail the consultations of patients seeing three of the nurse practitioners working at Lime Tree Way. This detailed consultation observation utilised video recording of the nurse practitioner-patient consultations. Following the video recorded consultations post-consultation semi-structured individual interviews with a sub-sample of the patient / carer participants, and all of the nurse practitioner participants of the sub-sample video-recorded consultations was undertaken. The third component undertaken concurrently with the video recordings was the patients / carers completing questionnaire measures of consultation expectations and subsequent consultation satisfaction and enablement this questionnaire was completed by the those whose consultation was video recorded and by a larger sample group of Lime Tree Way patients / carers whose consultations were not observed.

Table 3.1 summarises the different strands of the convergent parallel mixed methods design and indicates how they converged in analysis and discussion.

Table 3.1: Summary representation of the convergent parallel mixed methods design

Quantitative data collection ⟹	Quantitative data analysis ⟹	Convergence of findings Findings chapter ⟸⟹ Discussion chapter	
Questionnaires measuring patients' expectations, satisfaction, and enablement.	Descriptive statistics measuring patients' expectations, satisfaction, and enablement, linked with frequency coding of consultation interactions and consultation time length durations.	Answering of research questions requiring converged analyses of the different types of data collected to answer those questions. For example, analysis of questionnaire findings combined with the findings of the quantified frequency coding of the consultation interactions.	The quantitative and qualitative data strands were further converged via comparative merging and interpretation of the separate data sets, in a succeeding discursive exposition of the findings guided by the conceptual framework of sociological critical consultation analysis and the case study's aims and objectives.
Video recordings of nurse practitioner consultations.	Quantified frequency coding of consultation interactions, notation of consultation time length durations, and subsequent linking with descriptive statistics measuring patients' expectations, satisfaction, and enablement.		
Qualitative data collection ⟹	Qualitative data analysis ⟹		
Interviews with patient, carer, and nurse practitioner participants of video recorded nurse practitioner consultations.	Transcription of recorded interviews followed by an emergent thematic analysis of the transcripts, and subsequent computerised thematic analysis of the transcripts.		
⟸ Field journal ⟹			
Record of both quantitative and qualitative data collection and analysis incorporating researcher's reflections on the case study's research processes.			

3.6 Sampling

For the video-recorded consultations a convenience sample of three nurse practitioners from the selected clinic, with 10 patient consultations for each of the three nurse practitioners planned to be video recorded. This meant that a convenience sample of 30 available patients / carers needed to be recruited.

The convenience sample of 30 patients / carers was stratified into two possible categories: patients attending for same-day appointments, and those attending for pre-booked appointments. This binary stratification was used to ensure a mix of patients attending for either acute problems (same-day appointments), or follow-up of pre-existing problems (pre-booked appointments) were able to participate in the study, so as to reflect the realities of the clinic. It was planned that the three nurse practitioners' video recorded consultations would comprise approximately a 50/50 mix of the two possible appointment types for each nurse practitioner. This would mean that of the total 30 video recorded consultations, about 15 would be for same-day appointments, and about 15 would be for pre-booked appointments.

From the total sample of 30 patients / carers, a convenience sub-sample of 3 to 5 patients seen by each of the three nurse practitioners were recruited to participate in individual post-consultation semi-structured interviews. All three of the video recorded nurse practitioners were asked to participate in individual post-consultation semi-structured interviews, once the video recording of their ten consultations had been completed.

For the larger group of patients / carers completing questionnaire measures of pre-consultation expectations and subsequent post-consultation satisfaction and enablement, a convenience sample was used of those patients / carers attending appointments at the clinic during the 2 months of the data collection period designated for collecting questionnaires responses not related to video-recorded consultations. It was intended that about 100 questionnaires would be completed in this period. Prior to the study data collection starting patients were made aware of the planned study by an A4 poster advert on the waiting room noticeboard and a notice placed on the clinic's website.

3.6.1 Sampling criteria for patients / carers

The study sought to reflect an inclusive representation of the typical patients and nurse practitioners attending and working at Lime Tree Way, whereby the majority of patients attending the clinic would be potentially eligible for inclusion in the study. Therefore convenience sampling was used in all three parts of the study, with minimal restrictions on the recruitment criteria of patient participants. There were however, some exemptions to recruitment related to the vulnerability of potential participants. In accordance with the ethical guidelines of the Royal College of General Practitioners (2006) for the video recording of consultations in primary health care, the following 'vulnerable' groups of patients who may have difficulty in giving informed consent were excluded from the video recording / interview component of the study:

- the very ill, for example patients with acute life threatening illnesses,
- adults without capacity to consent (Royal College of General Practitioners, 2006).

The carers of patients without capacity to consent may have wished to complete a questionnaire not linked to a video recorded consultation, so they were not excluded from participating in that part of the study. Children attending with parents / carers were included within the sampling criteria, because as with any general practice clinic, children, especially those under 5 years old, occupy a large number of appointment slots at Lime Tree Way, so to exclude children from recruitment would not have reflected the reality of the nurse practitioners' caseloads.

3.6.2 Sampling of nurse practitioners

Prior to the start date of the research data collection, I met with five of the six nurse practitioners employed at Lime Tree Way and advised them of the details of the study and gave them a participant information sheet. Following this meeting a convenience sample of three of the nurse practitioners who were willing to participate in the study was used. It was felt that using three nurse practitioners would capture an appropriate range of consultation styles, and enable a linked matching of 10 video recordings per nurse practitioner, totalling 30 video recorded consultations. Participating nurse practitioners were briefed further about the research and their informed consent was sought for video recording of their consultations, and for their subsequent post-consultation audio recorded interviews.

The three nurse practitioners who volunteered to participate were all women. They were all experienced nurse practitioners, who had completed accredited undergraduate nurse practitioner education and were also qualified nurse independent prescribers. The selected nurse practitioners all had similar patient appointment schedules comprising a mix of pre-booked and same day appointments for adult or child patients either with acute medical problems, or ongoing long-term conditions. In this thesis the nurse practitioners have been referred to as: Nurse Practitioner 1; Nurse Practitioner 2; and Nurse Practitioner 3.

3.7 Recruitment for video recording and linked questionnaire

All patients / carers attending the clinic to see the duty nurse practitioners during the clinical sessions on the days identified for field visits were potentially included. Thus all patients / carers with either same day or pre-booked appointments at Lime Tree Way on the day of a field visit were identified as possible research participants.

For the video-recording of consultations patients / carers attending the selected clinic on an identified research day, for either pre-booked or same-day appointments with the nurse practitioner having her consultations video recorded, were initially asked by the duty receptionist if they would be willing to have their consultation video recorded and to complete a questionnaire. If they agreed they were then directed to speak with the researcher, and an electronic note indicating assent was placed on the computer appointment list by the reception staff. To enable all the potential patient / carer recruits to be able to talk with the duty receptionist the electronic check-in touch screen either had to be deactivated or covered with a notice, so that patients / carers were diverted to check in at the reception desk and speak with the duty receptionist. This arrangement, whilst ensuring that patients / carers had to speak with the receptionist was not ideal as all the patients / carers coming to see clinicians, other than the nurse practitioner being video recorded, were then forced to go to the reception desk. Consequently this diversion process did cause some small queues to build up at the reception desk.

Once a patient / carer had been referred to me they were taken to a side area of the waiting room where the study explained to them and they were given a participant information sheet. If the patient / carer verbally agreed to participate they were also given a study questionnaire to complete. The first part of the questionnaire was designed to be completed before the patient / carer saw the nurse practitioner and

the subsequent parts after they had been seen. The patients / carers then sat back in the waiting room and completed the first part of the questionnaire whilst waiting to be called to be seen by the nurse practitioner.

It was intended that recruitment of patients / carers for video recorded consultations would comprise a 50/50 mix of pre-booked and same day appointments with all patient / carer participants completing a linked questionnaire, the actual recruitment during field visits did not always work as smoothly as planned. For example, sometimes unequal amounts of patients / carers with different types of appointments would agree to be video recorded, and not everyone would agree to complete a questionnaire. Thus to enable the recruitment of patients / carers a flexible approach had to be adopted. Consequently small variations in actual recruitment versus planned sampling occurred. For Nurse practitioner 1, three pre-booked, and seven same day consultations were video recorded, and nine linked questionnaires completed. For Nurse practitioner 2, four pre-booked, and six same day consultations were video recorded, and ten linked questionnaires completed. For Nurse practitioner 3, four pre-booked, and six same day consultations were video recorded, and seven linked questionnaires completed. Overall 30 consultations were video recorded, comprising 12 pre-booked appointments and 18 same day appointments. From these 30 video recorded consultations 26 of the patients / carers participated in the consultations completed questionnaires.

3.8 Arrangements for video recording of nurse practitioner consultations

Prior to the beginning of an actual recording session a small digital video camcorder was set up in the nurse practitioner's consulting room, with the camera focus being on the nurse practitioners' and patients' chairs. For any physical examinations requiring removal of clothing the nurse practitioners were asked to conduct these on an examination couch, out of camera shot, but with the verbal interactions of the physical examination still being recorded. The nurse practitioners involved were shown how to turn off the camera recording function in the event of a patient or the nurse practitioner wishing it to be turned off during a recorded consultation. During a nurse practitioner's appointment session they were alerted by the electronic note on the computer appointment list that a patient had consented to participate. This then enabled the nurse practitioners to switch on the video recorder before they called a patient in, thus enabling a normal start to the consultation.

The consultations were video recorded using a *JVC Everio GZ-MG77EK* hard disk digital camcorder operated by a small remote control device placed on the nurse practitioners' desks. The camcorder was mounted on a tripod, either placed on a work surface as a desktop tripod in two of the nurse practitioners' smaller rooms, or as a fully extended tripod in the larger room of one nurse practitioner. The camera had the advantage of being a small discreet hand-sized device, which was not immediately obvious amongst the clinical items normally present in the nurse practitioners' rooms. This discreetness combined with the pre-activation of the camcorder just before the patients / carers entered the consulting room ensured that the practical process of video recording was minimised and unobtrusive for the patient / carer participants. Once a recording session with a nurse practitioner had been completed two DVD copies of the session were made using a portable *JVC CU-VD10 DVD* burner; the intention being to give one copy to the nurse practitioner in the video recording, and one to be retained by the researcher.

For each video recorded consultation the nurse practitioners were asked to record the participating patient's age, reasons for consultation attendance (for example, chest pain or abdominal pain), and their consultation outcomes (for example, a prescription, investigations, or onward referral) on a consultation details recording form. During recordings I sat outside of the consulting room and waited for the recorded consultation to finish. Once a consultation had been completed the camera recorder function was switched off by the nurse practitioner, and the patient / carer left the consulting room. The patient / carers were then asked to complete the post-consultation sections of the questionnaire. Once the questionnaire had been completed I took the questionnaire and checked with the patient / carer that it was still permissible to use the video recording. If any patient / carer had indicated they were not happy to have their consultation included in the study, their video recording would have been deleted. However all participants indicated they were happy for their video recording to be included in the study, so none were deleted.

3.9 Arrangements and recruitment for semi-structured interviews with patient / carer participants

Once patients / carers had come out from their consultations and completed their questionnaire they were also asked by the researcher if they would be willing to subsequently participate in a post-consultation interview. The post-consultation

interviews with patients / carers were initially offered to patients to take place face to face; if that was not convenient for the patient / carer the interview could be undertaken by telephone. Face to face interviews were planned to be preferably conducted in the patient's / carer's home as vacant rooms would not necessarily always be available at Lime Tree Way, and patients registered at Lime Tree Way live within its close vicinity so made it easy for me to potentially visit patient / carer participants in their own homes. If a patient / carer participant agreed to take part in a post-consultation semi-structured interview a later date and time for this interview would have been arranged; ideally no longer than one week post-consultation. When patients / carers were asked to be interviewed face to face at home, they were also advised this could involve a viewing of their own video recorded consultation on a laptop computer prior to the interview to enhance the subsequent interview discussion. However, when asked none of the patient / carers wanted to review their consultation video. Furthermore during recruitment for interviews it was found that patients / carers, whilst happy to have their consultations video recorded and complete a questionnaire, were reluctant to participate in a subsequent post-consultation face-to-face interview at home, often citing time pressures as a reason for declining. Offering telephone interviews that took place within one week of the consultation was more acceptable for some more patients / carers and enabled them to participate.

Additionally, when approached for recruitment to interviews some patients asked to complete the post-consultation interview immediately whilst they were still in the clinic as they had time available then, instead of doing an interview at home or a telephone interview. Provided a clinic room was available this participant choice was accommodated, but had the slight disadvantage that I was not able to view the video recorded consultation prior to the interview.

With Nurse practitioner 1's patients / carers, one face-to-face and two telephone interviews were conducted. With Nurse practitioner 2's patients / carers, two face-to-face and three telephone interviews were conducted. For nurse practitioner 3's patients / carers, one telephone and two face-to-face interviews were conducted. In total 11 post-consultation interviews with patients / carers were conducted, comprising five face-to-face interviews, and six telephone interviews. Four other patients agreed to telephone interviews but subsequently did not reply when telephoned on multiple occasions. One further telephone interview with a patient of nurse practitioner 1 could not be used as it was of poor sound quality and the patient

involved spoke heavily accented English, which made it very difficult to transcribe. In one of the two face-to-face interviews for nurse practitioner 3 both a husband and wife were present as the husband had attended his wife's consultation, and she had also wanted him present during the post-consultation interview. It so happened that the husband had also been a patient whose consultation with nurse practitioner 2 had been video recorded during a previous field visit nine months earlier, but a post-consultation interview had not been managed to be recorded at that time. During the interview with his wife the husband also self-reported his reflections on consulting with the nurse practitioners at Lime Tree Way. Whilst his video recorded consultation occurred nine months ago his interview comments were included in the data analysis as he was a frequent attender for nurse practitioner consultations, which meant he had recent recollections of those consultations with nurse practitioner 2 at the time of interview.

For all of the patient / carer post-consultation interviews the same 5-topic semi-structured schedule (Appendix A) was used with flexible variations in the interview content derived from the subsequent interview interactions with the participants, and also being guided by prior viewing of the consultation video recording. For the face-to-face interviews that took place in the clinic immediately after a consultation, there was not sufficient time available to allow pre-interview viewing of the video recording. The 5-topic interview schedule was developed in relation to the stated aims and objectives of the study, seeking to elicit patients' / carers' views on consulting with a nurse practitioner, discussing lifeworld information, opportunities for participation, and their enabled ability to cope with their medical problem after seeing the nurse practitioner.

The patient / carer post-consultation interviews varied in length from 5.09 minutes to 13.55 minutes, with the average length being 9.94 minutes. Whilst this patient / carer interview length was shorter than initially envisaged, the information gained from the interviews, even the shorter ones, was pertinently detailed. Nine of the 11 patient / carer interviews were recorded with a *Sony ICD-PX820* digital audio recorder, which has the facility for slowed playback, which assisted with transcription and analysis. The other two interviews were recorded with a different model of a digital audio recorder. All of the patient / carer interviews were fully transcribed as the initial part of the data analysis process.

3.10 Semi-structured interviews with nurse practitioner participants

The nurse practitioner post-consultation interviews took place at Lime Tree Way in the nurse practitioner's consulting room once all ten of their video recorded consultations have been completed. The researcher viewed the video recordings of an individual nurse practitioner's ten consultations prior to the interview and then used the initial interpretations of the observed interactions as a basis for the interview topic content in conjunction with a 5-question semi-structured interview schedule. The nurse practitioner semi-structured interview schedule is presented in Appendix A. As with the patient / carer interview schedule the 5-topic nurse practitioner interview scheduled was similarly developed in relation to stated aims and objectives of the study, seeking to elicit their views on consulting with patients as a nurse practitioner, discussing lifeworld information, creating opportunities for patient participation, and helping patients / carers to manage their presenting medical problems. It was initially intended that the nurse practitioner participants would also view their ten video recorded consultations prior to their interviews. However, during data collection it became apparent that only one of the three nurse practitioners were keen to view their own consultation video recordings. Consequently in only one of the interviews had the nurse practitioner (nurse practitioner 3) viewed her own consultation video recordings. The nurse practitioner interviews ranged in length from 34.51 minutes to 46.17 minutes, with the average length being 41.97 minutes. These interviews were also recorded with the *Sony ICD-PX820* digital audio recorder and then fully transcribed.

3.11 Completion of questionnaires by patients / carers whose consultations were not video recorded

In addition to the video recorded participants any adult patients or carers attending Lime Tree Way for a nurse practitioner consultation were asked to complete a research questionnaire by the reception staff. The questionnaire instructions indicated that patients / carers who had participated in a video recorded consultation and already completed a linked questionnaire should not have completed another questionnaire. However, whilst this instruction existed it is not possible to know whether any of the patient / carer participants of the video recorded consultations did actually complete another questionnaire.

100 hard copy questionnaires were made available for distribution at the clinic and the questionnaire was also made available online for those patients who prefer to engage electronically. 30 questionnaires were designated for use with video recorded patients / carers, and the remaining 70 questionnaires were placed at reception and the receptionists were asked to give the questionnaires to any patients attending for nurse practitioner appointments which were not being video recorded. The purpose of asking a group of patient / carers whose consultations were not video recorded to complete the questionnaire was to first to allow comparison with the video recorded patient / carers to check that satisfaction and enablement was not affected by the consultation observation; and second to get a better measure of patient / carer satisfaction and enablement arising from nurse practitioner consultations.

Soon after the data collection period was initiated the researcher moved away from London, which made it difficult to attend the clinic regularly to remind and encourage staff to distribute the questionnaires. On returning to the clinic a few weeks after data collection began it was found that only ten questionnaires had been completed. The importance of asking patients / carers to complete the questionnaire was re-emphasised to the clinic's reception team. The receptionists commented that with the majority of patients / carers indicating their arrival using the electronic touch screen, it was sometimes difficult to speak with a patient / carer to explain about completing the questionnaire before they were called in to be seen. The receptionists agreed they would make a more concerted effort to distribute the questionnaires; returning to the clinic a few weeks later a further 29 questionnaires had been completed. The distribution of the questionnaire was further complicated by the receptionists also being asked by the clinic's local Primary Care Trust to distribute patient satisfaction questionnaires for monitoring of the clinic's performance in the Quality and Outcomes Framework (QOF) annual reward and incentive programme, which took priority over the distribution of the questionnaire associated with this study. During the 2-month questionnaire data collection period in total 45 questionnaires were completed by patients / carers who were not video recorded (including six that were completed online); combined with the 26 questionnaires arising from the video recorded consultations the total number of completed questionnaires was 71.

3.12 Development of the questionnaire measures of patient expectations, satisfaction, and expectations

The questionnaire presented for this study has been developed by adaptively combining two validated questionnaires: the 'Nurse Practitioner Satisfaction Survey' (NPSS), which has been specifically developed in North America for measuring patient satisfaction with nurse practitioner delivered primary care (Agosta, 2009a) using 28 items[3]; and a commonly cited measure of patient enablement, developed in the UK, called the 'Patient Enablement Instrument' (PEI), which is intended to capture patients' feelings of confidence, ability and coping after a general practice consultation (McKinley *et al.,* 2004). The process of 'adaptively combining' does not mean the questions and scales of the NPSS and PEI were merged together in one questionnaire. Instead the two questionnaires were presented as discrete sequential sections within the same survey, thus aiming to maintain the independent validity and reliability of both the NPSS and PEI for measuring satisfaction and enablement respectively.

The 28-item NPSS was not the only validated consultation satisfaction questionnaire considered for use in the study. Also considered were the 18-item Consultation Satisfaction Questionnaire (CSQ) (Baker, 1990), and the 21-item Medical Interview Satisfaction Scale (MISS-21) (Meakin and Weinman, 2002). Whilst the CSQ and MISS-21 have been used extensively in previous studies of patient satisfaction with medical doctor and nurse practitioner consultations, both questionnaires were designed to specifically measure patient satisfaction with doctor-patient consultations. As the current study focuses entirely on nurse practitioner consultations it was considered important to use a satisfaction questionnaire specifically designed for measuring patient satisfaction with nurse practitioner consultations.

Accordingly two recently created nurse practitioner specific questionnaires were considered; the 15-item NPSI (Knudtson, 2000), and the NPSS (Agosta, 2009a), both of which were previously discussed in 2.5.3. Both questionnaires had been scrutinised for content validity and had high Cronbach's alpha reliability coefficients of 0.91 and 0.98 respectively (Knudston, 2000; Agosta, 2009a). However, as Agosta's (2005; 2009a; 2009b) NPSS was specifically designed to measure patient satisfaction with nurse practitioner delivered primary care, and had undergone more

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[3] Of the 28 items of the NPSS, 18 of those are used to measure a sub-scale of 'general satisfaction', and 6 are used to measure a subscale of 'communication satisfaction' (Agosta, 2009b).

extensive psychometric testing with a larger sample of patients, than Knudtson's (2000) NPSI (300 patients versus 93 patients respectively), it was decided to use the NPSS. Furthermore, whilst the NPSS had been specifically designed for the "measurement of satisfaction with nurse practitioner provided health care" (Agosta, 2009b, p. 117), the NPSI was essentially a modified version of another instrument designed to measure patient satisfaction with home health care provision (Knudtson, 2000). Prior permission was sought from the creator of the NPSS for its usage and advice taken on slightly modifying the questionnaire to make it culturally relevant for Britain, whilst trying to avoid damaging either its validity or reliability through the modifications.

The PEI comprises six items with a possible score of 0-12, with a higher score indicating more enablement (Wensing *et al.,* 2007). Additionally to measure patients' expectations of the nurse practitioner consultation, activities that are typically undertaken in medical general practice consultations such as history taking, diagnosis, prescribing, and referrals were used by me to develop items measuring patients' possible expectations of their nurse practitioner consultations. This amalgamated questionnaire was entitled the 'Nurse Practitioner Expectations, Satisfaction, & Enablement Questionnaire' (NPESEQ). The combined questionnaire comprises 51 questions divided over four discrete sections: pre-consultation expectations (8 questions designed for this study, with the last of those questions being asked post-consultation); post-consultation satisfaction (23 questions from the NPSS) supplemented by 6 questions from the NPSS related to perceptions of clinicians, clinic attendance patterns and existing co-morbidities, plus 1 extra question inserted to ask if the respondent was either a patient or a carer; post-consultation enablement (6 questions from the PEI); and demographic information (7 questions from the NPSS). To coherently apply the NPSS in this study 5 questions that related to scheduling of appointments at the service where the NPSS was tested were removed[4] as in Agosta's (2005) study respondents could optionally decide not to use the nurse practitioner service again in the future, as they could alternatively attend other primary care services, such as their own GP. Whereas at Lime Tree Way, the clinic was the patients' / carers' registered general practice service, so they did not so easily have the option of not using their registered service for general practice care, which reduced the relevance of the questions.

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[4] Whilst 5 questions were removed only one of the removed questions was from one of the satisfaction subscales; a question related to nurse practitioner appointment scheduling from the general satisfaction subscale (Agosta, 2009).

The expectations component is completed pre-consultation, so that patients' / carers' responses to this section of the questionnaire are not influenced by their subsequent experiences of the nurse practitioner consultation for which they are required to answer measures of post-consultation satisfaction and enablement. The expectations questions were intended to elicit respondents probability expectations of what they thought would actually happen in relation to their prospective consultation, rather than their value expectations of what they hoped would happen. The questions drawn from the satisfaction section of Agosta's (2005) NPSS were used with only small modifications being made such as the word 'office' being removed, as this American synonym for a general practice clinic has no meaning in Britain. The PEI was used with no modifications being made to its six items. The demographics component of the questionnaire was also taken from Agosta's (2009) NPSS, with further small modifications being made to ensure the demographic questions were culturally relevant to Britain. Prior permission was not sought to use the PEI in the study as the instrument is immediately available from multiple websites and other research studies via a brief Internet search. In the original NPSS general satisfaction is measured using 18 Likert-scale items, each with a maximum individual score of five, giving a maximum total score for general satisfaction of 90 (Agosta, 2009a). Communication satisfaction is measured using six Likert-scale items, again each with a maximum individual possible score of five, giving a maximum total score for communication satisfaction of 30.

Before the main study data collection started the NPESEQ was piloted with a group of five general practice patients to examine its perceived functionality. Additionally a group of five clinical academic nurse practitioners were asked to give their professional opinion of the questionnaire, and any potential problems and possible modifications of the questionnaire. The pilot study patients were recruited from the researcher's own general practice clinic, and the clinical academic nurse practitioners from London South Bank University. All of the pilot patients found the questionnaire easy to complete and just suggested minor formatting changes, which were incorporated in the final version of the questionnaire. The clinical academics also found the questionnaire easy to complete and again suggested minor formatting changes, which were again incorporated in the final version of the questionnaire. Two of the clinical academics thought that it was not appropriate to enquire about a person's income level in the demographic section as this is very personal information. However as Agosta (2009b) had noted significant variations in patient satisfaction with nurse practitioner care on the basis of demographic

variables, such as income levels, it was decided to retain the income level question. However it is acknowledged that income may be more of an issue in the USA in relation to satisfaction because of the USA's insurance-based health system (Fineberg, 2012). Please see Appendix B for a copy of the NPESEQ.

The questionnaire format was created as a print document using the commercially available '*SurveyMonkey*' questionnaire software. The questionnaire was divided into four discrete sections entitled:

1. What are your expectations of the nurse practitioner consultation?
2. Your satisfaction with the nurse practitioner consultation
3. Your ability to cope with your problem after seeing the nurse practitioner
4. Information about yourself

Section 2 comprised the NPSS questions and scales, and section 3 comprised the PEI questions and scales. The questionnaire was given on a clipboard to the patients / carers, who were asked to complete section 1 whilst waiting to be seen. The questionnaires given to respondents who were not video recorded were prefaced by a short participant information sheet. After their consultations, whilst still at the clinic, all respondents were directed to complete sections 2-4 of the questionnaire, and placed the completed questionnaire in a specially designated drop box at reception. Respondents who completed the online version of the questionnaire were asked to complete the first section of the survey related to pre-consultation expectations before completing the rest of the survey related to post-consultation satisfaction and enablement.

3.13 Fieldwork conducted for the research case study

The research case study fieldwork took place over a 14-month period. In the planning stages of the research the fieldwork was preceded by a preliminary visit to Lime Tree Way when the purpose and intent of the study was explained to the clinic's nurse practitioners. At this meeting their permission was also sought to go ahead and include the clinic as the research site in the ethics committee review application for the study. Once ethics approval had been received for the study a preparatory visit was made to the clinic to plan the arrangements for the video recording process. The piloting of the questionnaire was conducted in June 2011. The main study data collection fieldwork started in September 2011 and finished in November 2012. This fieldwork period comprised nine field visits, totalling

approximately 35 hours divided over the nine visits. The typical approximate length of a field visit for consultation video recording and interviewing was 4 hours. This on-site fieldwork was supplemented by approximately 2 hours of telephone interview data collection. The long time period of fieldwork enabled partial immersion in the everyday functioning of the clinic, which expedited the data collection process, as by the end of the 14-month fieldwork period the majority of Lime Tree Way's staff, and also some of its frequently attending patients, were familiar with the researcher's presence at the clinic.

3.14 Field journal

The field journal was maintained from the inception of the case study to the writing-up phase to enable reflection on the data collection experiences, and to be used as a further method and source of data collection (Porter, 2000). The field journal generated 95 handwritten A4 sized pages in a hardback notebook. This field journal comprised five of the seven common field journal components identified by Bailey (2007). The first component consisted of 'jotted notes', which included mental observations of the setting, its participants and their interactions, reminders of future research activities to be carried out, and also any sudden flashes of inspiration about the research project. The second component was a 'chronological log' detailing the dates of research days, the length of time spent in the setting, and a time and date record of consultation recordings and interviews. The third component consisted of the researcher's 'analytical ideas and inferences', such as conceptual categorisations of different types of patients, which emerged as the case study progressed. Also included in this third component were observational notes from watching the video recorded consultations when they were being analysed. These observational notes supplemented the concurrent interaction analysis of the video recorded consultations. The fourth component comprised 'impressions and personal feelings' about the case study, arising both from the research experiences and personal events. The fifth section, 'things to think about and do', included development of the interview and observational schedules, reflection on literature relevant to the study, and actions discussed supervision meetings (Bailey, 2007).

3.15 Data analysis

During the study data analysis was a concurrent, ongoing process. During the data collection period a contact summary was recorded in the field journal during each field contact, detailing the consultations and/or interviews recorded, the main themes of the contact and any conceptual speculations suggested by the experience of the contact. During data collection an initial case summary was made after each video recording session and interview, which briefly summarised the findings of the research to that point, to be explored in more detail in subsequent observations and interviews. Initial data analysis at the end of the data collection period comprised an overview of the case study, noting demographic details of the participants and summarising the chronology and clinical outcomes of the observed consultations. After this overview, each video recorded observation, interview recordings/transcript, contact summary, and any relevant field journal entries were read/watched/listened to and memos and annotations made in the field journal on the general themes emerging from the data.

Following this overview data analysis, specific types of data analysis for the study comprised three main components: statistical analysis of the questionnaire responses; a quantitatively orientated analysis of the interactions observed in the video recorded consultations; and a qualitatively orientated analysis of the interview transcripts.

The quantitatively derived data was inputted and analysed using IBM SPSS Statistics 20. Three datasets were created in SPSS: 'Questionnaires' which contained data generated from the questionnaire responses; 'Consultations' which contained data such as the observed coding frequencies of social interactions, consultation time lengths, and the summed scores of satisfaction and enablement taken from the first SPSS data set; and 'Interactions' which contained data related to the observed coding frequencies of social interactions occurring across the different sequential phases of the consultations. All statistical tests were conducted as two-tailed with significance measured at the 0.05 level. Non-parametric tests were mostly, though not exclusively, selected for analysis, as the sample sizes in the study were relatively small, and the skewness statistics for most of the data indicated it was not normally distributed. An exception to this was the data for enablement which where the skewness statistic was calculated as under 1, indicating it was more normally distributed. Therefore parametric tests were used for analysis of the enablement data.

3.15.1 Statistical analysis of the questionnaire responses

The statistical analysis of the questionnaires was partially guided by the reported data analysis for the NPSS (Agosta, 2005; 2009a, 2009b). Descriptive statistics were used to summarise the demographic, health, and clinic attendance profiles of the questionnaire respondents. Descriptive statistics were also used to summarise respondents' comparative evaluations of prior satisfaction with healthcare providers and health education. Descriptive statistics were further used to summarily describe patient / carer pre-expectations of the nurse practitioner consultation, including the use of one-sample Binomial tests to determine any significant differences in pre-consultation expectations amongst demographically defined groups of respondents.

For the satisfaction scores arising from the questionnaires the sample mean and median scores were calculated. Once the overall satisfaction scores had been determined Mann-Whitney U tests were used to investigate if there were any significant differences in respondents' satisfaction scores variability in relation to binary variables such as being video recorded versus not being video recorded; gender; and ethnicity. Kruskall-Wallis H tests were used to determine if there were any significant differences in respondents' satisfaction scores in relation to categorical variables with more than two categories such as age, and the different nurse practitioners seen. The respondents' satisfaction scores were also compared with their pre-consultation expectations using Mann-Whitney U tests.

For the enablement scores arising from the questionnaires the sample mean and median scores were calculated. Once the overall enablement scores had been ascertained independent samples t-tests were used to find out if there were any significant differences in respondents' enablement scores in relation to binary variables such as being video recorded versus not being video recorded; gender; and ethnicity. ANOVA F tests were then used to discover if there were any significant differences in respondents' enablement scores in relation to categorical variables with more than two categories such as age, and the different nurse practitioners seen. Independent samples t-tests were used to determine if there were any significant differences in respondents' enablement scores variability in relation to their pre-consultation expectations.

For the final part of analysis of the questionnaire data a correlational analysis of the satisfaction and enablement scores was also performed, using Spearman's rho, to ascertain if any associative relationship existed between the two variables.

3.15.2 Quantitatively orientated analysis of the interactions observed in the video recorded consultations

The approach to analysis of the interactions occurring in the video recorded consultations was guided by the commonly used consultation communication research approach of interaction analysis, which quantitatively examines the consultation in the context of the frequency proportions of different types of talk, particularly in relation to measuring the extent to which that talk is patient-centred (Greenhalgh and Heath, 2010). Interaction analysis research typically divides social interactions in consultations into two broad categories of: 'care' talk, such as "affective or socio-emotional interaction[s]", which foster a "therapeutic relationship; and 'cure' talk which comprises "instrumental or task-focused interaction[s]" related to "preventing, diagnosing, or treating disease" (Greenhalgh and Heath, 2010, p. 16). Interaction analysis usually involves "sentence-by-sentence coding" of the social interactions occurring in a consultation (Greenhalgh and Heath, 2010, p. 16).

Whilst interaction analysis of consultations can be reliably used to determine the comparative extent to which clinicians and patients use care and cure talk categories in their social interactions, some researchers have questioned the psychometric methodological validity of arbitrarily dividing consultation interactions into two broad analytical categories (Sandvik *et al.,* 2002). Interaction analysis systems have also been criticised from a theoretical perspective, with questions being raised about the ability of such systems to meaningfully capture the evident complexity of interactions occurring in consultations, as they comprise focused micro-analysis of social interactions, with no consideration of the wider macro-social context within which the consultations occur (Scambler and Britten, 2001). Despite these methodological and theoretical critiques of interaction analysis, this approach has a long history of ongoing usage in consultation communication research with many insights into the nature of social interactions in consultations being determined through the usage of such analysis systems (RIAS Works, 2014).

Within the field of communication research one of the most widely used interaction analysis methods of coding video recorded clinical consultations is the 'Roter Interaction Analysis System' (RIAS), which is a validated, quantitatively orientated instrument for systematic categorical coding of consultations developed by an eminent consultation communication psychology researcher, Prof Debra Roter

(Roter and Larson, 2002). Accordingly the RIAS approach was used in this study to analyse the interactions occurring in the video recorded nurse practitioner consultations. The content of the 2011 edition of the RIAS coding manual was used to guide the practical application of the RIAS coding process in the study (Roter, 2011).

RIAS conceptually divides clinical consultations into five main interaction activity segments: opening; history; exam; counsel (care advice); and closing. Within these segments each utterance of the speakers is coded and counted into one of 41 codes divided between two broad coding categories of 'Socio-emotional Exchange', which equates with care talk, and 'Task-Focused Exchange', which matches cure talk. In this regard the word 'exchange' can also be seen as a synonym for social interaction. A few of the codes are used solely for coding clinician interactions, and a few other are reserved for solely coding patient interactions. Examples of these discrete codes are 'Counsels - Medical / Therapeutic regimen (Physician only)', and 'Requests for Services or Medication (Patient category)' (Roter, 2011).

The socio-emotional coding category focuses on socio-emotionally orientated verbal interactions: personal remarks, social conversation; laughing, telling jokes; showing concern or worry; reassurance, encouragement or showing optimism; showing approval ; giving a compliment; showing disapproval; showing criticism; empathy statements; legitimising statements; partnership statements; self-disclosure statements; asking for reassurance; showing agreement or understanding; and back-channel responses (indicators of sustained interest, attentive listening or encouragement) (Roter, 2011).

The task-focused coding category firstly focuses on consultation task orientated verbal interactions: giving orientation or instructions; paraphrasing or checking for understanding; asking for understanding; bidding for repetition (requesting repetition of the other participant's previous statement); asking for opinion; and asking for permission. The second component of the task-focused coding category comprises the verbal interactions of: giving Information; asking closed-ended questions; and asking open-ended questions, all in relation to therapeutic regimens, lifestyle information, psychosocial information, and any other information. The third component of the task-focused coding category has clinician-only coding categories of: counselling or directing behaviour in relation to medical condition, therapeutic

regimens, lifestyle, or psychosocial factors. In this third component there is also a patient-only coding category of: requests for services or medication (Roter, 2011).

Whilst the consultation task-focused coding categories are orientated towards biomedical-related interactions, the content of the task-focused coding categories are not exclusively biomedical, and do contain psychosocial elements, of which a clear lifeworld emphasis can be discerned. For example giving information and asking questions about psychosocial issues comprises "… statements that relate to psychosocial concerns or problems, including stress, feelings, emotions, general state of mind, philosophical outlook, values and beliefs" (Roter, 2011, p.44).   On discovering this questionable categorisation of essentially lifeworld orientated interactions as task-focused exchange instead of socio-emotional exchange it was decided to look at how the practical usage of RIAS had been approached by other consultation communication researchers.

On further reading it was noted Pawlikowska *et al.* (2012), in their previously discussed RIAS-based study of patient enablement in relation to the social interactions occurring in medical primary care consultations, had reconfigured the RIAS coding categories into two broad groups of patient-centred interactions and biomedical interactions, using coding components from both the socio-emotional exchange codes and the task-focused exchange codes. In Pawlikowska *et al.'s* (2012) study patient-centred interactions were taken to be represented by the coding categories of: partnership-building; psycho-social information and counselling; relationship building; social talk; patient questions, and doctor open questions. In making that coalesced coding decision Pawlikowska *et al.* (2012, p.71) based their selection of the coding categories for patient-centred interactions on a conceptualisation of patient-centred communication[5] as: "…exploring the patient's illness experience and the disease, understanding the whole person, finding common ground, incorporating health promotion and prevention, enhancing the participants' relationship and using resources realistically". Biomedical interactions were seen as doctor-centred communication which was "task-focused, biomedical and administrative" (Pawlikowska *et al.* 2012, p.71). Accordingly the coding categories for biomedical interactions were: all biomedical information and counselling; and doctors' closed questions and orientations (or instructions).

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[5] In presenting this definition of patient-centred communication it is acknowledged that the concept of 'patient-centred' itself is contested and without clear consensus in the consultation communication research literature, but that for the methodological purposes of this study it was necessary to have some form of definition of the concept, even if it may not be accepted by all commentators in the field (Siriwardena, 2007).

Pawlikowska *et al.'s* (2012) methodological decision on conceptualising patient-centred interactions and biomedical interactions enabled determination of the extent of patient-centred communication in the primary care consultations they studied by calculating the ratio of codes related to patient-centred interactions to codes related to biomedical interactions.

After carefully considering the content of the RIAS coding manual (Roter, 2011), and Pawlikowska *et al.'s* (2012) reconfiguration of the RIAS socio-emotional exchange and task-focused exchange coding categories a decision was made to follow Pawlikowska *et al.'s* (2012) analytical approach to the determination of the ratio of patient-centred interaction codes versus biomedical interaction codes. This decision was undertaken as it was felt Pawlikowska *et al.'s* (2012) removed the artificiality of the original RIAS framework having psychosocial or lifeworld orientated interactions classified as task-focused exchange, and indeed correctly permitted identification of lifeworld interactions as patient-centred communication.

To what extent does this reconfiguration of the RIAS coding categories differ from the original version? In the originally configured RIAS schedule, 15 coding categories for clinicians and 13 coding categories for patients are designated as socioemotional exchanges. For task-focused exchange 24 coding categories are designated for clinicians, and 21 are designated for patients. In the reconfiguration of the coding categories used in this study, for the nurse practitioners 22 were re-designated as patient-centred and 17 as biomedical, and for the patients 24 were re-designated as patient-centred and 11 as biomedical. Whilst this re-configuration does switch the balance of the original RIAS coding categories from Task-focused / biomedical to Socioemotional / patient-centred, this was deemed acceptable as it was noted Pawlikowska *et al.'s* (2012) own decision on this reconfiguration of the RIAS coding categories was based on previous RIAS-based studies of patient-centred communication involving Roter herself, whereby similar decisions were made on re-categorising the RIAS codes to analyse patient-centred communication (Cooper *et al.,* 2003). For example in a RIAS-based study of patient-centred communication, ratings of care, and concordance of patient and physician race Cooper *et al.* (2003, pp.908-909) attributed patient-centered interviewing as "… a ratio of all codes relating to socioemotional and psychosocial elements of exchange (all partnership-building; psychosocial information and counseling; relationship building; positive, negative, and social talk by physicians and patients; all physician open-ended questions; and all patient questions) divided by codes that further the

biomedical agenda (the sum of all physician and patient biomedical information and counseling, orientations, and physician closed-ended questions)". So with the RIAS reconfiguration interpreted in this regard it can be seen that both this study and Pawlikowska *et al.'s* (2012) study are expediently building on previously accepted reconfigurations of the RIAS coding categories to comparatively identify patient-centred versus biomedical interaction styles in consultations.

To apply Pawlikowska *et al.'s* (2012) analytical approach meant that once the coding of the video recorded consultations had been completed using the original RIAS coding categories, the frequencies of each speaker's utterances in the RIAS coding clusters had to be summed. Once the summary frequencies of each speaker's utterances in the RIAS coding clusters have been summed then the ratios of codes related to patient-centred interactions versus biomedical interactions for each speaker were calculated. Aside from determining the extent of patient-centred communication versus biomedical communication RIAS coding also enables ratios to be calculated for frequency counts of patient utterances to clinician utterances, conceptualised as verbal dominance (Pawlikowska *et al.,* 2012).

Following Pawlikowska *et al.'s* (2012) analysis method the RIAS ratio scores for each video recorded consultation were calculated for verbal dominance by dividing the sum of nurse practitioner utterance frequency counts by the sum of patient utterance frequency counts, and for type of interaction by dividing the sum of patient-centred coding frequencies by the sum of biomedical coding frequencies. For the verbal dominance ratio a score >1 indicates the nurse practitioner was verbally dominant, and for the patient-centred versus biomedical interactions ratio a score >1 indicates a patient-centred consultation. Conversely, for verbal dominance a ratio score <1 indicates the patient / carer was verbally dominant, whilst for patient-centred versus biomedical interactions a ratio score <1 indicates a biomedical task-focused consultation.

In this study it was decided to further extend the use of ratio analyses derived from the RIAS coding to examine the congruency of the different interaction types used by participants in the video recorded consultations. This congruency analysis was undertaken to determine if the participants in the video recorded consultations either spoke in harmony in the same voice, or in disharmony in different voices. This analysis was based on Mishler's (1984) and Johnson's (1993) prior identifications of the importance of analysing the competing voices of the lifeworld and medicine in

clinical consultations. This congruency analysis was done by calculating the ratio of patient-centred versus biomedical interactions used by each pair of participants in the individual consultations; thus determining whether they were interacting congruently by predominantly both using the same interaction style, either patient-centred or biomedical-focused, or else were interacting incongruently with one participant predominantly using one style, whilst the other participant predominantly used another style.

In addition to the codes RIAS can also utilise 'Global Affect Ratings' of the interactants measured on a Likert-type scale, such as 'Anxiety/Nervousness', and 'Interest/Attentiveness' (Roter and Larson, 2002). In this study it was decided not to use the Global Affect Ratings as they were felt to be too subjective for a single researcher to determine as inter-rater comparisons are required to more objectively determine accurate Global Affect Ratings (Roter, 2011).

The papers published on RIAS by Roter herself advocates using special RIAS software, which is only available to researchers who have completed validated RIAS training (Roter and Larson, 2002). However, in comparison, others researchers using the RIAS method appear to take a more flexible approach and do not mention using the RIAS software or having RIAS training (Timmermans *et al.,* 2005). Both Roter and other researchers note RIAS usage and analysis can be flexibly interpreted and modified for the purposes of a specific study, for as Roter (2011, p.52) indicates "adaptations are made, to some extent, to the RIAS coding scheme for almost all studies". For example researchers using RIAS sometimes either add, or collapse and combine the RIAS coding categories dependent on the context of the particular study (Roter, 2011).

In addition to the RIAS coding the individual time durations of all the video recorded consultations was noted, which is also an integrated component of analysis for the RIAS coding scheme.

The actual analysis of the video recorded consultations was initially operationalised, as previously noted, by watching each recording and making observational notes in the field journal on the overview content and scope of each consultation, the frequently occurring types of interactions observed, including the observed occurrence of lifeworld style interactions. Once this initial overview analysis had been completed each consultation was then watched again on a start-stop-code

basis to enable sentence-by-sentence RIAS coding frequency analysis, firstly of the nurse practitioner interactions in each consultation, and then secondly of the patient / carer interactions. Following this sequence of analysis meant each consultation was watched and analysed at least three times, with two of those times involving an extended viewing of starting-stopping-coding. The coding frequencies were recorded on a coding record sheet, based on the RIAS coding categories (Roter, 2011). An example of a completed coding record sheet is presented in Appendix C.

Once the initial RIAS coding had been completed iterative data display and reduction was initiated via tabulated event listings / summary meta-matrices of the participants, content and outcomes of the consultations linked with the RIAS coding. This data display and reduction was used to gain an overview understanding of the content, scope, and interaction styles of the observed consultations, thus putting the collected data in order before detailed analysis started (Yin, 2009). The reduced data displays or 'meta-matrices' contained details such as: biographical details of each patient / carer (adult or child, age, gender, ethnicity, carer being present); consultation appointment type (pre-booked or same day); patients' presenting problem or problems; clinical outcomes of each consultation; consultation time lengths and related questionnaire satisfaction evaluation of the time length; RIAS verbal dominance ratios; RIAS interactions ratios; RIAS interactions congruency ratios; patients' / carers' questionnaire evaluations of expectations being met, overall satisfaction, satisfaction with how treated, future preferences to see a nurse practitioner over a GP, recommending the nurse practitioner to others; and finally the enablement scores.

Successive meta-matrix summaries of the overall outcomes for the video recorded consultations were developed, sorted by grouped pre-booked consultations, grouped same day consultations, and both consultation types combined. Appendix D presents an example of an event listing meta-matrix summary of the RIAS coding outcomes for the first session of video recorded consultations undertaken with Nurse Practitioner 1. The usage of the meta-matrices enabled an initial conjoined familiarity with the data sets emerging from the questionnaires and RIAS coding, before the creation and analysis of the SPSS data sets, which in turn then informed the subsequent qualitative data analysis of the interviews.

As there was no other researcher involved in the RIAS analysis this meant that no measures of inter-rater reliability could be determined, as does often occur in RIAS

studies. Therefore to mitigate against that absence one consultation from each of the three nurse practitioners was reanalysed at a 3-month interval after the initial RIAS coding to determine if there were any major intra-rater variances in coding. This re-analysis process found no major comparative variances in the iterative coding of the three selected consultations, with the same overall coding category placements of either patient-centred or biomedical interactions being determined in comparison to the initial coding. Across the three recoded consultations the mean percent change in coding for patient centred interactions was a reduction of 1.79%, so there was 98.21% agreement. The mean percent change in coding for biomedical interactions was a reduction of 2.58%, so there was 97.42% agreement.

Once the RIAS component of the analysis of the video recorded consultations had been completed the ensuing coding results were statistically analysed. This statistical analysis initially comprised descriptive statistics comparing the verbal dominance ratios of the participants, the patient-centred versus biomedical interactions ratios, and interaction style congruencies, including one-sample Binomial tests to determine if any significant comparative differences existed between those different variables. Chi-square χ^2 tests were then used to individually compare the categories of verbal dominance, patient-centred biomedical interactions, and interactions congruency to appointment types, patient / carer gender, and child or adult consultations, to determine whether there were any relationships between those variables. The RIAS coding outcomes of verbal dominance, patient-centred versus biomedical interactions, and interactions congruency were also analysed in relation to the satisfaction scores using Mann-Whitney U tests, and the enablement scores using Independent-sample t-tests, to see if there were any significant differences in the satisfaction and enablement scores in relation to the RIAS coding outcomes. The frequency occurrence of either patient-centred style or biomedical style interactions in the five different interaction activity phases of the video recorded consultations was also analysed. Firstly, comparing the frequency of patient-centred versus biomedical interactions, and secondly, comparing the extent of usage of each interaction type by the nurse practitioners and patients / carers. For each interaction phase of the consultations Wilcoxon Signed Ranks Z tests were used to see if there any significant differences in the frequency occurrences of patient-centred and biomedical interactions. Mann-Whitney U tests were then used to determine if there were any significant differences in the nurse practitioners' and patients' / carers' frequency usage of patient-centred and biomedical interactions in each of the consultation phases.

Wilcoxon Signed Ranks *Z* tests were also used to compare the nurse practitioners and patients / carers usage of the discretely categorised RIAS patient-centred and biomedical coded interactions.

Frequency rates of participant question-asking were also analysed in this study, as the RIAS coding allows for specific identification of question-asking by the respective participants of a consultation. A Mann-Whitney *U* test was used to determine if there was any significant difference in the frequency rates of question-asking amongst the patients / carers and nurse practitioners.

Descriptive statistics were also used to analyse the video recorded consultation time lengths. Mann-Whitney *U* tests were used to determine if there were any significant differences in consultation time lengths in relation to: consultation types, patients' / carers' gender; and child and adult consultations. Mann-Whitney *U* tests were also used to see if there was any relationship between consultation time lengths and: participants' verbal dominance, the occurrence of patient-centred versus biomedical interactions; and consultation interactions congruency. The consultation time lengths were also correlated, using Spearman's rho correlation, with the scores for satisfaction, and enablement, to see if there was any relationship between consultation time lengths and those variables.

3.15.3 Qualitatively orientated analysis of the case study data with a focus on the interview transcripts

It is recognised that in qualitative case study data analysis there are variant approaches, which is in contrast to the more 'settled' analytical approaches of other qualitative methodologies such as phenomenology, ethnography and grounded theory (Houghton *et al.,* 2015). For example, Yin (2009) espouses using variants of either pattern matching or time-series analysis in case study data analysis. In other case studies the analysis of qualitative data has been alternatively achieved through a framework approach to data analysis (Baillie, 2007). Both Yin (2009) and Houghton *et al.* (2015) note the analytic strategies developed by both Miles and Huberman (1994) have been also influential in subsequent case study research. Anthony and Jack (2009) in an integrative review of 42 qualitative case study methodologies in nursing research, noted in the case studies they reported on that the principles of content analysis were generally applied to guide data analysis processes, albeit in differentially named guises. Accordingly it can be seen that

whilst differently named processes of qualitative data analysis have been used in case studies their end outputs are often the derivation of thematic-style findings summarily representing the analysed qualitative data.

In this case study, reflecting the plurality of approaches to qualitative case study data analysis, two approaches to qualitative data analysis have been used in combination. The initial stages were guided by Miles and Huberman's (1994) sourcebook for qualitative data reduction, exploration and summarising. For the subsequent stages Bazeley and Jackson's (2013) guide to computerised qualitative data analysis with *NVivo,* supplemented by the *NVivo 9* 'Basics' and 'Advanced' workbooks (QSR International 2010a, 2010b) were used.

The initial stages of data analysis guided by Miles and Huberman (1994) comprised an emergent thematic analysis of the interview data involving an iterative, interlinked process of data familiarisation, data reduction, data display, and summarising. Miles and Huberman's (1994) approach was chosen for guiding the initial stages of analysis as the researcher was familiar with their analytical methods from using them in prior case study research, and also because their analytic techniques are recommended by Yin (2009) for putting collected data in order prior to detailed analysis. To enable emergent thematic analysis the interviews were all transcribed and then each transcript plus relevant field journal entries were read twice. Line-by-line highlighting, memos, and annotations were made on the general ideas emerging from the interview data. This re-reading process also enabled familiarisation with the interviews data set to occur. The line-by-line highlighting, memos and annotations were then manually coded and grouped in emergent coding categories to capture and describe all aspects of the content that related to nurse practitioners' and patients' experiences of their consultations. This initial data analysis process being paper-based facilitated a full 'hands-on' familiarity with the interview transcripts before the subsequent steps of the computerised qualitative data analysis process proceeded. To illustrate the process of emergent thematic analysis the summary coding categories derived from the emergent thematic analysis of the interviews with the patients / carers and nurse practitioners are presented in Appendix E (Table E1 and Table E2). The summary coding categories, such as 'Openness and giving the impression of time' from the nurse practitioner interviews, and 'Not being rushed' from the patient / carer interviews, were the tentative coding ideas that initialised the qualitative data analysis process

as an intermediary step to the subsequent detailed qualitative data analysis of the interview transcripts.

The summary coding categories derived from the emergent thematic analysis of the interviews with the patients / carers and nurse practitioners were then co-related by combining codes that represented similar content from the interviews. For example, the code of 'Openness and giving the impression of time' from the nurse practitioner interviews was combined with the theme of 'Not being rushed' from the patient / carer interviews. Further examples of co-related summary coding categories are presented in Appendix E (Table E3).

Once the co-relations of the summary coding categories had been established they were then reductively compared to elucidate the combined co-related summary coding categories originating from the initial emergent thematic analysis process. For example, the co-related coding categories of 'Openness and giving the impression of time' from the nurse practitioner interviews and 'Not being rushed' from the patient / carer interviews were reductively compared to generate the combined co-related summary coding category of 'Conveying the impression of time for the patient / carer'. These combined co-related summary coding categories are presented in Appendix E (Table E4).

Once the emergent thematic analysis had been completed computer-assisted qualitative data analysis (CAQDA) then provided the subsequent determinant approach to the data analysis process for the interviews via the use *of NVivo 9* software (Leech and Onwugbuzie, 2011). It has been noted that there should be no "false dichotomy between tool and process" in CAQDA and that software such as *NVivo* should be viewed as having a complete analytical capability which encompasses both how the analysis is completed (process) and what it is completed with (tool) (Johnston, 2006, p.381). Furthermore CAQDA software such as NVivo should be viewed not as an "ad-hoc appendage to a traditional [data analysis] strategy but fully integrated" in research projects through offering a complete approach to qualitative data analysis, which should also be used creatively by researchers (Bourdon, 2002, p.175). This perspective regards *NVivo* as both a software tool and a process method for qualitative data analysis (Johnston, 2006). Aside from being a creatively complete analytical approach it has been observed that *NVivo* offers consistency in coding and the ability to query and audit coding processes, which enhances the credibility of data interpretation (Bergin, 2011). CAQDA with *NVivo* has been used successfully in other case studies with mixed

methods, such as the work of Sangster-Gormley (2011) and Sangster-Gormley *et al.* (2015), looking at the integration of nurse practitioner roles in healthcare services. Furthermore, one of the other CAQDA systems, ETHNOGRAPH', has also been successfully used for thematic analysis of nurse practitioners' use of resources for supporting interactions with patients in consultations (Koeniger-Donohue, 2007). Consequently, based on the positive appraisals of CAQDA in the research literature, and discrete examples of its usage in relation to researching nurse practitioners, *NVivo*-guided CAQDA was adopted as an integrant approach for the detailed analysis of the study's qualitative data component. Before starting analysis with *NVivo 9,* in 2011 I attended a 2-day QSR International classroom workshop for using '*NVivo* with *Windows'* to gain the knowledge and practice needed to begin work in *NVivo*, which covered '*NVivo* Essentials' as a basic introduction to the software, and 'Further Analysis in *NVivo*' looking at visualising and further exploring data.

In making a decision to use *NVivo* as both the tool *and* process of qualitative data analysis in this case study it is acknowledged that other forms of qualitative data analysis have previously been associated with case studies. The steps in this *NVivo* analytic process were: building further knowledge of the interview data through initial coding; identifying and naming codes; storing coding in nodes in a structured system; comparative coding analysis with charts, graphs, and tree maps; exploring coding node relationships via modelling; and grouping and conceptualising coding nodes. Before making the decision to proceed with *NVi*vo as both the tool and process of data analysis another form of detailed qualitative data analysis was considered, namely pattern matching as described by Yin (2009). In many ways it can be seen that the *NVivo* analytic process does indeed allow for a degree of pattern matching to occur as the *NVivo* outputs can be scrutinised to determine whether any meaningful patterns related to a study's research question or aims and objectives are emerging (Yin, 2009). Examples of such patterns are identifying the frequency of coding nodes or coding node combinations, which can then be related back to a case study's theoretical propositions in post-computer discursive interpretation to focus attention on data meaningful to the context of the study (Yin, 2009). Thus it can be seen the *NVivo* analytic process does involve some aspects of pattern matching, though it is not its solely intended purpose, so nor was it was adopted as the sole qualitative data analysis process for this case study.

As *NVivo 9* was used for the final qualitative data analysis the language of *NVivo* is adopted for the rest of the explanation of the qualitative data analysis process in this section of the thesis and its supporting appendix. Accordingly the commonly used *NVivo* terms are now discussed. 'Coding' in *NVivo* is "selecting source content [for example text from an interview transcript] and defining it as belonging to a specific node (topic or research subject)"... (QSR International, 2010a, p. 107). A 'node' in *NVivo* is "a container that lets you gather source content relating to themes, people, places, organizations or other area of interest" (QSR International, 2010a, p. 110). Nodes can be organised in node hierarchies with general topics at the top of the hierarchy called 'parent nodes' with specific themes or topics below a parent node coded to sub-nodes called 'child nodes' (QSR International, 2010a). To 'aggregate' in *NVivo* means to "gather the content of child nodes to the parent node" (QSR International, 2010a, p. 105). To 'merge' means to combine "...nodes which are about the same thing" (Bazeley and Jackson, 2013, p. 100).

Further details of the components of the steps of the *NVivo* data analysis process and their practical implementation in the study are presented in Table 3.2.

Table 3.2: Steps of NVivo guided thematic analysis (QSR International 2010a; 2010b; Bazeley and Jackson, 2013)

NVivo analysis steps	Description of analysis process implemented in the case study
1. Initial coding	Detecting initial codes in the emergent thematic analysis.
2. Identifying and naming codes	Identifying further codes from the data in a structured style, including building on and integrating the initial emergent thematic analysis.
3. Storing codes in nodes in a structured system	Sorting and storing similarly related codes in coding nodes.
4. Comparative coding analysis	Comparative visual analysis of coding nodes with charts, or graphs, or tree maps generated in *NVivo*.
5. Exploring coding node relationships	Exploring coding nodes relationships via modelling of nodes.
6. Conceptualising and aggregating coding nodes	Grouping together coding nodes which are conceptually similar in a hierarchical sequence of child and parent nodes

The first step, prior to entering data into *NVivo 9*, was the initial emergent thematic analysis of the interview data expedited as previously described via guidance from Miles and Huberman's (1994) iteratively reductive approach. Following on from the initial emergent thematic analysis *NVivo 9* was then used to examine the interview transcripts in detail and to establish definitive coding nodes which accurately reflected the content of those interviews. Such a dual approach of both manual and computer assisted methods for coding has been shown to be beneficial in CAQDA, particularly for showing how annotations and memos of data streams link together (Welsh, 2002). This computerised process involved uploading the interview transcripts and also the findings of the emergent thematic analysis to *NVivo 9.* The ensuing line-by-line analysis of the interview transcripts comprised developing the interview data from the emergently identified coding ideas into coding nodes using *NVivo 9*. This process involved identifying and coding themes and topics from the data in a structured hierarchical sequence of coding nodes, guided by the initial coding ideas generated in the emergent thematic analysis, and also comparative referral back to the study's aims, objectives, and propositions. The long list of initial codes generated at this step of the CAQDA process is presented in Appendix E (Table E5). To help further understand how the coding in *NVivo* was derived, a worked example of some of the direct line-by-line coding from the interview transcripts is provided in Appendix E (Table E6).

Once the initial codes had been developed in *NVivo* they were then reductively combined in order to create a structured coding node system to enable conceptual clarity and pattern identification to emerge from the unstructured long list of initial codes. This ensuing process involved analysing again the combined co-related summary coding categories from the emergent thematic analysis, and additionally the unstructured long list of codes generated in *NVivo*, and then comparatively referring back again to the case study's aims, objectives, and propositions. Deciding where frequently occurring coding commonalities existed, enabled combining of similarly themed codes under the same coding node. To aid this analysis visual displays of inter-relationships and in data were used in *NVivo 9* as supplementary methods of analysis for discovering patterns and visualising data (QSR International, 2010b). Graphs were used in the data analysis process to display the coding originating from each participant, and charts were used to display the most frequently coded nodes for each participant. The *NVivo*-derived visual analysis of a patient participant's interview transcript has been used to provide an example of a

coding graph and a coding node chart in Appendix E (Figure E1 and Figure E2). At the end of this iterative, reductive process 122 coding nodes were identified.

Once those 122 coding nodes had been identified they were further scrutinised to see whether any of the coding nodes was very similar and hence needed to be aggregated to create a more manageable set of coding nodes, organised as a hierarchical system of child nodes and parent nodes to further understand them. This hierarchical aggregation process led to the identification of seven parent nodes with associated child nodes. Those seven parent nodes are presented in Appendix E (Table E7). Models[6] are used in NVivo for supporting further consideration and visualisation of data such as coding nodes (QSR International, 2010b). Accordingly once the parent nodes had been identified a model was created to visualise them in *NVivo.* This model is presented in the findings chapter in Figure 4.2. Once the parent nodes had been established on further comparative scrutiny of their constituent child nodes it was noted that some of their constituent child nodes were very similar and accordingly could be merged together as one child node within the same parent node. It was also noted one of the parent nodes, '*Consulting style of nurse practitioners',* comprised 53 child nodes, which was many more child nodes than the other parent nodes had. Consequently this parent node was further scrutinised to identify any child nodes that could be further aggregated to enable its content to be further explicated. This scrutiny process led to identification of six aggregated child nodes explicating the content of the parent node *Consulting style of nurse practitioners*, which are presented in Appendix E (Table E8). As this further aggregation of the child nodes of the parent node of *Consulting style of nurse practitioners* was an additional process to the creation of the other parent nodes, the inter-relationships between those aggregated child nodes and the parent node of *Consulting style of nurse practitioners* was modelled in *NVivo* to visualise it and thus make it clearer. This model is presented in the findings chapter in Figure 4.3.

The child nodes comprising each of the six aggregated child nodes of the parent node *Consulting style of nurse Practitioners* are presented as list-style tables in Appendix E (Tables E9 – E14). The other parent nodes are also presented as list-style tables in Appendix E (Tables E15 – E19). The child nodes and aggregated

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[6] The term 'model' in *NVivo* means creating a visual representation of components of a project for aiding exploration of data (QSR International, 2010b).

child nodes of the parent nodes were also visualised as *NVivo* 'tree maps'[7] displaying the proportional composition of each child node within a parent node, or coding nodes within an aggregated child node. An example of a tree map has been presented in Appendix E (Figure E3) to demonstrate the visual analytic capacity of *NVivo* 9 that was flexibly applied in the study in order to assist developing an understanding of the different coding node components of both the aggregated child nodes and the parent nodes. In Appendix E the example of the aggregated child node of *Explanation, information, and enablement* of the parent node of *Consulting style of nurse practitioners* has been used.

Whilst *NVivo* nomenclature has been used in this section of thesis and its supporting appendix, in the ensuing findings, discussion and conclusion chapters, and also in the abstract, the aggregated child nodes and the parent nodes are referred to respectively as 'sub-themes' and 'themes' to make the qualitative findings more accessible to a wider audience who may be unfamiliar with the operational technicalities of *NVivo*.

3.16 Promoting rigour

Verification of the research findings was sought via monitoring of the credibility (trustworthiness) of the collected data (Miles and Huberman, 1994; Houghton *et al.,* 2013). This verification was achieved in a number of ways. Firstly, a prolonged involvement with the setting facilitated an in-depth understanding of the setting and its participants, through the 14-month length of the fieldwork period. Alongside this prolonged involvement, persistent observations were also made of the case in question, the nurse practitioner consultation, to hopefully encompass a wide scope of consultation interactions. The use of multiple methods of data collection facilitated a methodological convergence on the experienced reality of the setting. Member checks were also used on the data collected, by informally discussing their experiences of being video recorded, initial findings from prior recording sessions, and emergent interpretations with the nurse practitioner participants as the study progressed in the time periods before and after their interviews (Houghton *et al.,* 2013). This member check process led both the researcher and participants to reflect on their research experiences, which in turn helped contextualise the purpose

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[7] Tree maps are used in *NVivo* to provide a visual representation of coded data as "nested rectangular boxes" (QSR International, 2010b, p. 66). The nested boxes represent nodes, and the size of each box proportionally represents the number of sources coded by the node (QSR International, 2010b).

of the interviews for the nurse practitioner participants. Summaries of these reflections were then recorded in a field journal for subsequent data analysis. The verbatim transcription of the interview recordings also augmented the trustworthiness of the collected data (MacLean *et al.,* 2004). Furthermore, arrangements were made to present the findings to the nurse practitioner team at Lime Tree Way to enable them to have the opportunity to challenge, discuss, and reflect as a group on the study's findings.

Following Ballinger's (2006) suggestions for ensuring rigour in qualitatively-orientated studies the credibility of this research case study is further demonstrated by: the case study approach supporting the research aims and objectives; clear evidence of careful conduct of the research as detailed in this chapter; the persuasive and pertinent interpretation of the data presented in the succeeding chapters; and a clear delineation of the researcher's role in the case study as also noted in this chapter.

A further component to consider in relation to enhancing the credibility of the study is the researcher's enduring personal experiences of working as a nurse practitioner, conducting consultations with patients in a variety of primary and secondary care settings, including general practice. This experience has fostered a detailed and intimate knowledge of the challenges and processes of consulting with patients as a nurse practitioner. Accordingly the researcher is very familiar with what would normally be expected to occur in a nurse practitioner consultation which enhanced the analytical understanding of the data; thus being an example of case familiarity as another feature of rigour in case study research (Cronin, 2014).
In relation to the credibility of qualitative data analysis, as a safeguard from researcher biases such as inaccurate pattern coding or involvement with the case setting, a research supervisor colleague, with experience of qualitative data analysis was asked to review the coding list and the aggregation of the coding nodes in their child and parent nodes. This review confirmed that that coding nodes had been placed in appropriate hierarchical child nodes and parent nodes. Finally, an audit trail of research activities was maintained, including raw data such as observation notes and interview transcripts, the field journal, and the details of subsequent data coding and analysis.

Furthermore 'thick' description of the research setting has been deployed in this chapter to convey an immersive, realistic account of the setting. Thick description

has also been used by offering many perspectives from different participants for each of the qualitative themes that are presented in the findings chapter (Creswell, 2013).

3.17 Ethical considerations

Ethical guidelines from the General Medical Council (2002) for making and using visual recordings of patients in clinical practice were applied in this study. For children who lacked the understanding to give their permission to be recorded, permission to record was obtained from their parent. Informed consent for the video recording was obtained from the patient / carer and nurse practitioner participants before and after the video recording took place. In all cases post-consultation confirmatory consent for usage of a video recording was given by all of the participants of the consultations. However if this post-consultation confirmatory consent could not have been obtained, the recording would have been erased and no copies made. Participants were informed that information about their participation in the study would be kept confidential and that their identifying details would not be referred to in any research outputs, so they will therefore remain anonymous. However, participants were informed that if any possible instances of poor clinical practice were observed during a video recorded consultation I would be duty bound to report this to the relevant employer and / or regulatory body following discussion with the individuals concerned.

The patient / carer and nurse practitioner participants were assigned numbers to provide anonymous video, interview and questionnaire data. It was intended that the researcher, the research supervisors, patient and nurse practitioner participants would be the only individuals who would see the recorded consultations (for both patients and nurse practitioners this access would only apply for the video recorded consultations they have been personally involved in). However during the study data collection none of the patients and only one of the nurse practitioners wanted to see their own video recording and discuss that in an interview.

When making the video recordings particular care was taken to respect patients' autonomy to ensure that the patients selected for the study maintained the right to expect that their individual consultation would be devoted to their needs and expectations, and that these would not be comprised by their participation in the research. Accordingly to ensure that a participating patient's care was not comprised

by being video recorded the following general ethical principles were applied in the video recording research process:

- Endeavouring to give participants adequate information about the purpose of the video recording when seeking their permission.
- Ensuring that participants were under no pressure to give their permission for the video recording to be made.
- Advising the nurse practitioner participants to stop the video recording (they were shown how to do this) if the patient / carer asks them to, or if it was having an adverse effect on the consultation or treatment.
- Ensuring that the recording did not compromise patients' privacy and dignity, by asking the nurse practitioner participants to conduct physical examinations requiring removal of clothing out of camera view.
- Not using the video recordings for purposes outside the scope of the original consent for use, without obtaining further consent.
- Making appropriate arrangements for secure storage of the recordings.
- It was also ensured that patients / carers had an understanding of who else would be permitted to watch their consultation video recording; for the purposes of this study the researcher, the supervisors and the particular nurse practitioner involved in a recorded consultation were the only people who could potentially view a video recorded consultation.

A research proposal application was made to the National Research Ethics Service (Central London REC 4) on 8th March 2011. The Chief Investigator and lead research supervisor attended a committee review meeting on 7th April 2011 where a favourable ethical opinion of the proposed research was given subject to:

1. Obtaining local management permission via "R&D approval".
2. Amending the participant information sheet for nurse practitioners "to reflect the need to complete a questionnaire in the 'What do I have to do section?'".
3. Specifying "the exclusion criteria that will be used to avoid stressful situations".
4. Revising the video recording participant information sheet for patients "to state specifically that patients are able to discontinue their participation at any time".

The Chief Investigator wrote back to the ethics committee, complying with conditions 1, 3, and 4. However the committee was advised that the nurse practitioners did not need to complete a questionnaire so it was not necessary to indicate that on their

information sheet. The committee accepted compliance with the approval conditions on 26th May 2011. Subsequently local research governance ('R&D') approval was sought from The West London Consortium for Research and Innovation and this approval was given on 9th June 2011, with the requirement that a 'NHS to NHS letter of access for research be obtained. This access letter was needed as at the time I was employed in a general practice clinic providing NHS services, which meant an honorary research contract was not required. The access letter was obtained on 13th June 2011, granting the right of access to conduct research in the clinic's local area from 14th June 2011 to 31st December 2014. Finally the ethics review and acceptance of the study from Central London REC 4 was upheld by the Research Ethics Committee of London South Bank University on 8th July 2011. Please see Appendix F for copies of the research approval letters.

From a nursing research ethics perspective, the study was informed by the Royal College of Nursing Research Society (2011) guidance for nurses on 'Informed consent in health and social care research'. Informed signed consent was obtained from the participants being video recorded and interviewed by ensuring that they were aware that they were taking part in a research case study, the purpose of the research, the video recording and interview procedures, their right to terminate the observation or interview, the voluntary nature of their participation and assurances of anonymity and confidentiality. The confidentiality and anonymity of the research participants and the setting was maintained throughout the study. The participants were also advised of the planned dissemination of the results of the study. The suggested pro forma / guidelines of the National Research Ethics Service were used to develop the research consent forms, and participant information sheets for the video recorded patients / carers, nurse practitioners, and the patients / carers completing the unlinked questionnaires.

Access to the medical records and biographical details of the patient participants was not needed to complete the research data collection. All research data was coded through the use of numbers, with no use of participants' names or initials. The collected research data was held securely.

3.18 Summary of methodology

This chapter has presented the methodological details of the study, which has been designed as a case study utilising convergent parallel mixed methods of data

collection to enable naturalistic video recorded observations of social interactions in nurse practitioner consultations. Those observations were complemented by the concomitant collection of survey data related to patient / carer pre-consultation expectations and post-consultation satisfaction / enablement, and also post-consultation semi-structured interviews with some of the patient / carer and nurse practitioner participants of the video recorded consultations. A corresponding tripartite approach to analysis of the three components of data collected was undertaken, comprising descriptive statistical analysis of the survey responses, a quantitatively orientated frequency analysis of the consultation interactions, and *NVivo*-guided CAQDA of the interview data.

Chapter 4 Findings of the case study

4.1 Introduction

This chapter presents the data analysis and associated results arising from the three different sources of data collection. A brief overview of the whole data set collected is presented in section 4.2. The chapter is then divided into four main sub-sections: Section 4.3 focuses on the questionnaire data, including the demographics and health statuses of the respondents. This is followed by analysis of the expectations component of the questionnaire, and analysis of the satisfaction and enablement scores, including their relationship to consultation time lengths; Section 4.4 focuses on the RIAS coding of the video recorded consultations, comprising the consultation details and summary outcomes for the video recorded consultations, including the RIAS coding findings. A descriptive statistical analysis of the video recorded consultations RIAS data is followed by an examination of the associative relationships between the RIAS-coded consultation interactions, and then an analysis of consultation time lengths and satisfaction and enablement scores in relation to the RIAS data. This section is completed with a detailed analysis of interaction categories in the different phases of the video recorded consultations. Section 4.5 focuses on the interview data, presenting the findings of the *NVivo*-guided qualitative data analysis of the nurse practitioner and patient / carer interviews. Finally, section 4.6 summarises the findings.

The key questions being answered in this chapter are derived from the propositions of the case study which were presented in section 2.7.1. The propositions and research questions are re-stated in Table 4.1, where applicable the independent (predictor) variable and dependent (outcome) variable(s) components of the research questions have been indicated in parentheses. Table 4.1 also indicates the data sets to be used to answer the question and the section of this chapter in which the findings can be located. Some questions require more than one data set to provide a complete answer, as indicated in Table 4.1. Where convergence of interview data with either questionnaire data or observation data is required, this convergence to provide the full answer will occur in the discussion in chapter 5.

Table 4.1: Research questions and plan of the presentation of findings.

Propositions	Research questions	Questionnaire	Video observations	Interviews	Findings appear in section
		Data used			
1. Nurse practitioners emphasise patient-centred styles of communication in their consultations.	Q1.1 Do patient-centred styles of communication occur more frequently than biomedical styles of communication in nurse practitioner consultations?		✓		4.4.3
	Q1.2 Do nurse practitioners and patients use similar frequencies of patient-centred and biomedical interaction styles in their consultations?		✓		4.4.4
	Q1.3 Where in the consultation do nurse practitioners and their patients use patient-centred interactions and where do they use biomedical style interactions?		✓		4.4.5
2. The discrete features of styles of communication and social interactions used in nurse practitioner consultations have not been fully elucidated and nor have patients', carers', and nurse practitioners' views of such styles of communication.	Q2.1 What are the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations?		✓	✓	4.4.2, 4.5.1 and 5.2
	Q2.2 What are patients', carers', and nurse practitioners' perceptions regarding the inclusion of lifeworld information in nurse practitioner consultations?			✓	4.5.5
	Q2.3 What are patients', carers', and nurse practitioners' perceptions regarding the interaction styles used by nurse practitioners in their consultations?			✓	4.5.2 and 4.5.3

Propositions	Research questions	Data used			Findings appear in section
		Questionnaire	Video observations	Interviews	
3. Patients have uncertain expectations of the nurse practitioner consultation and an ambiguous understanding of the nurse practitioner role.	Q3.1 What are patients' and carers expectations of consulting with nurse practitioners?	✓		✓	4.3.2, 4.5.6 and 5.3.2, 5.4
	Q3.2 What are patients', carers', and nurse practitioners' perceptions of the status of the nurse practitioner role?	✓		✓	4.3.2, 4.5.4 and 5.3.1, 5.3.2
	Q3.3 Do patients' and carers' expectations (independent variable) of consulting with nurse practitioners affect their subsequent evaluations of post-consultation satisfaction (dependent variable)?	✓			4.3.4 and 4.3.6
	Q3.4 Do patients' and carers' expectations (independent variable) of consulting with nurse practitioners affect their subsequent evaluations of post-consultation enablement (dependent variable)?	✓			4.3.4 and 4.3.6
4. Patients will report high levels of satisfaction with nurse practitioner consultations.	Q4.1 From a UK perspective how satisfied are patients and carers after consulting with nurse practitioners when satisfaction is measured with an instrument specifically devised for measuring satisfaction with those types of consultations?	✓			4.3.3
5. Patients will report high levels of enablement and those patients with the highest levels of satisfaction will be most enabled.	Q5.1 How enabled are patients to manage their own health after consulting with a nurse practitioner?	✓			4.3.5
	Q5.2 Do the outcome variables of patient satisfaction and patient enablement after consulting with nurse practitioners have any associative relationship?	✓			4.3.7

Propositions	Research questions	Data used			Findings appear in section
		Questionnaire	Video observations	Interviews	
6. Levels of satisfaction and enablement are affected by the interaction style with patient-centred styles of interaction increasing satisfaction and enablement.	Q6.1 Do interactions styles (independent variables) used in nurse practitioner consultations affect subsequent patient satisfaction and enablement (dependent variables) after consulting with nurse practitioners?	✓	✓		4.4.6
7. Patients have a sense of more time in the consultation when they consult a nurse practitioner.	Q7.1 What is the mean time length of nurse practitioner consultations?		✓		4.4.7
	Q7.2 Does the frequency occurrence of different communication and interaction styles (independent variables) in the consultations affect the time length (dependent variable) of nurse practitioner consultations?	✓	✓		4.4.8
	Q7.3 Does the time duration (independent variable) of nurse practitioner consultations affect the outcomes of patient satisfaction and enablement (dependent variables)?	✓	✓		4.4.9
	Q7.4 What are patients', carers', and nurse practitioners' perceptions of the usage of time in nurse practitioner consultations?	✓		✓	4.5.5

* When convergence of data sets is necessary the final answers to the question are in the discussion chapter.

4.2 Overview of data collected during the study

During the fieldwork period the final data set comprised a mix of video recorded consultations, interviews and questionnaires. Thirty nurse practitioner-patient consultations were video recorded. Eleven post-consultation interviews were completed with patients/carers whose consultations had been video recorded. One interview was completed with each of the three participating nurse practitioners. In relation to the questionnaires 26 out of 30 distributed paper-based questionnaires were completed by patients/ carers whose consultations had been video recorded (response rate 86.7%). An additional 45 questionnaires (six online) were completed by patients/carers whose consultations had not been video recorded.

4.3 Analysis of the questionnaire data

This section presents the results of the questionnaire data analysis from both video recorded and non-video recorded patients. Firstly the demographic and attendance profile of the questionnaire respondents is described followed by statistical analysis of the respondents' answers within the questionnaires. Due to the relatively small size of the questionnaire sample size of 71 respondents, the discrete demographic groups were combined to enable more effective analysis of relationships within the data set.

4.3.1 Demographic and health status profile of the questionnaire respondents

This analysis provides an indication of the types of people and health issues that are seen by the nurse practitioners in Lime Tree Way clinic. The demographic profile of the questionnaire respondents is presented in Table 4.2. The majority of respondents reported their gender as female (n=48, 71.6%); were aged 36-65 years old (n=38, 53.5%); and were either married or living with their partner (n=40, 62.5%). In relation to highest education level completed the majority of respondents were educated to university degree level (n=38, 61.3%). A large majority of respondents described themselves as White (n=51, 75%).

Respondents were also asked to indicate their household take home annual income. Interestingly the largest category in this group was no response to this question

(n=20, 29%). This non-response corresponds with the findings of the questionnaire pilot study, where some professional occupation respondents said they were not prepared to answer the income question, as they felt it was too private. Of the 48 respondents who answered the income question the majority placed themselves in the £10,000-£40,000 bracket (n=26, 53.1%). Over half of the respondents described themselves as being employed (n=39, 58.2%). The questionnaires were only designed and intended to be completed by either adult patients or carers, so no questionnaire responses were collected from child participants.

Table 4.2: Demographic profile of the questionnaire respondents

Characteristic	Number	Percentage
Gender (n=67)		
Female	48	71.6%
Male	19	28.4%
Age (n=71)		
18-35 years old	11	15.5%
36-65 years old	38	53.5%
Over 66 years old	22	31.0%
Marital status (n=64)		
Married / living with partner	40	62.5%
Single, never married	13	20.3%
Divorced or separated	7	10.9%
Widowed	4	6.3%
Highest education level (n=62)		
Less than O-Level / GCSE	7	11.3%
GCSE / O-Level	7	11.3%
A-level	2	3.2%
Vocational / Technical Qualifications	8	12.9%
University degree	38	61.3%
Ethnicity (n=68)		
White	51	75%
Black and Minority Ethnic	17	25%
Household take home annual income (n=49)		
Less than £10,000	8	16.3%
£10,000 to £40,000	26	53.1%
£41,000 to £75,000	10	20.4%
£76,000 plus	5	10.2%
Employment status (n=67)		
Employed	39	58.2%
Unemployed	4	6.0%
Retired	21	31.3%
Students	3	4.5%

Participants were asked to provide information related to their current health problems, and so were asked what health problems either they or the person they

were attending with took medication for. Three participants did not answer this question. Sixty respondents (88.2%) reported having one or more medical problems requiring medication. Of these the largest group (n=24, 35.3%) was those with multiple combined medical problems, such as high blood pressure, high cholesterol, and heart disease. These findings indicate the diverse range of complex medical problems the nurse practitioners typically dealt with at Lime Tree Way clinic during the data collection period.

As a result of the modest number of questionnaire respondents some categories of marital status, highest educational level, household income and employment status have few respondents. In analyses presented investigating the relationship between demographic variables and satisfaction (section 4.3.5) and enablement (section 4.3.7) it was necessary to reduce the number of low frequency categories. For such analyses marital status is categorised as living with partner or not living with partner (combining single never married, widowed, divorced or separated); highest educational level is categorised as university degree or no university degree; employment status is categorised as employed or not employed (combining unemployed, retired and student); and household income is categorised as over £40,000 and £40,000 or below.

4.3.2 What are patients' and carers' expectations of consulting with nurse practitioners?

The pre-consultation expectations component of the questionnaire was designed to assess patient/carer pre-expectations of their nurse practitioner consultations based on the typical activity components of a clinical consultation: history taking, clinical examination, medical investigations, diagnosis, prescribing, and referrals. An additional questionnaire items in the expectations section asked if respondents expected the nurse practitioner to discuss their case or that of the person they were accompanying with a doctor. This extra item was designed to assess whether or not patients / carers fully understood the autonomous nature of the nurse practitioner role, as nurse practitioners do not routinely need to discuss the patients they see with a doctor. If patients / carers thought their case would be discussed with a doctor that would suggest they did not fully understand the independent, autonomous nature role of the nurse practitioner role. Accordingly this extra item also provided part of the answer to the research question exploring patients', carers', and nurse practitioners' perceptions of the status of the nurse practitioner role, in conjunction

with the qualitative interview data. Immediately post-consultation patients / carers were then asked if their expectations of coming to see the nurse practitioner had been met. For the expectations data a one-sample Binomial test was used to determine if there was any significant difference in the proportions responding 'Yes' and 'No' for the different expectations. For example, did patients expect the nurse practitioner to take a history? This would imply testing the hypothesis:

H0: Patients were as likely as not to expect history taking (so probablity of expecting history taking to occur is 0.5)

H1: Patients had a clear idea about whether or not history taking would to occur in nurse practitioner consultations (so probability of expecting history taking to occur is not 0.5)

In this use of the one-sample Binomial test a significant result indicated the null hypothesis that the proportion of respondents replying 'Yes' equals the proportion of respondents replying 'No' could be rejected. Accordingly the alternative hypothesis could then be accepted, that a significant majority of patients / carers expected the relevant activity component in the consultation to occur. The results of this analysis of pre-consultation expectations are presented in Table 4.3.

Table 4.3: Binomial analysis of pre-consultation expectations

Pre-consultation expectation	Expected N (%)	Not Expected N (%)	Binomial Test p value
History taking	61 (85.9%)	n=10 (14.1%)	$p < 0.001$
Clinical examination	65 (91.2%)	n=6 (8.5%)	$p < 0.001$
Medical investigations	59 (83.1%)	n=12 (16.9%)	$p < 0.001$
Diagnose problem	52 (73.2%)	n=19 (26.8%)	$p < 0.001$
Prescribe medication	62 (88.6%)	n=8 (11.4%)	$p < 0.001$
Case to be discussed with doctor	37 (52.9%)	n=33 (47.1%)	$p = 0.720$
Onward referral	59 (83.1%)	n=12 (17.6%)	$p < 0.001$

Table 4.3 shows a significant ($p < 0.001$) majority of respondents expected a history to be taken; a clinical examination to take place during their consultation; the nurse practitioner to request some medical investigations such as blood tests or an x-ray; the nurse practitioner to be able to diagnose the problem they were attending their consultation for; the nurse practitioner to prescribe medication for the problem they were attending with; and the nurse practitioner, if required, to be able to refer either them or the person they were accompanying to a medical specialist or other service.

Only the pre-consultation expectation for a case to be discussed with a doctor by the nurse practitioner did not have a significant higher proportion of patients expecting this activity in their consultation (p = 0.720). For this particular expectation there was an almost even split (Yes 52.9% / No 47.1%) amongst the respondents as to whether they thought the nurse practitioner would discuss their case or that of the person they were accompanying with a doctor. This result suggests that many patients / carers were not fully conversant with the independent, autonomous nature of the nurse practitioner role, despite most of them clearly expecting the nurse practitioner to engage in areas of advanced clinical practice such as clinical examination, diagnosis and prescribing, as can be seen in the preceding expectations responses.

For the smaller group of video recorded questionnaire respondents it was also possible to determine, using a Chi-square χ^2 test, if there was any relationship between consultation appointment types and expectations for doctor discussion. This analysis was undertaken on the premise that patients / carers attending for pre-booked appointments could have been potentially attending with more complex problems than those attending for same day appointments, and so may have had justifiable reasons for expecting doctor involvement. However, there was no significant association between the consultation appointment types of same day / pre-booked and patients' / carers' expectations for doctor discussion (p = 0.653).

The final expectations question from in the questionnaire was answered immediately post-consultation and asked if respondents overall expectations of coming to see the nurse practitioner had been met. All respondents to this post-consultation expectations evaluation question either agreed (n=20, 30.3%) or strongly agreed (n=46, 69.7%) that their overall expectations of coming to see the nurse practitioner had been met.

On a methodological point it should be noted that in the actual questionnaire respondents could select one of three categories for expectations for their case to be discussed with a doctor by the nurse practitioner: 'Yes', 'No', and 'Not sure'. The original frequency responses to these categories were: Yes 52.9% (n=37), No 22.6% (n=16), and Not Sure 24.3% (n=17). Similarly respondents could select one of four categories for the onward referral expectations question: 'Yes', 'No', 'Not sure', and 'Not required'. The original frequency responses to these categories were: Yes 83.1% (n=59), No 2.8% (n=2), Not Sure 8.5% (n=6), and Not required

5.6% (n=4). Retaining multiple categories for analysis of these two questions was difficult because of the small sample size and low frequency for some categories. Therefore it was decided to combine the 'No', 'Not Sure', and 'Not required' categories together as an overall negative reply, thus enabling analysis using a one-sample Binomial test. The negative reply has for convenience of presentation been labelled 'No' but perhaps is better thought of as 'not Yes'.

4.3.3 How satisfied are patients and carers after consulting with nurse practitioners?

The satisfaction component of the questionnaire, derived from the NPSS (Agosta, 2009a) enables determination of two subscale measurements of patient / carer satisfaction: general satisfaction and communication satisfaction. General satisfaction is measured using 17 Likert-scale items each with a maximum score of five, giving a maximum score of 85. Communication satisfaction is measured using six Likert-scale items, again each with a maximum individual possible score of five, giving a maximum total score for communication satisfaction of 30.

The descriptive statistics for the general satisfaction and communication satisfaction scores are displayed in Table 4.4. The mean general satisfaction score in this study was 78.48 (95% confidence interval 76.7, 80.3). The mean communication satisfaction score was 26.37 (95% confidence interval 25.7, 27.1). It would appear that overall patients / carers in the study have reported high levels of post-consultation satisfaction as the mean score for general satisfaction was only 6.52 points below the modified maximum score of 85, and the mean score for communication satisfaction was relatively even higher, being only 3.63 points below the maximum score of 30.

Table 4.4: Descriptive statistics for General Satisfaction and Communication Satisfaction scores

Descriptive statistics	General Satisfaction score (maximum possible 85)	Communication Satisfaction score (maximum possible 30)
Mean (standard deviation)	78.48 (6.68)	26.37 (2.75)
Median (quartiles)	81.0 (73.0, 84.0)	27.0 (24.0, 28.5)
Skewness statistic	-1.024	-0.636

As Table 4.4 indicates some skewness (so the satisfaction scores may not be normally distributed) a Mann-Whitney *U* test were used to determine if there is any evidence that video recording the consultation or not (independent variable) affects patient general satisfaction and communication satisfaction (dependent variables). The results these tests are shown in Table 4.5 and showed no significant differences in the general and communication satisfaction scores for the video recorded and the non-video recorded respondents. Thus the process of video recording the consultation does not appear to have affected patient satisfaction with the consultation. This is an important finding because some later analyses of satisfaction will be based on the video recorded observations only, so we need to be sure the process of video recording has not impacted on these observations.

Table 4.5: Comparison of General Satisfaction and Communication Satisfaction scores for being video recorded or not being video recorded

	General satisfaction		Communication satisfaction	
	Median (quartiles)	*p* value*	Median (quartiles)	*p* value*
Type of participant				
Video recorded participants	77.5 (70.0, 83.0)	*p* = 0.054	25.0 (24.0, 28.0)	*p* = 0.054
Non-video recorded participants	83.0 (79.0, 84.0)		27.5 (25.0, 29.0)	

*p value is from Mann-Whitney test

A comparative analysis was also made of the satisfaction scores of the video recorded patients / carers and the respective nurse practitioner they had seen with Kruskall-Wallis tests. This analysis was done to ascertain if there was any variation in patient/carer satisfaction scores (dependent variables) across the three different nurse practitioners (independent variables). The results of the respondents' general and communication satisfaction scores across the different nurse practitioners are presented in Table 4.6. No significant differences were noted for either general satisfaction or communication satisfaction on comparison of the three different nurse practitioners.

Table 4.6: Comparison of patient/carer general satisfaction and communication satisfaction scores for the three nurse practitioners

	General satisfaction		Communication satisfaction	
	Median (quartiles)	p value*	Median (quartiles)	p value*
Nurse Practitioner 1	73.0 (69.5, 84.0)		24.0 (21.5, 28.5)	
Nurse Practitioner 2	80.0 (68.0, 85.0)	p = 0.745	25.5 (24.0, 28.0)	p = 0.652
Nurse Practitioner 3	77.5 (72.0, 80.0)		28.0 (24.0, 28.5)	

*p value is from Kruskall-Wallis test

In order to gain a fuller picture of how satisfied patients and carers are after consulting with nurse practitioners it was also necessary to determine if there were any significant variations in satisfaction scores amongst different types of respondents. Accordingly once the overall satisfaction scores had been determined Mann-Whitney U tests were used to determine if there were any significant differences in respondents' satisfaction scores in relation to binary independent variables of gender, ethnicity, employment status, income level, educational level, and martial status. The independent variable of age group was not binary, so Kruskall-Wallis tests were used to determine if there were any significant differences in respondents' satisfaction scores in relation to age group. These analyses showed no significant differences were found in general or communication satisfaction scores in relation to gender, ethnicity, age group, employment status, household income, or educational level. An exception was marital status, which was not significantly different for general satisfaction, but for communication satisfaction those who were not living with a partner had a significantly higher (p=0.008) median communication satisfaction score.

Overall this analysis of the post-consultation satisfaction indicates that both general satisfaction and communication satisfaction scores were high and that this was a generally consistent trend across the respondents, with no significant variations occurring, with the exception of respondents in the living with partner category who had significantly lower communication satisfaction scores than those in the not living with partner category (single, divorced or separated). Furthermore no significant differences in satisfaction scores were attributed to participants consulting with the different nurse practitioners, or being video recorded or not being video recorded.

4.3.4 How do patients' and carers' expectations of consulting with nurse practitioners affect their subsequent evaluations of post-consultation satisfaction?

The respondents' satisfaction scores (dependent variables) were also compared with their pre-consultation expectations for the nurse practitioners utilising the advanced practice skills of history taking, clinical examination, medical investigations, diagnosis, prescribing, and onward referral (independent variables). A similar comparison was also made with patients' / carers' expectations for the nurse practitioners to discuss their case with a doctor. These comparisons were made to determine whether or not a relationship exists between patients' / carers' satisfaction and their pre-consultation expectations.

Mann-Whitney U tests were used to determine if there were any significant differences in respondents' satisfaction scores in relation to their pre-consultation expectations of what would happen during their consultation with the nurse practitioner. The results of the comparison of pre-consultation expectations and satisfaction scores are displayed in Table 4.7. The only pre-consultation expectation with a significant difference was for general satisfaction in relation to diagnosis expectations; the median general satisfaction score was significantly higher (p=0.043) for those with diagnosis expectations (median 82.0) than the median score for those not expecting the nurse practitioner to diagnose their problem (median 75.0).

From this analysis there is no evidence to suggest that those patients with lower expectations are more satisfied than patients with higher expectations. Hence it appears that the high levels of satisfaction with nurse practitioner consultations cannot simply be explained by patients having low expectations that have been exceeded.

Table 4.7: General satisfaction and communication satisfaction scores compared to pre-consultation expectations

Pre-consultation expectations	General satisfaction score				Communication satisfaction score			
	Yes response Median (quartiles)	No response Median (quartiles)	*p* value**	Points median score higher for a *Yes response*	Yes response Median (quartiles)	No response Median (quartiles)	*p* value**	Points median score higher for a *Yes response*
Expects history taking	81.0 (73.0, 84.0)	77.5 (72.0, 83.3)	*p* = 0.401	+3.5	27.5 (24.0, 29.0)	25.0 (24.0, 27.0)	*p* = 0.234	+2.5
Expects clinical Examination	81.0 (73.0, 84.0)	81.0 (74.5, 82.0)	*p* = 0.608	0	27.0 (24.0, 28.0)	24.5 (24.0, 29.0)	*p* = 0.696	+2.5
Expects medical investigations	81.5 (73.0, 84.0)	77.0 (72.0, 83.0)	*p* = 0.307	+4.5	27.0 (24.0, 29.0)	26.0 (24.5, 28.0)	*p* = 0.459	+1
Expects diagnosis	82.0 (77.0, 84.0)	75.0 (72.5, 82.0)	*p* = 0.043	+7	28.0 (24.0, 29.0)	25.5 (24.0, 28.0)	*p* = 0.205	+2.5
Expects prescribing	81.0 (73.5, 84.0)	73.0 (72.5, 76.5)	*p* = 0.114	+8	27.0 (24.0, 29.0)	24.5 (23.5, 27.0)	*p* = 0.150	+2.5
Expects doctor discussion*	81.0 (73.0, 84.0)	81.0 (73.0, 83.0)	*p* = 0.980	0	26.0 (24.0, 29.0)	28.0 (24.0, 28.0)	*p* = 0.759	-2
Expects onward referral	81.5 (73.0, 84.0)	79.0 (70.0, 82.0)	*p* = 0.151	+2.5	28.0 (24.0, 29.0)	25.0 (24.0, 27.5)	*p* = 0.142	+2

*Expects doctor discussion is not an advanced practice expectation
**p value from Mann-Whitney test

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4.3.5 How enabled are patients to manage their own health after consulting with a nurse practitioner?

As previously noted the PEI comprises six items.each with a possible score of 0-12. A higher score indicates more enablement (Wensing *et al.*, 2007). Each item has 4 possible responses, for example: "Not applicable", "Same or less", "Better", "Much better". The first response, "Not applicable" is not scored, and the other responses score 0, 1, and 2 respectively. The mean enablement score in this study was 6.08 (n = 51). The descriptive statistics for the enablement score are displayed in Table 4.8.

Table 4.8: Descriptive statistics for enablement score

Descriptive statistics	Enablement score (maximum possible 12)
Mean (standard deviation)	6.08 (3.40)
Median (quartiles)	6.0 (4.0, 8.0)
Skewness statistic	0.066

As with the satisfaction scores, in order to gain a fuller picture of how enabled patients and carers are to manage their own health after consulting with nurse practitioners, it was also necessary to determine if there was any significant variations in enablement scores. As the mean and median are close for enablement score and the skewness statistic is near to 0, this suggests a symmetric distribution and that using parametric tests that assume the data follow a normal distribution would be appropriate. Hence, independent samples *t*-tests were used to determine if enablement score (dependent variable) was influenced by independent variables such as demographic variables, being video recorded, and consulting with different nurse practitioners. An ANOVA *F* test was used to determine if there were any significant differences in respondents' satisfaction scores variability in relation to age.

Comparison of the mean enablement score for video recorded versus non-video recorded patients / carers shows no significant difference between the two groups (*p* = 0.425). This finding is similar to that of satisfaction, where the non-video recorded respondents had higher, but not significantly higher satisfaction scores. This similar finding for enablement provides further evidence that the video recording process did not have a subject-expectancy effect.

In relation to gender, ethnicity, age, employment, education, income and marital status there were no significant differences in mean enablement score.

A comparative analysis was also made of the mean enablement scores of the video recorded patients / carers and the respective nurse practitioner they had seen. This analysis was done to ascertain the extent of variability in enablement scores across the three different nurse practitioners. The highest mean enablement score was for those respondents who consulted nurse practitioner 2 who also achieved the highest mean general satisfaction score. However, the differences in mean enablement score across the nurse practitioners were small and were not statistically significant. These findings are displayed in Table 4.9.

Table 4.9: Respondents' mean enablement scores after consulting with one of the three nurse practitioners

Nurse Practitioners	Enablement mean (SD) score	ANOVA *F* test *p* value
Nurse Practitioner 1	5.44 (2.74)	
Nurse Practitioner 2	6.00 (2.94)	*p* = 0.909
Nurse Practitioner 3	5.50 (2.17)	

Overall this analysis of the post-consultation enablement indicates a highly enabled group of patients.

4.3.6 Do patients' and carers' expectations of consulting with nurse practitioners affect their subsequent evaluations of post-consultation enablement?

The patients' enablement scores (dependent variable) were compared with their pre-consultation expectations for the nurse practitioners utilising the advanced practice skills of history taking, clinical examination, medical investigations, diagnosis, prescribing, and onward referral (independent variables). A similar comparison was also made with patients' / carers' expectations for the nurse practitioners to discuss their case with a doctor. These comparisons were made to determine whether or not a relationship exists between respondents' post-consultation enablement and their pre-consultation expectations. Independent

sample *t*-tests were used to determine if there were any significant differences in respondents' enablement scores variability in relation to their pre-consultation expectations. The mean enablement scores for pre-consultation expectations are displayed in Table 4.10.

Table 4.10: Enablement scores compared to pre-consultation expectations

Pre-consultation expectations	Enablement Score			
	Yes response Mean (SD)	*No response* Mean (SD)	*p* values**	Points mean score higher for a *Yes* response
Expects history taking	6.23 (3.36)	5.14 (3.80)	*p* = 0.439	+1.09
Expects clinical Examination	6.20 (3.46)	5.00 (2.92)	*p* = 0.461	+1.20
Expects medical investigations	6.23 (3.57)	5.14 (1.95)	*p* = 0.439	+1.09
Expects diagnosis	6.39 (3.68)	5.15 (2.30)	*p* = 0.261	+1.24
Expects prescribing	6.29 (3.44)	5.00 (2.92)	*p* = 0.425	+1.29
Expects doctor discussion*	6.76 (3.68)	5.33 (3.06)	*p* = 0.142	+1.43
Expects onward referral	6.24 (3.62)	5.40 (2.32)	*p* = 0.488	+0.84

*Expecting doctor discussion is not an advanced practice expectation
**p value from independent sample t-test

As was also found with general satisfaction the advanced practice skill most traditionally associated with doctors, prescribing, was the pre-consultation expectation with the biggest difference in mean post-consultation enablement score for those who did and those who did not expect prescribing. However, as noted in Table 4.10 overall there were no significant differences in respondents' expectations for the occurrence of advanced practice activities in their consultations and their reported post-consultation enablement. So in this study patients' pre-consultation expectations do not appear to affect their subsequent evaluations of post-consultation enablement. However, whilst there are no significant differences in mean patient enablement score for any of the pre-consultation expectations, for all the suggested consultation activities the mean enablement score was higher for those who expected the activity to occur, than for those who did not expect the nurse practitioner to carry out this activity.

4.3.7 Do patient satisfaction and patient enablement after consulting with nurse practitioners have any associative relationship?

A correlational analysis of the satisfaction and enablement scores was performed, using Spearman's correlation coefficient, to ascertain if any associative relationship existed between the two outcome variables. This analysis showed a significant, small to moderate, positive correlation of 0.427 (p = 0.005) between general satisfaction and enablement, and a non-significant, small, positive correlation of 0.216 (p = 0.150) between communication satisfaction and enablement. This correlational analysis indicates a tendency for increased general satisfaction and enablement to occur together, so the more satisfied a patient/carer is they correspondingly feel more enabled. However, based on this data no judgement can be made about whether there is a causal relationship; that is whether satisfaction leads to enablement or vice-versa.

4.4 Analysis of the video recorded consultations

This section presents the results of the quantified frequency analysis of the video recorded consultations. Firstly the details of the participants and outcomes of the video recorded consultations are presented. This is then followed by analysis of the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations. Analyses of biomedical versus patient-centred styles of interaction are then presented. Finally styles of interaction in relation to patient satisfaction and enablement are analysed.

4.4.1 Descriptive characteristics of the participants of the video recorded consultations

This section presents overview details of the 30 video recorded consultations, each nurse practitioners had 10 consultations video recorded. The consultations were recorded in two separate appointment sessions each for Nurse practitioners 1 and 2, and three separate appointment sessions for Nurse practitioner 3. A mix of pre-booked (n=11) and same day (n= 19) appointment consultations were recorded for each nurse practitioner. Twenty of the consultations were for adult patients, and 10 were for children attending with carers, all of whom were mothers. All the nurse practitioners saw a mix of children and adults in their respective consultations.

Twenty-four of the patients/carers were women, and six of the patients were men. All of the carers were the mothers attending with the children. All the nurse practitioners saw patients across the age span, ranging from infants to older aged people. The age range of the patients was from 8-months old to 72 years old. Seven of the 10 child consultations were with young children aged under 5-years old. In relation to ethnicity 26 participants were white and four participants were BME. Aside from ethnicity, which is a locally-dependent characteristic, this patient profile is typical of the normal caseload of patients registered in a small-medium sized general practice, such as Lime Tree Way (Kelly and Stoye, 2014).

To ensure a complete understanding of the wide range of patients seen by the nurse practitioner participants a summary of the patients' demographics, appointment types, presenting problems and the consultation clinical outcomes for each of the three nurse practitioners are presented in Tables 4.11 to 4.13. In those tables the abbreviations 'URTI and 'UTI' respectively mean 'upper respiratory tract infection', and 'urinary tract infection'. A diverse range of presenting problems were seen and dealt with by the nurse practitioners, including both acute problems and ongoing problems. A key feature to note in relation to patients' presenting problems is that all the problems in the video recorded consultations were assessed and managed solely by the nurse practitioners themselves with no medical doctor intervention or support. Nineteen of the presenting complaints were acute problems such as infections and pain. Thirteen of the presenting complaints were long term conditions such as hypertension or eczema. Ten patients presented with a mix of two or more acute problems / long term conditions. Eight prescriptions were issued of which three were repeat issues and five were acute issues. Nine onward referrals were made to other clinical services, such as health visiting, physiotherapy, or medical specialists.

Table 4.11: Summary details of patients seen by Nurse Practitioner 1

Biographical details of each patient / carer	Consultation appointment type	Presenting problems	Consultation clinical outcomes
P 1.1, adult, 24 years old, female, White British, young child present	Pre-booked	Depression, related medication review	Repeat script, further review appointment
P 1.2, child, 8 months old, white, mother present	Same day	Fever, teething	Self-care advice
P 1.3, adult, 62 years old, male, white British	Pre-booked	Medication request, tiredness	Repeat script, blood test, self-care advice
P 1.4, child, 1 year old, white Eastern European, mother present	Pre-booked	Eczema, eye infection, feeding problems	Script for emollients, self-care advice, refer to health visitor
P 1.5, adult, 55 years old, male, white British, no other present	Same day	Ear pain	Script for antibiotics, self-care advice
P 1.6, adult, 40 years old, white British, female, no other present	Same day	Sore throat, depression review	Self-care advice, repeat script
P 1.7, child, 1 year old, white Eastern European, mother present	Same day	Cough / URTI	Reassurance, self-care advice
P 1.8, child, 3 years old, white British, mother present	Same day	Cough / URTI	Reassurance, self-care advice
P 1.9, child, 11 years old (learning disabilities), Asian other, mother present	Same day	Infected toenail	Script for antibiotics, dressing, self-care advice
P 1.10, adult, 68 years old, white British, female, no other present	Same day	Skin lesion, toe problem	Dermatology referral

Table 4.12: Summary details of patients seen by Nurse Practitioner 2

Biographical details of each patient / carer	Consultation appointment type	Presenting problems	Consultation clinical outcomes
P 2.1, adult, 38 years old, male, white British, no other present	Pre-booked	Hypertension review	Investigations, self-care advice, follow-up
P 2.2, adult, 72 years old, male, white British, no other present	Pre-booked	Swollen eyelid	Script for antibiotics, self-care advice, see Optometrist
P 2.3, adult, 47 years old, female, white British, no other present	Pre-booked	Achilles tendonitis, menopausal symptoms	Reassurance, self-care
P 2.4, adult, 41 years old, female, white British, young children present	Pre-booked	Breast concerns, anxiety, back pain	Reassurance, referral to mental health service, refer physiotherapy
P 2.5, adult, 19 years old, white British, female, no other present	Same day	Abdominal pain, UTI	Script for antibiotics, reassure
P 2.6, adult, 35 years old, male, white British, no other present	Same day	Sore throat	Script for antibiotics
P 2.7, adult, 39 years old, female, white British, no other present	Same day	Dental abscess	Script for antibiotics, see dentist
P 2.8, adult, 62 years old, female, white British, no other present	Same day	Dizzy, high cholesterol	Reassurance, refer neurology, script statin
P 2.9, child, 1 year old, white British, Italian mother present	Same day	Fever, URTI	Self-care advice
P 2.10, infant, 9 months old, white British, mother present	Same day	Mouth problems, oral candida	Script for oral anti-fungal, self-care advice, refer health visitor

Table 4.13: Summary details of patients seen by Nurse Practitioner 3

Biographical details of each patient / carer	Consultation appointment type	Presenting problems	Consultation clinical outcomes
P 3.1, child, 11 years old, male, Pakistani, mother present	Same day	Abdominal pain, nausea and vomiting	Script for paracetamol, self-care advice
P 3.2, adult, 24 years old, male, white British, no other present	Same day	Asthma, cough, URTI	Script for antibiotics, self-care advice
P 3.3, adult, 52 years old, female, Black Caribbean, no other present	Same day	Review cough	Reassurance, self-care advice
P 3.4, child, 4 years old, white Eastern European, mother present	Same day	Fever, URTI	Self-care advice
P 3.5, adult, 59 years old, white British, female, no other present	Same day	Infected sebaceous cyst	Script for antibiotics, self-care advice
P 3.6, adult, 51 years old, female, white British, no other present	Pre-booked	Hypertension review, skin lesion	Lifestyle advice, observe lesion
P 3.7, adult, 22 years old, female, white British, no other present	Pre-booked	Depression review	Repeat script, review
P 3.8, adult, 35 years old, female, white Eastern European, no other present	Pre-booked	Request termination	Referral to pregnancy advisory service
P 3.9, child, 6 years old, Asian, mother present	Pre-booked	Medication review - eczema	Script for emollient, self-care advice
P 3.10, adult, 72 years old, white British, female, husband present	Same day	Back pain post-cystoscopy, superficial pressure ulcer	Script for analgesia, self-care advice, review

4.4.2 What are the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations?

The discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations were able to be determined in RIAS by analysing a range of quantified frequency coded interactions. These quantified frequencies included: descriptive comparative analyses of the most frequently occurring RIAS codes of observed interactions amongst the nurse practitioners and patients / carers; analysing frequency rates of participant question-asking; and noting which group of participants dominated interactions in the nurse practitioner consultations.

The RIAS coding comprised a large amount of individually coded interactions spread over 40 discrete coding categories. The top ten most frequently coded interactions for nurse practitioners compared with patients / carers are presented in Table 4.14, with the ranking based on the mean frequency counts for each individual code.

Table 4.14 shows that the nurse practitioners and patients / carers both integrated high levels of the patient-centred category code 'Showing Agreement or Understanding' in their consultations, with this category being the most frequently coded interaction for nurse practitioners and patients / carers. Another patient-centred category code, 'Back-channel' responses, which can be interpreted as a sub-set of the larger Agreement category, as an indicator of a "clinician's sustained interest, attentive listening or encouragement" when a patient / carer is speaking, formed the second most frequently coded component of the nurse practitioners' interactions (Roter, 2011, p.25). These high levels of expressed agreement occurring for both types of participants can be interestingly contrasted with the lack of coding for 'Shows Disapproval - Direct (Disagree)', which represents indications of "disapproval, criticism, complaint, rejection, coolness or disbelief directed expressly to the other person present", as that code, alongside a variant of disagreement, 'Shows Criticism – General', which is "directed toward another not involved in the exchange", were not coded in any consultation for either nurse practitioners or patients / carers (Roter, 2015, pp. 18-19).

For both nurse practitioners and patient / carers the patient-centred category code of 'Personal Remarks, Social Conversation' were also a frequently occurring coded

interaction, being conjointly ranked as the third most frequently coded interaction. In RIAS Personal Remarks and Social Conversation relate to "greetings, initiating contact through friendly statements that are part of a formal greeting, return of friendly gestures and greetings, and goodbyes … [and also] … conversation on weather, sports or any non-medical or social topic of general health that is not related directly to the discussion of general health" (Roter, 2011, p.10). For the patients / carers the biomedical category code, 'Gives Information-Medical Condition' was also a top three frequently coded interaction, which was coded when patients / carers were seen to be giving "…statements of fact or opinion relating…" to presenting medical problems (Roter, 2011, p.10). For nurse practitioners half of the top ten most frequently coded interactions were in the patient-centred category, and the other half were biomedical categorised interactions. For patients / carers six of the top ten most frequently coded interactions were patient-centred category interactions.

Table 4.14: Top ten most frequently coded RIAS interaction categories of nurse practitioners compared with patients / carers

Nurse Practitioners			Patients / carers		
RIAS coded interaction Biomedical / Patient-centred categories	Mean (SD)	Median (quartiles)	RIAS coded interaction Biomedical / Patient-centred categories	Mean (SD)	Median (quartiles)
Show agreement or understanding	14.2 (12.3)	10.0 (5.7,17.7)	Show agreement or understanding	32.1 (17.5)	27.5 (21, 40.2)
Back-channel responses*	13.0 (12.9)	9.5 (5, 15.2)	Gives information - medical condition	21.1 (11.7)	17 (14.5, 27.2)
Personal remarks, Social conversation	10.5 (5.3)	8.0 (6, 15.2)	Personal remarks, Social conversation	9.6 (5.1)	9.0 (6.0, 13)
Gives information - medical condition	10.1 (6.7)	9.0 (5, 14)	Gives information - therapeutic regimen	5.8 (5.19)	4 (2.0, 11)
Counsels medical / therapeutic regimen*	9.9 (6.6)	10.0 (5.7, 14)	Gives information - psychosocial	5.7 (6.8)	3.5 (1.7, 6.2)
Gives orientation or instructions	7.43 (5.2)	7.0 (3.7, 10.2)	Laughs, tells jokes	3.83 (4.0)	3.0 (1.7, 5.2)
Gives information - therapeutic regimen	5.0 (6.1)	4 (0.7, 7.0)	Shows concern or worry	2.9 (2.6)	2.0 (0.7, 4.2)
Reassures, encourages or shows optimism	5.0 (5.2)	3 (0.7, 9.5)	Gives information - lifestyle	2.6 (5.2)	0.0 (0.0, 2.2)
Asks open-ended questions about medical condition	4.4 (3.0)	4 (2.0, 6.2)	Gives information - other	2.3 (3.1)	0.0 (0.0,1.0)
Asks close-ended questions about medical condition	4.2 (3.96)	3 (2.0, 6.0)	Reassures, encourages, or shows optimism	1.2 (2.0)	0.0 (0.0, 1.0)

*RIAS code is only for coding clinician interactions, not patient/carer interactions

In Table 4.14, which compares the nurse practitioners' and patients' / carers' frequency occurrences of the discrete patient-centred category RIAS codes, shows that the patients' / carers' interactions were coded for significantly higher levels of 'Shows Agreement or Understanding', which is a code representing "signs of agreement or understanding [and] includes conceding a point, social amenities and apologies that do not indicate particular concerns for the other's feelings" (Roter, 2011, p. 24). A significantly higher (p = 0.023) level of patient / carer agreement still persists if the coding frequencies of the Shows Agreement or Understanding and its clinician sub-set of Back-channel responses are combined together for the nurse practitioners (median 24.0, quartiles 15.0, 36.0), and compared against the Shows Agreement or Understanding coding frequencies for the patients / carers (median 27.5, quartiles 21.0, 38.0). Both groups of participants were seen to be using comparatively high levels of interactions coded as Personal Remarks and Social Conversation. However, the patients / carers gave significantly more psychosocially coded information, which includes "statements that relate to psychosocial concerns or problems, including stress, feelings, emotions, general state of mind, philosophical outlook, values and beliefs" (Roter, 2011, p. 44). The nurse practitioners were coded significantly more for the code of 'Reassures, Encourages, or Shows Optimism', which "includes statements indicating optimism, encouragement, relief of worry or reassurance" (Roter, 2011, p. 14). The patients / carers were coded significantly more for the code 'Laughs, Tells Jokes', which includes friendly jokes, banter, and laughter.

Following on from that initial comparative analysis, the Wilcoxon Signed Rank test was used to see if there was a significant comparative difference in the total frequency occurrences of the discrete RIAS codes arising from the nurse practitioners and patients / carers, for both patient-centred and biomedical category interactions. This comparative analysis was only possible with some of the RIAS coding categories as either some of the categories can only be coded for one type of consultation participant (clinician or patient / carer), or some categories had only been coded for one of the consultation participant types. Also two categories relating to criticism and disagreement had not been coded at all for either consultation participant types. The Wilcoxon Signed Rank Test was used as the discrete RIAS codes were matched group nominal data arising from the same consultations where the interactions of participants had been coded. These comparative analyses are presented in Table 4.15 for patient-centred category interactions and Table 4.16 for biomedical category interactions. The combined mean score for each type of coded

interaction was used in Tables 4.15 and to 4.16 to present the coded consultation categories in descending rank-order frequency.

Table 4.15 compares the nurse practitioner and patient / carer use of RIAS coded patient-centred interactions within the same consultation (so a matched pairs analysis). This analysis reveals a significantly higher use of "shows agreement or understanding" (p<0.001) and of "laughs, tells jokes" (p<0.001) and of "shows concern or worry" (p=0.001) by the patient/ carers than by the nurse practitioners. The nurse practitioners make significantly greater use of "Asks open-ended questions - medical condition" (p<0.001) and "Reassures, encourages. or shows optimism" (p<0.001). Whilst Table 4.15 does show other significant differences, the frequency of use of some of the other RIAS coded patient-centred interactions is very low. For example, whilst the nurse practitioners made significantly more 'Empathy Statements', "that paraphrase, interpret, name or recognize the emotional state of the other person present during the visit" (Roter, 2011, p. 20), this was at a low frequency, which Roter (2011) notes is normal as it is typically a low frequency coded category. The nurse practitioners and the patients / carer both showed no significant differences for the codes of 'Show Approval – Direct' and 'Gives Compliment – General', which are related codes for "compliments, expressions of approval, gratitude, praise, reward, respect or admiration" directed respectively to the other person present or to someone else not present (Roter, 2011, p. 15).

Table 4.15: Comparisons of matched pairs of nurse practitioner and patient/carer RIAS coded patient-centred category interactions

RIAS coded patient-centred interaction category	Nurse Practitioners and Patients / Carers	Nurse Practitioners Coding	Patients / Carers Coding	
	Combined mean (SD) coded frequency	Median (quartiles)	Median (quartiles)	p-value*
Shows agreement or understanding	46.3 (23.5)	10.0 (5.7, 17.7)	27.5 (21.0, 40.2)	<0.001
Personal remarks, social conversation	20.1 (9.2)	8.0 (6.0, 15.2)	9.0 (6.0, 13.0)	0.325
Gives information - psychosocial	6.2 (7.6)	0.0 (0.0, 0.0)	3.5 (1.7, 7.2)	<0.001
Reassures, encourages, or shows Optimism	6.2 (5.9)	3 (0.7, 9.5)	0.0 (0.0, 2.0)	0.001
Laughs, tells jokes	5.7 (5.6)	1.0 (0.0., 3.0)	3.0 (1.7, 5.2)	0.003
Asks open-ended questions – medical condition	5.1 (3.4)	4.0 (2.0, 6.2)	0.0 (0.0, 1.0)	<0.001
Shows concern or worry	3.4 (2.7)	0.0 (0.0, 0.0)	2.0 (0.7, 4.2)	0.001
Asks open-ended questions – therapeutic regimen	2.4 (2.1)	1.0 (0.0, 3.0)	0.0 (0.0, 1.2)	0.018
Empathy statements	0.9 (1.3)	0.0 (0.0, 2.0)	0.0 (0.0, 0.0)	0.001
Shows approval – direct	0.9 (2.0)	0.0 (0.0, 0.2)	0.0 (0.0, 0.0)	0.336
Asks open-ended questions - psychosocial	0.7 (1.3)	0.0 (0.0, 1.0)	0.0 (0.0, 0.0)	0.002
Asks open-ended questions - other	0.7 (1.5)	0.0 (0.0, 0.0)	0.0 (0.0, 1.2)	0.090
Asks open-ended questions - lifestyle	0.6 (1.4)	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.072
Gives compliment – general	0.2 (0.6)	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.317

*p value from Wilcoxon Signed Rank Test

Table 4.16, which compares the nurse practitioners' and patients' / carers' frequency occurrence of the discrete biomedical category RIAS codes, shows that the patients' / carers' interactions were coded for significantly higher levels of giving information on both medical conditions and lifestyles. The nurse practitioners were coded significantly more frequently for 'Gives Orientation, Instructions', which "tell the other person what is about to happen, what is expected during the interview or exam, or serve to orient the other to the major topics of discussion or the physical flow of the [consultation]" (Roter, 2011, p. 27). Relatedly the nurse practitioners also used significantly more 'Transition Words', which are "sentence fragments that indicate movement to another topic or area of discussion, train of thought or action" (Roter 2011, p. 26). The nurse practitioners were also coded significantly more frequently for the code of 'Paraphrase / Checks for Understanding', which represents "mechanisms by which the speaker re-states or reflects back information he or she has just been told by the other for the purpose of checking for accuracy of information, or for confirming a shared understanding of the facts or issues being discussed" (Roter, 2011, p. 28). There were no significant differences between nurse practitioner and patients / carers in the coding frequencies of 'Gives Information – Therapeutic Regimen', 'Gives Information – Other', and 'Asks for Understanding'.

Table 4.16: Comparisons of matched pairs of nurse practitioner and patient/carer RIAS coded biomedical category interactions

RIAS coded biomedical interaction category	Nurse Practitioners and Patients / Carers	Nurse Practitioners Coding	Patients / Carers Coding	
	Combined mean (SD) coded frequency	Median (quartiles)	Median (quartiles)	*p*-value*
Gives information – medical condition	31.2 (14.9)	9.0 (5.0, 14.0)	17.0 (14.5, 27.2)	<0.001
Gives information – therapeutic regimen	10.8 (8.0)	4.0 (0.7, 7.0)	4.0 (2.0, 11.)	0.332
Gives orientation, instructions	8.6 (5.8)	7.0 (3.7, 10.2)	0.0 (0.0, 0.0)	<0.001
Gives information - other	4.5 (5.3)	0.0 (0.0, 4.2)	1.0 (0.0, 4.0)	0.431
Transition words	3.8 (2.9)	3.0 (1.0, 4.0)	0.0 (0.0, 1.0)	<0.001
Gives information - lifestyle	3.7 (7.5)	0.0 (0.0, 0.2)	0.0 (0.0, 2.2)	0.007
Paraphrase / Checks for understanding	2.7 (2.5)	1.5 (0.75, 4.0)	0.0 (0.0, 1.0)	<0.001
Asks for understanding	0.5 (1.1)	0.0 (0.0, 1.0)	0.0 (0.0, 0.0)	0.257

p value from Wilcoxon signed ranks test

Further determining the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations the RIAS coding allows for specific identification of question-asking by the respective participants of a consultation. In this study patients / carers were found to have asked 19.9% of questions, whilst the nurse practitioners asked 80.1% of questions. The mean frequency of question-asking for the patients / carers was 4.0 (SD 3.42) questions per consultation, and for the nurse practitioners it was 16.2 (SD 8.6) questions per consultation. The full descriptive statistics for the question-asking frequency rates are displayed in Table 4.17.

Table 4.17: Question-asking frequency rates amongst the consultation participants

Descriptive statistics	Patients/carers	Nurse practitioners
Mean (SD)	4.0 (3.42)	16.2 (8.60)
Median (quartiles)	4.0 (2.0,5.0)	15.0 (9.0, 22.0)
Skewness statistic	1.223	0.521

A Wilcoxon Signed Ranks test was used to determine if there was any significant difference in the median question-asking amongst the patients / carers and nurse practitioners. The specific hypotheses tested are:

H0: Median question asking by patients / carers is equal to median question asking by nurse practitioners

H1: Median question asking by patients / carers is not equal to median question asking by nurse practitioners

On comparison of the question-asking rates a significant difference was found ($p < 0.001$) amongst the participants, with the nurse practitioners asking significantly more questions than the patients/carers. This finding indicates the nurse practitioners asked significantly more questions than the patients/carers. However the patients/carers generated 19.9% of the total questions so they were able to ask a much higher proportion of questions than has been identified in previous studies of patient question-asking rates in consultations. This finding suggests that the nurse practitioners in the study were either relinquishing or sharing some of the negotiation of control and power in their consultations with the patients/carers, through creating opportunities and space for patient / carer participation by facilitating patient / carer question-asking. Nurse practitioners are generating 80.1% of questions in the consultation which is still quite a high proportion, but along with the significant

amount of task-focused interactions used by the nurse practitioners, high-levels of question-asking are necessary to provide safe clinical care. Commonly used examples of such questioning are enquiring about patients' past medical histories, medications usage, and allergies, which are all crucial components of a clinical assessment. These higher rates of patient question-asking in the observed consultations potentially provide evidence of increased patient-centred style interactions in consultations as identified by Peräkylä *et al.* (2007), based on their premise of more question-asking by patients or carers being demonstrative of increased levels of participatory interactions.

Aside from analysing rates of question-asking in consultations the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations was further analysed by considering whether nurse practitioners or patient / carers were more verbally dominant in consultations. A binomial test was used to examine verbal dominance in the consultations. The hypotheses tested are

H0: Patients / carers and nurse practitioners are equally likely to be verbally dominant

H1: Patients / carers are not equally likely to be verbally dominant.

The results of this binomial analysis are presented in Table 4.18.

The nurse practitioners were verbally dominant in 60.0% (n=18) of the video recorded consultations. However, a one-sample Binomial test showed that in the video recorded consultations neither group of participants (nurse practitioner or patient / carer) was significantly more verbally dominant than the other.

Table 4.18: Analyses of verbal dominance amongst the consultation participants

Verbal dominance	Number (%) of consultations	P value
Patient / carers verbally dominant	12 (40.0%)	0.362*
Nurse Practitioner verbally dominant	18 (60.0%)	

*p value is from Binomial test

Chi-square χ^2 tests were used to investigate possible association between the interaction characteristic of verbal dominance and appointment types, patient / carer gender, and child or adult consultations; no significant associations were found.

4.4.3 Do patient-centred styles of interaction occur more frequently than biomedical styles of interaction in nurse practitioner consultations?

A Binomial test was used to answer the question of whether patient-centred styles of communication occur more frequently than biomedical styles of communication in nurse practitioner consultations. The hypotheses tested are

H0: The proportion of patient-centred interactions is equal to the proportion of biomedical interactions

H0: The proportion of patient-centred interactions is not equal to the proportion of biomedical interactions.

The result of this binomial test is presented in Table 4.19 and showed that a significantly higher (p=0.005) proportion of the video recorded consultations comprised patient-centred interactions than biomedical interactions.

Table 4.19: Binomial analysis of patient-centred interaction styles versus biomedical interaction styles

Interactions style	Number (%) of consultations	P value
Patient-centred interactions	23 (76.7%)	$p = 0.005$
Biomedical interactions	7 (23.3%)	

Chi-square χ^2 tests were used to investigate possible association between characteristics of the interaction styles of patient-centred and biomedical and appointment types, patient / carer gender, and child or adult consultations. There was no significant association between the interaction styles of patient-centred and biomedical and any of the variables of appointment type, patient / carer gender, or adult / child consultation.

In overview these analyses of patient-centred versus biomedical interaction style reveal patient-centred styles of interaction do occur significantly more frequently than biomedical styles of interaction in nurse practitioner consultations, and that furthermore there is no significant variability in the occurrence of those styles of interactions in the different types of consultations sampled.

4.4.4 Do nurse practitioners and patients comparatively use similar frequencies of patient-centred and biomedical interaction styles in their consultations?

The comparative frequency analysis of the occurrence of patient-centred versus biomedical style interactions in the video recorded consultations was extended by also analysing the participants' overall comparative usage of patient-centred style and biomedical style interactions across the different video recorded consultations. This further analysis was done by summing their respective usage frequencies of both types of interaction, and then comparing the consultation sum for each interaction style between the nurse practitioners and patients / carers using a Wilcoxon Signed Rank test which allows for the pairing of patient / carer and nurse practitioner within each consultation.

On analysis of patient-centred interactions no significant difference (p = 0.150) was noted in relation to the frequency of usage of this style of interaction amongst the nurse practitioners (median 53, quartiles 36, 65) compared to patients / carers (median 54, quartiles 41, 78). This finding suggests that the nurse practitioners and patients / carers interacted in a patient-centred style with similar frequencies during their consultations.

On comparison of biomedical interactions a significant difference (p < 0.001) was noted in the frequency of usage of this style of interaction by nurse practitioners compared to patients / carers. The nurse practitioners (median 43, quartiles 34, 64) used biomedical interactions significantly more frequently than the patients / carers (median 32, quartiles 25, 47). This finding can be probably explained by the necessity for the nurse practitioners to ask biomedical task-focused questions, conduct examinations, and give biomedical task-focused information in order to provide clinically safe care. In contrast the main biomedical task-focused consultation activity for patients / carers was giving information about presenting problems.

This comparative analysis was augmented by also noting if nurse practitioners and patients / carers correspondingly used the same styles of interaction in their individual consultations, the results of which are displayed in Table 4.20. A one sample binomial test showed no significant differences (p = 0.099) in the proportion of the video recorded consultations comprising either congruent or incongruent interactions. In relation to the observed congruency of consultation interactions

66.7% (n=20) of the 30 video recorded consultations comprised congruent interactions where both participants interacted in the same style, with 80.0% (n=16) of those congruent consultations being patient-centred, and 20.0% (n=4) having a biomedical focus. 33.3% (n=10) of the video recorded consultations comprised incongruent interactions where the participants both predominantly interacted in different styles. Of these 10 incongruent consultations 70.0% (n=7) comprised consultations where the nurse practitioners used a biomedical interaction style, whilst the patients/carers used a patient-centred interaction style, and the other incongruent consultations (30.0% / n=3) comprised the nurse practitioners interacting in a patient-centred style whilst their patients used a biomedical style. A Chi-square χ^2 test showed no association between interactions congruency and the occurrence of either patient-centred or biomedical focused interactions (p = 0.657).

Table 4.20: Analysis of interactions congruency amongst the consultation participants

Interaction congruency	Number (%) of consultations	P value
Congruent interactions	20 (66.7%)	0.099*
Incongruent interaction	10 (33.3%)	

*p value is from Binomial test

Chi-square χ^2 tests were used to investigate possible association between the characteristic of interactions congruency and appointment types, patient / carer gender, and child or adult consultations. There was no significant association between the RIAS measured categories of interaction congruency and any of the variables of appointment type, patient / carer gender or adult / child consultation.

4.4.5 Where in their consultations do nurse practitioners and their patients use either patient-centred or biomedical style interactions?

The frequency occurrence of either patient-centred style or biomedical style interactions in the five different interaction phases of the video recorded consultations was analysed to determine where those interaction styles were mostly used by the interactants. These interaction phases are: opening (opening of the consultation); history (history taking), examination (clinical examination); counsel (diagnostic / therapeutic decision-making); and closing (closing of the consultation). For each interaction phase three Wilcoxon signed rank tests were performed. The

first test compared the frequency of patient-centred and biomedical interactions. The second compared the frequency of use of patient-centred interaction by patients / carers with that of nurse practitioners. The third compared the frequency of use of biomedical interactions by patients/ carers with that of nurse practitioners. The Wilcoxon Signed Rank test is appropriate for paired data and the pairing is because each consultation has a patient-centred interaction count and a biomedical interaction count which are from the same consultation.

Table 4.21 shows the use of patient-centred style interactions and biomedical style interactions for each phase of the consultation and also presents the results of the Wilcoxon signed rank test comparing use of the two styles in each phase. This indicates that in the opening phase of the video recorded consultations patient-centred style interactions significantly predominated over biomedical style interactions. This finding is expected as the typical types of interaction occurring in this first phase were personal remarks or social conversation, and open-ended questions for establishing the agenda of consultations. In the history taking phase, and exam phase of the consultations no significant differences in the frequency of usage of either patient-centred or biomedical style interactions were found. In the counselling phase of the consultation there is significantly greater use of patient-centred interactions than biomedical style interaction, though both have high use in this phase of the consultation. In the closing phase of the consultations patient-centred interactions occurred significantly more frequently than biomedical interactions. This finding is expected as examples of frequently used RIAS-coded interactions in the closing phases were personal remarks, social conversation, and showing agreement or understanding, with minimal task-focused interactions occurring.

Table 4.21: Comparative frequency analysis of patient-centred versus biomedical interactions in the different interaction phases of the video recorded consultations

Consultation phases	Patient-centred style interaction frequency Median (quartiles)	Biomedical style interactions frequency Median (quartiles)	Wilcoxon Signed Rank test p-values
Opening	7.0 (5.0, 9.0)	0.0 (0.0, 1.0)	<0.001
History	32.5 (17.0, 39.0)	30.5 (20.0, 43.0)	0.940
Exam	10.5 (5.0, 24.0)	12.0 (3.0, 16.0)	0.212
Counsel	39.5 (28.0, 57.0)	32.0 (25.0, 49.0)	0.002
Closing	10.5 (8.0, 16.0)	0.0 (0.0, 1.0)	<0.001

Table 4.22 shows the comparative frequency of patients / carers and nurse practitioner use of both patient-centred and biomedical interactions in each phase of the consultation. In the opening phase there were no significant differences in the frequency of usage of either patient-centred style interactions amongst nurse practitioners and patients / carers. Both types of participant used similar amounts of patient-centred interactions in the opening phases of the consultations. Neither patients / carers nor nurse practitioners made much use of biomedical interactions in the opening phase of the consultation.

In the history phase nurse practitioners were significantly more likely to use patient-centred style interactions than the patients / carers. The RIAS coded patient-centred style interactions commonly used by the nurse practitioners in the history phases of the consultations were showing agreement or understanding, and open-ended questions about presenting problem(s). In the history phase patients / carers were significantly more likely to use biomedical style interactions than the nurse practitioners. The RIAS coded biomedical style interactions commonly used by the patients / carers in the history phases of the consultations were giving information about medical conditions, therapeutic regimens or lifestyles.

In the exam phase there was no significant difference in the frequency of usage of patient-centred style interactions amongst the nurse practitioners compared to the patients / carers. However in the exam phase nurse practitioners were significantly more likely to use biomedical style interactions than the patients / carers. The RIAS coded biomedical style interactions commonly used by the nurse practitioners in the exam phases of the consultations were giving orientation or instructions, and asking for permission.

In the counsel phase of the consultations the patients / carers used significantly more patient-centred style interactions than the nurse practitioners. Common examples of the RIAS-coded patient-centred style interactions used by the patients / carers were showing agreement or understanding, or giving psychosocial information. In the counsel phase of the consultations the nurse practitioners were significantly more likely to use biomedical style interactions than the patients / carers. Common examples of the RIAS-coded biomedical interactions used by the nurse practitioners were counselling regarding medical / therapeutic regimens, and asking or checking for understanding.

In the closing phases of the consultations no significant differences were found between the nurse practitioners and patients / carers for their respective usage of either patient-centred or biomedical interaction styles.

Table 4.22: Analysis of the comparative frequency of patient / carer and nurse practitioner use of patient-centred interactions and of biomedical interactions in the different interaction phases of the video recorded consultations

Consultation interaction phases	Patient-centred style interactions			Biomedical style interactions		
	Patient/carer frequency of use Median (quartiles)	Nurse Practitioner frequency of use Median (quartiles)	p-value*	Patient/carer frequency of use Median (quartiles)	Nurse Practitioner frequency of use Median (quartiles)	p-value*
Opening	3.0 (3.0, 4.0)	4.0 (3.0, 5.0)	0.441	0.0 (0.0, 0.0)	0.0 (0.0, 1.0)	0.323
History	9.0 (6.0, 18.0)	20.5 (13.0, 25.0)	<0.001	19.0 (14.0, 26.0)	9.5 (6.0, 16.0)	<0.001
Exam	4.5 (3.0, 10.0)	4.0 (1.0, 9.0)	0.628	2.0 (0.0, 6.0)	8.5 (0.0, 13.0)	0.001
Counsel	25.0 (16.0, 33.0)	16.0 (9.0, 23.0)	0.001	7.0 (4.0, 12.0)	22.0 (17.0, 35.0)	<0.001
Closing	5.5 (4.0, 10.0)	4.0 (3.0, 7.0)	0.067	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.161

*p value from Wilcoxon Signed Rank test

4.4.6 Do interactions styles used in nurse practitioner consultations affect subsequent patient satisfaction and enablement after consulting with nurse practitioners?

The RIAS coding outcomes of the observed interaction styles of verbal dominance, patient-centred versus biomedical interactions, and interactions congruency (independent variables) were also analysed in relation to the satisfaction scores (dependent variables) using Mann-Whitney U tests. This analysis was also done for the enablement score (dependent variable) using Independent-sample t-tests. The analyses were completed to see if there were any significant differences in the satisfaction and enablement scores in relation to interaction style. Only the 26 patient / carers who completed the questionnaires in addition to having a video-recorded consultation could be included in this analysis. These results of these analyses of post-consultation satisfaction and enablement are presented in Table 4.23.

There was no significant difference in general satisfaction score or communication satisfaction score or enablement score for any of the three interaction style variables considered in Table 4.23. Overall these analyses show a lack of significant variability in satisfaction and enablement scores in relation to the observed interaction styles, thus indicating no effects from those interaction styles based on the analyses of the small sub-sample of 26 patient / carers who completed the questionnaires in addition to having a video recorded consultation.

Table 4.23: Analysis investigating whether different interactions styles affect general and communication satisfaction scores and enablement score

RIAS variables	General satisfaction score		Communication satisfaction score		Enablement score	
	Median (quartiles)	p-value*	Median (quartiles)	p-value*	Mean (SD)	p-value**
Patients / carers verbally dominant	80.0 (68.0, 84.0)	0.930	25.0 (24.0, 28.5)	0.638	6.45 (2.38)	0.136
Nurse practitioners verbally dominant	77.0 (73.0, 80.0)		26.0 (22.0, 28.0)		4.82 (2.56)	
Patient-centred interactions predominated	76.0 (68.0, 83.0)	0.763	25.0 (23.5, 28.5)	0.723	5.18 (2.34)	0.185
Biomedical interactions predominated	78.5 (73.0, 83.0)		25.5 (24.0, 28.0)		6.83 (2.93)	
Congruent interactions occurred	80.0 (70.0, 84.0)	0.749	24.0 (23.0, 28.5)	0.619	5.50 (2.54)	0.577
Incongruent interactions occurred	78.0 (75.5, 81.5)		27.0 (25.0, 27.5)		6.16 (2.31)	

*p value from Mann-Whitney test
**p value from t-test

4.4.7 What is the mean time length of nurse practitioner consultations?

The mean video recorded consultation time length was 10.97 minutes (standard deviation 4.13). There was one outlying consultation with an extended consultation time of 22.9 minutes. The extended consultation occurred with nurse practitioner 2 and was for a patient presenting with three different problems. The descriptive statistics for consultation time length are presented in Table 4.24 and Figure 4.1 shows the distribution of consultation times.

Table 4.24: Descriptive statistics for consultation time length

Descriptive statistics	Consultation time length
Mean (SD)	10.97 (4.13)
Median (Quartiles)	10.1 (8.2, 13.7)
Skewness statistic	0.857

Figure 4.1: Histogram of consultation time lengths
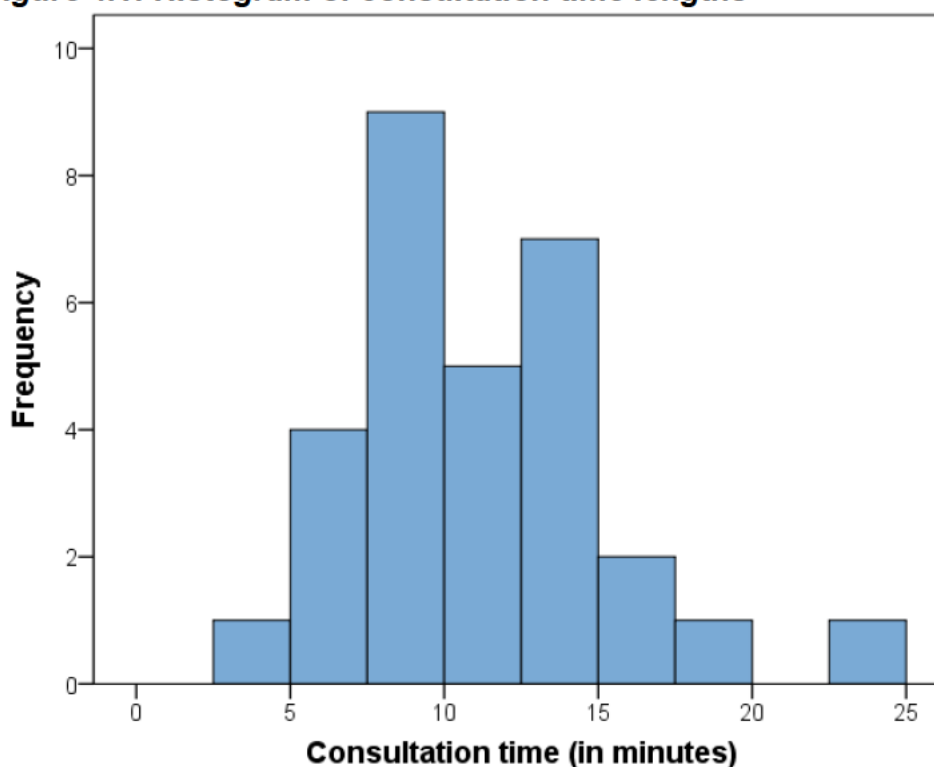
Mann-Whitney U tests were used to determine if there was any significant difference in consultation time length (dependent variable) in relation to: consultation appointment types, patients' / carers' gender; and child and adult consultations (independent variables). The allocated appointment slot times of the two different

types of consultations, were 10 minutes long for same day slots, and 15 minutes long for pre-booked appointments. Table 4.25 shows that median time length of pre-booked consultations was 13.4 minutes (quartiles 9.3, 15.0), and for same day consultations was 9.3 minutes (quartiles 7.8, 12.4). Pre-booked consultations were found to be longer, but not significantly so, than same day consultations (p = 0.053). This finding closely matches the allocated time slots of the two appointment types, and indicates that overall the nurse practitioners were generally adhering to the designated time lengths for the different appointment types.

There was no significant difference in the median consultation time length in relation to gender or whether the appointment was for a child or adult, see Table 4.25.

4.4.8 Does style of interaction affect the length of the consultation?

Mann-Whitney U tests were also used to see if there was any relationship between consultation time length (dependent variable) and the interactions styles of: participants' verbal dominance, the occurrence of patient-centred versus biomedical interactions; and consultation interactions congruency (independent variables). The results are given in Table 4.25. In relation to participants' verbal dominance, consultations where patients / carers dominated the interactions had a longer median duration than consultations where the nurse practitioners dominated interactions, but the difference in median was not significant (p = 0.916). Consultations with a patient-centred balance of interactions had a shorter median duration than those with biomedical balance of interactions, however, there was no significant difference in the durations of patient-centred versus biomedical task-focused consultations (p = 0.573). Consultations with congruent interactions, where both participants predominantly used the same interaction style, had a shorter median duration than consultations with incongruent interactions, however, there was no significant difference in the durations of congruent and incongruent consultations (p = 0.379).

Table 4.25: Comparison of consultation time length for different types of consultation and interaction styles

	Consultation length	
	Median (quartiles)	p value*
Type of consultation		
Pre-booked	13.4 (9.3, 15.0)	p = 0.053
Same day	9.3 (7.8, 12.4)	
Gender		
Female	10.4 (8.7, 13.6)	p = 0.437
Male	8.3 (7.3, 14.8)	
Patient type		
Adult consultation	10.4 (7.9, 14.4)	p = 0.741
Child consultation	9.6 (8.5, 11.8)	
Verbal dominance		
Patient / carer dominant	11.1 (7.1, 13.7)	p = 0.916
Nurse Practitioner dominant	10.1 (8.2, 13.7)	
Interaction style		
Patient-centred	9.8 (8.2, 13.6)	p = 0.573
Biomedical	11.8 (8.9, 13.6)	
Interaction congruency		
Congruent	9.1 (7.9, 13.2)	p = 0.379
Incongruent	10.9 (9.8, 14.8)	

*p value from Mann Whitney test

4.4.9 Does the time length duration of nurse practitioner consultations affect the patient satisfaction and enablement?

The consultation time lengths were also correlated, using Spearman's rho correlation, with the scores for general satisfaction, communication satisfaction and enablement, to see if there was any relationship between consultation time lengths and those outcomes variables.

A non-significant, small, positive correlation of 0.209 ($p = 0.326$) for general satisfaction and consultation time length was noted. For communication satisfaction and consultation time length there was a very small, non-significant slightly positive correlation of 0.014 ($p = 0.946$). Both of these correlations of consultation time lengths and satisfaction scores indicate that in this study there is no significant

association between consultation time lengths and post-consultation satisfaction scores. These findings do not support the notion that longer consultation times are significantly associated with increased patient satisfaction.

The correlational analysis of the relationship between the recorded consultation time lengths with the enablement scores was done based on the pre-existing evidence that increased enablement scores are associated with increased consultation time lengths, as was noted in the previously cited large-scale enablement study of GP patients by Howie *et al.* (1999), and a more recent integrative review of patient enablement by Frost *et al.* (2015). However in this current study there was a non-significant, small negative correlation for enablement and consultation time length of -0.104 (p = 0.644). This correlational finding indicates that conversely to Howie *et al.'s* (1999) and Frost *et al.'s* (2015) findings, in this study longer consultation times did not significantly increase enablement.

4.5 Qualitative findings arising from the interviews with patients and nurse practitioners

In this section of the data analysis chapter the findings of the qualitative analysis of the interview transcripts is reported. Additionally, where relevant, the findings arising from analysis of the interviews have been further developed with evidence from the initial overview analysis of the video recorded consultations, the subsequent RIAS analysis of the video recorded consultations, the questionnaires, and observations of the clinic recorded in the field journal. Eleven interviews were conducted with patients/carers, and three interviews (one each) with the nurse practitioners. The interviewees of nurse practitioner 1 have been notated as: patient 1.3; patient 1.5; and patient 1.10. The interviewees of nurse practitioner 2 have been notated as: patient 2.2; patient 2.4; patient 2.8; mother of child patient 2.9; and mother of child patient 2.10. The interviewees of nurse practitioner 3 have been notated as: patient 3.5; patient 3.6; and patient 3.10.

Five of the eleven patient/carer post-consultation interviews were face-to-face interviews conducted at Lime Tree Way, and six of them were telephone interviews. All of those interviews took place within one to two days of their video recorded consultation being recorded. The mean duration of the patient/carer interviews was 9.6 minutes (range 5.09 to 15.02 minutes). The age range of the patient participants

was 41 to 72 years old. All of the patient/carer participants were white. Three of the patient participants were male and the eight other patient/carer participants were female. Eight of the participants had attended for same day appointments and three had attended for pre-booked appointments. The overview details of the interview participants are displayed in Table 4.26. The three interviews (one each) with the nurse practitioner participants were all face-to-face individual interviews conducted at Lime Tree Way, once their full set of video recorded consultations had been completed. The mean duration of the nurse practitioner interviews was 41.8 minutes (range 34.5 to 46.1 minutes).

Table 4.26: Details of the patient/carer interview participants

Patient/carer notation	Patient/carer ethnicity and ages	Consultation appointment type / reason for attendance
Patient 1.3	White British male, 62 years old	Same day / Medication request, tiredness
Patient 1.5	White British male, 55 years old	Same day / Earache
Patient 1.10	White British female, 68 years old	Same day / Skin lesion, toe problems
Patient 2.2	White British male, 72 years old	Pre-booked / Swollen eyelid
Patient 2.4	White British female, 41 years old	Pre-booked / Breast concerns, anxiety, back pain
Patient 2.8	White British female, 62 years old	Same day / Dizziness, hyperlipidaemia
Mother of child patient 2.9	White Italian mother of a 1 year old child	Same day / Fever
Mother of child patient 2.10	White British mother of a 9 months old infant	Same day / Oral candida
Patient 3.5	White British female, 59 years old	Same day / Infected sebaceous cyst
Patient 3.6	White British female, 51 years old	Pre booked / Hypertension review, skin lesion
Patient 3.10	White British female, 72 years old	Same day / Back pain post-cystoscopy

At the end of the qualitative data analysis processes, which was previously discussed in section 3.15.2, six themes arising from the interview data were identified. These themes are presented in Figure 4.2 as a model created within *NVivo*.

Figure 4.2: NVivo model of interview data themes
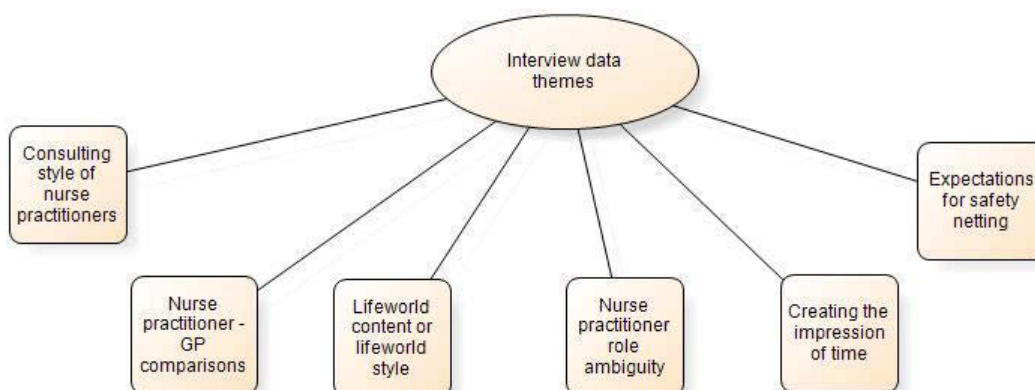
The qualitative data analysis and its ensuing themes were intended to answer the following research questions:

- What are the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations?
- What are patients', carers', and nurse practitioners' perceptions regarding the interaction styles used by nurse practitioners in their consultations?
- What are patients', carers', and nurse practitioners' perceptions regarding the inclusion of lifeworld information in their consultations?
- What are patients', carers', and nurse practitioners' perceptions of the social status of the nurse practitioner role?
- What are patients', carers', and nurse practitioners' impressions of the time length durations of nurse practitioner consultations?
- What are patients' and carer' expectations of consulting with nurse practitioners?

The findings of each of the themes in response to the research questions are now discussed in sections 4.5.1 to 4.5.6, utilising dialogue extracts from the interviews to explicate the contextual meaning of each coding node. In the dialogue extracts additional explanatory or qualifying phrases have been inserted as parentheses and marked off using square brackets, in order to either contextualise a dialogue extract, or to enhance the coherence of a dialogue extract.

4.5.1 Consulting style of nurse practitioners

The '*Consulting style of nurse practitioner*s' was the most coded theme to emerge from the qualitative data analysis process, which enabled some of the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations to be elaborated following their initial identification in the RIAS coding. These analyses addressed the research question of: what are the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations?

Accordingly, as previously noted, this theme was further scrutinised to identify sub-themes to enable the concept of *Consulting style of nurse practitioners* to be fully explored, leading to the identification of six sub-themes explicating the content of the theme of *Consulting style of nurse practitioners,* which are presented in Figure 4.3 as a model created within *NVivo*.

Figure 4.3: NVivo model of sub-themes of the theme Consulting Style of Nurse Practitioners
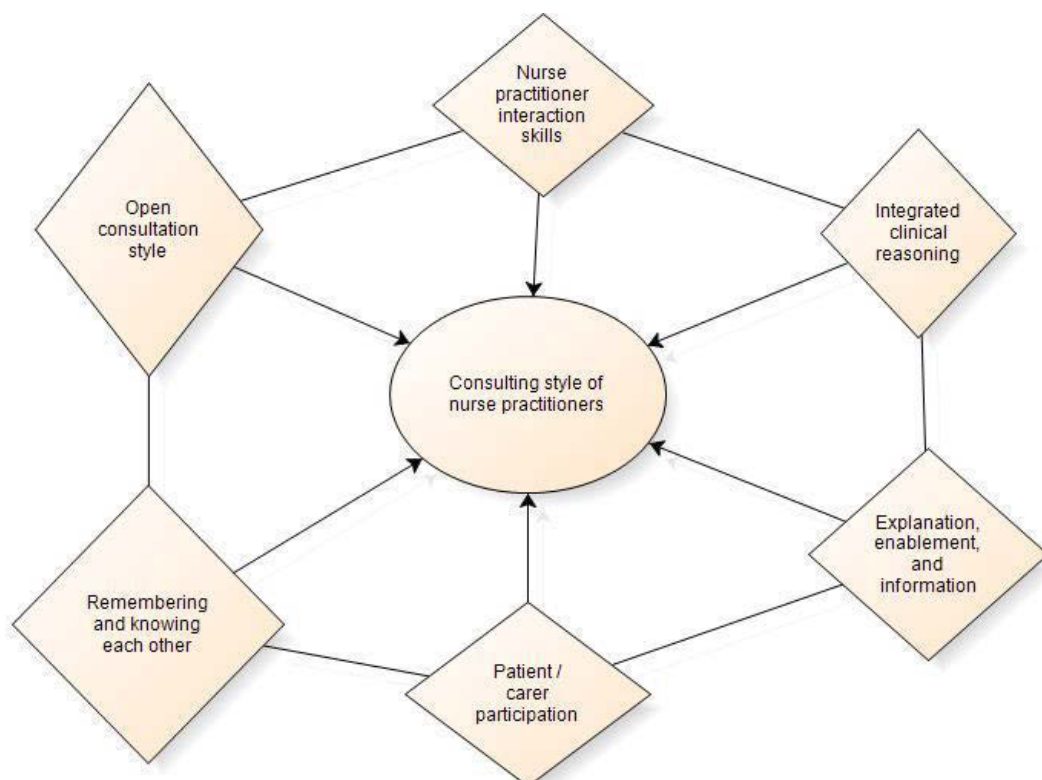
The contextualised meanings of each sub-theme of the theme *Consulting style of nurse practitioners* are now considered.

Patient / carer participation

The sub-theme of '*Patient / carer participation*' represents the processes and opportunities for patient participation that were perceived to exist in the nurse practitioner consultations. Many patients expressed the sense that talking with the nurse practitioner was like conversing with a friend, which was in contrast to the more formalised problem-focused interactions that may occur when consulting with a GP. For example patient 1.3 when comparing consulting with a nurse practitioner and a GP commented:

> *"I mean I find them quite pleasant [the nurse practitioners], with a doctor they tend to be a bit more official …" {Patient 1.3}*

In further relation to this idea of friendliness and thus creating opportunities for participation, patient 3.5 said:

> *"They talk with you rather than down at you. In a way I suppose it's like talking with a friend". {Patient 3.5}*

Building on this idea of a friendly conversation style patients also commented that they felt comfortable interacting with the nurse practitioners. For example patient 3.6 described the reasons why she had changed from consulting regularly with a GP, to instead consulting regularly with a nurse practitioner:

> *"So I kind of saw the nurse practitioner as a friendly face … I kind of stayed with the nurse practitioners because I feel more comfortable with them". {Patient 3.6}*

Patient 1.3 felt that he was actively engaged in his consultation interactions with nurse practitioner 1 as:

> *"…she brings you [into the consultation] and asks what you think, and just talks to you as anybody else would talk to you. I feel really at ease with talking about anything and she seems really interested in what you have to say". {Patient 1.3}*

Nurse practitioner 2 noted it is important to make give patients space to speak, particularly so at the beginning of the consultation, to enable them to fully express both their expectations of the consultation and also their concerns as they then feel the consultation is a 'safe space' for disclosure:

> *"…I think generally speaking, if you do give the patient space at the beginning of a consultation, they're usually going to tell you the story, and they're usually going to tell you what their expectation of the consultation is, whether it's a medical certificate, antibiotics, permission to have time off work, or they're terrified they've got cancer. If you give them a bit of space*

> *and make them feel comfortable, they usually come out with that quite*
> *quickly if they feel safe and in a safe space". {Nurse practitioner 2}*

Nurse practitioner 2 went to say she thought patients consulting with her feel comfortable telling her what they think is wrong with them, and she hoped her friendly consulting style enabled patients to feel comfortable in asking her questions:

> *"…I hope that I am friendly, and I hope that people feel comfortable in asking*
> *me questions that, perhaps they wouldn't ask other people, they feel they can*
> *just ask anything". {Nurse practitioner 2}*

Nurse practitioner 3 also commented on the importance of creating a safe space for disclosure and the idea patients might need to reveal something they have not told anyone else. For example she cited a patient who had registered at the clinic in 1995, and had last attended in 2004. So when she saw him she said:

> *"…'oh gosh, we don't see you very often' " and went on to say: "his world had*
> *fallen apart … [and] he hadn't told anyone yet". {Nurse practitioner 3}*

For nurse practitioner 2 part of this safe space also involved negotiations with patients. For example, in response to the observation that her video recorded consultations involved a lot of negotiations, such as negotiation over possible treatment options, she said:

> *"…the treatment plan, that's got to be negotiated, because if you don't*
> *negotiate it, I mean half of all medicines aren't taken anyway…so…a prime*
> *part of prescribing is to negotiate what the patient thinks; was there [an]*
> *expectation of [a] prescription…if they are expecting a prescription, is it*
> *antibiotics?". {Nurse practitioner 2}*

Nurse practitioner 2 also noted that potentially a lot of discussion with other people, such as family members or other clinicians, may have happened before a patient consulted and it is important to elicit any expectations for treatment arising from those pre-consultation discussions in order to successfully negotiate with patients. Accordingly she felt it was important to come to a negotiated settlement with patients, such as when making decisions which resolved the tensions existing between patients'/carers' expectations for treatment and the clinically assessed need for treatment:

> *"…you've got to negotiate if it's going to be the right treatment … for*
> *antibiotics I quite often use delayed scripts … I say, 'Look most ear infections*

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are viral, the child's probably going to get better in 24 hours, but if you feel, in
24-hours' time, they're still feeling unwell, here's a post-dated prescription'.
Then you've met them in the middle so that there isn't a clash of ideas".
{Nurse practitioner 2}

Also commenting on consultation negotiations with patients, nurse practitioner 1
noted negotiating with patients can give them a sense of control:

"I think sometimes it [negotiation] is good. I mean it obviously depends on
who, what, and why, but I think it gives them [patients] a bit of feeling of
control. They are more likely to comply [with negotiated treatments] probably.
It gives them a chance to kind of talk about it really, any issues they might
have…I think it is just involving the patient isn't it?" {Nurse practitioner 1}

In summary this sub-theme of *Patient/carer participation* indicates in this study that
patient participation in nurse practitioner consultations is dependent on the
patients/carers feeling comfortable interacting with the nurse practitioners. This
sense of comfort then encourages patients/carers to express their ideas, concerns,
and expectations, which in turn enables negotiations to occur, thus allowing
patients/carers to retain some control over their treatment plans.

Integrated clinical reasoning

The sub-theme of '*Integrated clinical reasoning*' stems from analysing the video
recorded consultations where it was noted all three nurse practitioners verbalised
their clinical reasoning to the patients/carers, and also provided information on what
they saw, felt, or heard during the physical examinations of the patients. Clinical
reasoning is a cognitive process of problem solving used by clinicians to provide the
foundation for establishing differential diagnoses and planning the management of
patients' presenting problems. The key point to note is that it is most often a
cognitive process, and so is not necessarily always shared or verbalised to patients
or carers during consultations. However, as verbalised clinical reasoning was seen
in the video recorded consultations it was followed up as a discussion point in the
interviews, particularly so with the nurse practitioner participants.

An example of this discussion is when nurse practitioner 2, elaborating on the
importance of explanation in her consultations said:

"So I do think it's really important to [explain clinical reasoning], for most
patients, an intelligent person who can go with you, I'll try and say, 'Look, this

is what my thought process is about what I think is wrong … it might not be right, but this is what I think is the most likely thing … so we are going to have a trial of treatment, we might do some investigations, and then we're going to follow it on' ".{Nurse practitioner 2}

Further in relation to verbalised clinical reasoning, during nurse practitioner 3's interview I explained to her that I had observed instances of her talking out loud about potential diagnoses, saying for example: 'Well it's not this because you haven't got this, it's not that because you haven't go this, but it could maybe be this'. In response nurse practitioner 3 explained that verbalising clinical reasoning can be a further way of answering patients' questions:

"I think it's great. It's great because they know you're thinking about it, and patients are quite clever and of course with the net now they've probably looked up all [sic], and very often you have to clarify [as] they say, 'Well I think I've got…', and I always clarify by saying, 'Well you haven't got those symptoms and therefore the symptoms that you're talking about would give a diagnosis of …', so yes, I would say that has to be, because otherwise the patients' questions are probably not answered". {Nurse practitioner 3}

Expounding further on verbalised clinical reasoning nurse practitioner 3 went on to say that she observed patients felt reassured by an overt discussion of clinical reasoning as they can then question the basis for clinical decisions.

Nurse practitioner 2 also noted that verbalised clinical reasoning can help patients understand that often there can be more than one potential differential diagnosis for a presenting medical problem. She thought it is important for patients to understand the multiplicity of diagnoses and subsequent treatment choices so that they do not necessarily think something has been done wrong, when they do not respond to an initial therapy. She explained this idea citing the example of tonsillitis:

"…you see a patient with really [bad] tonsillitis, and what are your differentials? Well, I suppose you've got a tonsillar abscess, but the commonest one in a young person is glandular fever. So rather than the patient having a surprise that they don't get better with the penicillin that you give them, and they then think, 'Oh, she didn't know what she was talking about', … you say, 'I'm going to give you penicillin because the most likely thing is you've got a nasty tonsillitis, but …it's always possible that you've glandular fever". {Nurse practitioner 2}

Nurse practitioner 2 went on to say that such verbalised clinical reasoning can help minimise misunderstandings and miscommunication between patients and clinicians. She also said that verbalising clinical reasoning helps patients to understand why an initial diagnosis may not in fact be the correct diagnosis, rather than thinking clinicians must always be correct about a diagnosis. She then further stated verbalised clinical reasoning cannot be used with all patients, citing the examples of confused patients or elderly people:

> *"I wouldn't do it with somebody who was a little bit confused or somebody …*
> *I didn't feel had the confidence to go with me on it … some elderly people*
> *don't like that sort of thing and would much rather be told, 'This is what I think*
> *it is and we're going to try this and come back if it doesn't settle down".*
> *{Nurse practitioner 2}*

However this process of verbalised clinical reasoning may not always happen with other types of patients. For example patient 2.4, a 41-year old woman, cited the example of her husband who had been previously seen at the clinic by one of the nurse practitioners and had, she felt, been misdiagnosed:

> *"I mean my husband did have an episode earlier on in the year where he was*
> *seen by a nurse … but he was misdiagnosed actually, with something like he*
> *had a chest infection, but actually it turns out he had pneumonia". {Patient*
> *2.4}*

So in patient 2.4's example it would appear that possibly, verbalised clinical reasoning with a discussion of alternative diagnoses to a chest infection, had not occurred, and that resultantly some misunderstandings about differential diagnoses had occurred.

Nurse practitioner 2 also commented that some doctors also engage in verbalised clinical reasoning, particularly so more experienced doctors, such as consultants or senior GPs, but that perhaps nurse practitioners were more comfortable in sharing their clinical reasoning with patients as they were on an even social level:

> *"… I sort of think that maybe nurse practitioners [are] more comfortable doing*
> *it because we're more comfortable on working on a sort of even level with our*
> *patients". {Nurse practitioner 2}*

Nurse practitioner 1 noted verbalised clinical reasoning could also be used as summary strategy at the end of a consultation to both reinforce a patient's

understanding and to make sure she had covered all the necessary requirements for assessing a patient's presenting problem:

> *"Reinforcing what they have got to do, because sometimes you go through stuff, and it is a lot for them to take in – but it also helps me with my consultation. I am kind of going back over stuff and making sure that I have covered everything". {Nurse practitioner 1}*

One overt part of the clinical reasoning process is physical examination of patients. During interviews some patients expressed the view that they had been thoroughly examined by the nurse practitioners. For example, the mother of patient 2.10, a 9-month old infant, when speaking about him being examined by nurse practitioner 2 said:

> *"…she was quite thorough in looking at him and [that] was good". {Mother of child patient 2.10}*

It was noted during the examination phases of the consultations the nurse practitioners would often provide a running commentary on the examination findings. The nurse practitioners reported that this was another feature of their processes of verbalised clinical reasoning, which supported their discussion of diagnostic and treatment decisions, and provided further reassurance to patients.

An example of this type of reassurance arising from concurrent commentary during a physical examination can be seen in the following video recorded consultation dialogue of nurse practitioner 2 speaking with patient 2.4 whilst she concurrently examined the patient's breasts for a lump:

> *"I would say your breasts are completely normal at the moment … I can't feel anything I'm worried about". {Nurse practitioner 2}*

In response patient 2.4 appeared to be reassured, which was in contrast to the initial anxiety she had displayed at the beginning of her consultation.

In overview the sub-theme of *Integrated clinical reasoning* represents the ways the nurse practitioners overtly discussed their cognition related to clinical reasoning with the patients/carers including commentary on physical examination findings, which in turn helped reassure patients / carers.

Nurse practitioner interaction skills

The sub-theme of '*Nurse practitioner interaction skills*' captures the varied communication and social interaction attributes the nurse practitioners utilised in their consultations. The communication styles of the nurse practitioners were commented upon by several of the patients. For example, patient 1.10 noted nurse practitioner 1 helped her to articulate what she wanted to say when she was struggling to do so herself:

> *"Our communication was excellent. She was able to pick up on things I was trying to say when I was not very articulate". {Patient 1.10}*

Patient 3.5 noted if a patient had to be told they had not done something correctly, for example following medication usage instructions, they were advised about this in a 'nice' way:

> *"If we need to be told off, they will tell you off. They do it in such a nice way". {Patient 3.5}*

Patient 3.6, commenting on how she felt more able with the nurse practitioners, than with a doctor, to elaborate on things concerning her, noted how a combination of non-verbal and verbal skills were used by the nurse practitioners, which in turn made her feel valued as an individual:

> *"…I think [if] it was something deeper and you mightn't wanted to say it, I think you'd feel more reassured. Also I think it's very important with like their body language and how they talk to you … the whole body image is important, the way they look at you and talk to you, value you as a person, I think that's very important". {Patient 3.6}*

Patient 2.2 noted the nurse practitioners used conversation skills to relax him at the opening of a consultation and that they then subsequently had a two-way conversation which also helped him reveal things he wouldn't have said otherwise:

> *"…they seem to calm you down and talk to you. I say something to them that I really wouldn't thought I would have said [sic]… because they relax you first and you have [a] two-way conversation. {Patient 2.2}*

Aside from encouraging patients to speak, Patient 2.8 felt that nurse practitioner 2 was an example of a very good listener who was always interested in the patient's perspective:

> *"I just feel that, yes, she is a very good listener. She always wants to know, from your point of view, how things are". {Patient 2.8}*

Commenting on using listening skills in her consultations nurse practitioner 2 noted it was very important to give the impression of actively listening to patients, so that

they in turn understand the nurse practitioner is actually interested them as a person:

> *"…what you're doing is actively listening to them, and active listening is a key skill in a consultation … in this busy world where we live in when there's so much going on … but what we're actually here for is the patient. So it helps you ground yourself and it helps the patient ground you in that actually, you are interested in the patient". {Nurse practitioner 2}*

Nurse practitioner 3 also commented on the importance of fully listening to patients as a way of ensuring she responded to their expressed needs:

> *"…I think …the interaction between myself and patients; I feel that I hear everything they say. I think if you hear everything they say, it's very difficult to go wrong, because you have to act on it then". {Nurse practitioner 3}*

Nurse practitioner 1 commented on the benefits of trying to encourage patients to express all that they wanted to say in consultations:

> *"…the patient is going to feel that they've got what they wanted, or they have managed to say, you know talk about their problems. They will feel happy with the outcome hopefully, and they won't go away thinking, 'I didn't sort that out', or 'she didn't help me with that'… [so] …more likely to comply with their treatment". {Nurse practitioner 1}*

Nurse practitioner 3 thought nurse practitioners had a different way of communicating with patients in comparison to doctors, which further encouraged patients to open up to nurse practitioners:

> *"…I don't know, we're different – our communication skills are better, we have a different way of doing it, we're more at level with the patient. They feel they can talk to us better and that's been said loads of times in consultations. You know, 'I couldn't come to the doctor with this', so yes there's a big difference in consulting style". {Nurse practitioner 3}*

Commenting further on identifying the need to get some patients to talk candidly with her nurse practitioner 1 noted it required a certain kind of skill, which she tentatively labelled as 'intuition':

> *"…it is just a kind of skill I suppose. What is the word? Whether it is because you know the patient, and you just know that is not right, intuition or whatever". {Nurse practitioner 1}*

Nurse practitioner 3, responding to interview feedback that patients reported she seemed really caring and really interested in them, and didn't just say 'Here take this penicillin and off you go', said that from her experiences of consulting with patients, consultations had inter-dependent components linked together by communication:

> "So there's so many components … if you broke it down, the social bit, the interacting, the understanding, patient participation and the concordance and all of that is linked together with the communication". {Nurse practitioner 3}

Nurse practitioner 3 also expressed the view that the ability to manage the complexities of consultation interactions was the key to successful consultations, rather than solely medical knowledge:

> "I think the complexity of general practice is not medicine, it's not really medicine, it's the rest … so I do think the complexities of the interaction and the communication skills, I think they're the key". {Nurse practitioner 3}

Nurse practitioner 3 further explicated this idea of the act of consultation communication taking precedence over the actual medical decisions, when in conversation with me she reflected on the complexities of negotiating with patients over a range of matters including their expectations, differential diagnoses and prescribing decisions:

> "So there's a lot to be said for medicine as an art, not a science". {Nurse practitioner 3}
>
> {Interviewer}: "…yes, you do need a level of scientific knowledge in order to make those [medical] decisions, but the way you make those decisions …is given privilege by the nurse practitioners that I've seen [in the video recorded consultations] ..."
>
> {Nurse practitioner 3}: "Yes, how it's done".

As a result of this focus on optimising interactions, nurse practitioner 3 felt that such consultations were more therapeutic and that the nurse practitioners at Lime Tree Way were better than the doctors there at doing that:

> "…I think we are far better than the doctors [at communicating], and the doctors we have here are very good doctors, but I do think we're better. How are we better? …the better the interaction, the more therapeutic the consultation obviously…" {Nurse practitioner 3}

Summarily *Nurse practitioner interaction skills* comprise a mix of attributes which were used by the nurse practitioners in the study to successfully manage the

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complexities of consultation communication, and to encourage patients/carers to provide fulsome accounts of their presenting problems and associated concerns.

Explanation, enablement, and information

The sub-theme of '*Explanation, enablement, and information*' represents the sense conveyed in the interviews that the nurse practitioners clearly and coherently explained medical problems and treatments to patients, supported those explanations with relevant verbal and written information, which in turn enabled the patients to self-manage their medical problems. For example patient 2.2 noted medical queries and related questions were answered in a clear non-medical style:

> *"They don't tell you mumbo jumbo language. If you ask a question you get a reasonable answer that even I can understand, rather than in doctor's language". {Patient 2.2}*

Nurse practitioner 1, in response to being asked about high levels of explanation being observed in her video recorded consultations said:

> *"Yes, well that [explanation] is important. I always try and do that, or ask them what they think is wrong, and what they understand about it before I start to talk about it". {Nurse practitioner 1}*

Nurse practitioner 1 went to say that explanation can be an iterative process in consultations, which reinforces patient understanding:

> *"I always try and do that [explain], and always at the end [of consultations] go over it again so they know what they are doing when you give them a prescription, so you are reinforcing it". {Nurse practitioner 1}*

Patients commented that they clearly understood what they were supposed to do in terms of care and treatment after seeing the nurse practitioners and felt the clear explanations they received from the nurse practitioners were very important to aid their understandings. Nurse practitioner 3 noted these explanations are often supported with the provision of information, which enables patients/carers to make informed decisions about their care:

> *"I always say [to patients] 'I'm not here to tell you what to do, I'll give you the information and we can make an informed decision". {Nurse practitioner 3}*

Talking further about explanation and the provision of information nurse practitioner 1 was mindful that patients will often have read Internet-based medical information prior to their consultations and that needs to be acknowledged, but that accessing

Internet-based medical information can also be used as a reverse strategy to encourage patients to read information about their diagnosed medical problems post-consultation:

> "…often a lot of patients come in, they have been on the Internet …using that as a tool, as they are going away [leaving the consultation], giving them a bit of information to go and look up [on the Internet]…it makes them feel more involved". {Nurse practitioner 1}

Nurse practitioner 2 commenting on focused information-giving encouraging patient involvement said that sharing and discussing information with patients can empower them to manage their own conditions, particularly so when they are long term:

> "I think, certainly nurse practitioners, we want to work obviously [so] that empowerment is involved where we're giving the patient the information, and when I do the first hypertension [diagnosis] I show them the different types of medication and the ABC use on the hypertension guidelines to say, 'Look, this is where I think we should be going with you, or we can hold off for a little while and you can try lifestyle stuff yourself". {Nurse practitioner 2}

Nurse practitioner 2 speaking further in relation to the management of long term conditions and maximising patient empowerment said:

> "…we're putting the ball back in their court all the time [by discussing treatment information], especially with long term conditions, because it's their condition isn't it …and they've got to live with it for the rest of their life". {Nurse practitioner 2}

Patient 2.8 provides a good example of the nurse practitioners' encouragement of self-management of long term conditions, where she had hyperlipidaemia for which she was initially reluctant to take medication for and wanted to try alternative non-pharmacological therapies:

> "I need to take some medication [a statin] which I was pretty reluctant to do up until now and … she [nurse practitioner 2] has been very supportive of that. She has not poo-pooed my ideas in any way…she has been very, very supportive of my alternative approaches until now…" {Patient 2.8}

In relation to question asking and those questions being answered by the nurse practitioners patient 2.2 was clear that he felt all questions were clearly answered, which in turn gave him confidence about his medical problems and treatments:

> "You come along, you ask the questions and you can get the answer … you get a decent answer and you feel confident". {Patient 2.2}

Patients 3.5 and 2.9 both corroborated this sense of being given clear advice and information by the nurse practitioners:

> "[You can ask] 'Am I doing this right?' The advice is great that they give you". {Patient 3.5}
>
> "Well she gave me good practical advice [on how to manage her child's medical problem]…so that was quite good". {Patient 2.9}

Patient 2.2 further elaborated that whilst not resolving a medical problem, the provision of explanation and information did help to ameliorate the experience of having a medical problem:

> "When it becomes a problem [a medical condition], you've still got a problem but the problem isn't as bad as you thought it was because they've [the nurse practitioners] explained [it]…they've not cured you, but the nurse has explained to you what to do, how to cure it or how to make it better…" {Patient 2.2}

So overall in this sub-theme it can be seen that the nurse practitioners providing clear explanations, and presenting and discussing information about patients' medical conditions in turn leads to some patients feeling more empowered or enabled to self-care for those conditions.

Open consultation style

The sub-theme of '*Open consultation style*' refers to the openness of the nurse practitioner consultations in this study. The term 'openness' is used here to reflect the finding from the interviews analysis, that the nurse practitioners conducted their consultations in a very 'open' style. What features does this open style comprise? A large component is the space the patients/carers were given by the nurse practitioners to allow them to raise multiple agendas. For example patient 1.10 in response to being asked in her interview about raising a second agenda item in her consultation said:

> "Yes, I did. I felt a bit guilty about that really, but she did not mind at all". {Patient 1.10}

What were the nurse practitioners' views on multiple agenda items? Nurse practitioner 1 in response to being asked about patient 1.10 raising a second agenda item she said it did sometimes cause difficulties for her and so she tries to prioritise problems:

> *"…that is difficult sometimes. I guess I do have difficulty with that sometimes. I guess it is kind of prioritising, I suppose what is the most important for them, because you can't always deal with everything". {Nurse practitioner 1}*

Nurse practitioner 1 went on to say that whilst multiple agenda items were difficult to deal with she likes patients to:

> *"…think that they go away feeling that they've got things sorted or that they have got options [to get their other problems sorted as well]". {Nurse practitioner 1}*

Nurse practitioner 3 also commented that it is difficult dealing with multiple agendas and that she too tries to prioritise presenting problems:

> *"I find it [multiple agendas] really tough because if someone doesn't come often and it's something big and they want to off load it and there's a whole list of patients [waiting], what I sometimes do is I cover a bit of it, just to grasp the severity of it … ". {Nurse practitioner 3}*

Aside from the nurse practitioners' openness to multiple agendas the patients / carers had opportunities to ask questions to which the nurse practitioners were receptive. For example patient 2.2 commented:

> *"… you can ask any question you like, that's the good part of it … they don't say, 'Oh no your time is up, off you go'. You can ask them another question can't you? ". {Patient 2.2}*

In the observations of the video recorded consultations they were also noted to have an open ending with checks that all agenda items had been covered using simple questions such as, 'Is there anything else?', or 'Are you happy with that?' Following this checking open options for return were often explicated to the patients / carers by the nurse practitioners.

In summary this sub-theme conveys the sense of openness that existed from the beginning to the end of the observed consultations.

Remembering and knowing each other

The sub-theme of '*Remembering and knowing each other*' relates to firstly, the nurse practitioners often remembering and commenting on patients' previous attendances at the beginning of consultations, and secondly, the nurse practitioners and patients / carers in many, though not all instances, knowing each other as they had consulted together on numerous previous occasions.

In relation to the perceived importance of remembering patients nurse practitioner 2 said:

> *"… I do it is quite important to do that [remember patients] because otherwise how can [they] have trust in somebody who doesn't remember"? {Nurse practitioner 2}*

Nurse practitioner 1 commented that she tried to use strategies at the beginning of consultations to check whether she had seen a patient before by asking a question such as:

> *"'Have I met you before' … [or]… 'I think I've met you before'"? {Nurse practitioner 1}*

Some patients' consultations would often start with a brief informal review of a prior presenting problem before moving onto the main focus of their consultation. Both nurse practitioner 1 and nurse practitioner 2 commenting on this process said it may require some pre-verification such as checking a patient's notes before calling them in to orientate themselves to the patient's recent history. Patients expressed contentment with this strategy of remembering them and briefly reviewing their prior attendances. For example patient 2.4 commented:

> *"There was one time I'd been through a miscarriage and I was obviously very stressed … on my next appointment, which was months later, she [nurse practitioner 1] referred back to that appointment and said 'How are you? You seemed in quite a bad way the last time I saw you.' I was really, really appreciative that she had taken time to kind of note it. So you weren't somebody who just walked through the door … I think the familiarity and the contact is important". {Patient 2.4}*

Patient 1.3 commented that he knew nurse practitioner 1 quite well as a person through regularly consulting with her and that this familiarity facilitated the fluidity of their consultation interactions. Patient 1.10 felt that patient participation in a consultation was related to the clinician knowing the patient:

> *"I think the issue about participation is to do with when they [the nurse practitioners] know you as well. It is about knowing the patient". {Patient 1.10}*

In symmetry with the patients/carers it was also expressed by the nurse practitioners that they too had familiarity with the patients and their families. This was often because they had known the patients for extended periods of time, which meant they were familiar with their family backgrounds, and that they could then make

decisions about whether or not to use such information in the consultations. For example nurse practitioner 2 said:

> *"I know a lot the grandmas, the daughters, their granddaughters, and so there is a lot of stuff, it's sometimes unsaid. Perhaps they might know that I know their grandma's got dementia, but I won't mention it". {Nurse practitioner 2}*

Nurse practitioner also commented on fostering familiarity with the personal circumstances of a patient with a patient with a long-term condition, such as depression:

> *"So … you go the journey with the patient … for instance with patients with depression, if they're going on holiday … I'll always put down [in their notes] 'Going to Jamaica', 'Going to France on holiday'. Next time I see them: 'How did the holiday in France go'?" {Nurse practitioner 2}*

It must be noted that in the context of Lime Tree Way being a general practice clinic all the patients are registered there and so attend there on repeated basis, which facilitates the nurse practitioners and patients / carers remembering and knowing each other. In an unscheduled care primary care environment such as a walk-in centre or out-of hours service, where patients most often attend on either a one-off or irregular basis the process or clinicians and patients getting to know each other would be more limited, though not completely absent as some patients are frequent attenders at such services.

4.5.2 Nurse practitioner – GP comparisons

The theme of '*Nurse practitioner-GP comparisons*' relates to both the patients/carers and nurse practitioners making comparisons of nurse practitioners and GPs and the respective care they provide. This theme addressed the research question of: What are patients', carers', and nurse practitioners' perceptions of the status of the nurse practitioner role? Many of the ideas expressed by the patient/carer participants in relation to this theme arose from being asked to comparatively discuss their experiences of consulting with a nurse practitioner to consulting with a GP. The nurse practitioners were similarly asked to reflect on their experiences of consulting with patients as nurse practitioners.

For the patients/carers a frequently cited difference between consulting with a nurse practitioner compared to a GP was that they thought a GP should be consulted for

more 'serious problems', and nurse practitioners for less serious problems. For example patient 1.5, who saw nurse practitioner 1 for an acute ear infection said:

> *"I think, for general problems I think it [consulting with a nurse practitioner] is a very good idea. I think if I actually felt I had something more serious, I think I would rather see a doctor. But I think, for general things, I think it is absolutely fine…" {Patient 1.5}*

Patient 2.4 said that she had previously actually asked to see a GP when she had a problem which she thought was more serious than she perceived was appropriate for a nurse practitioner:

> *"There have been times when I've specifically asked to see a doctor because I thought that the condition that I have is a bit more serious than just a sore throat or a chest infection and so on". {Patient 2.4}*

Paradoxically despite making that statement, patient 2.4 had one of the most complex consultations in the case study, as she attended to see nurse practitioner 2 with a multiple mix of physical and psychological presenting problems in the same consultation: breast concerns, back pain, and anxiety. The combined assessment and management of those problems required a high level of clinical reasoning on the part of nurse practitioner 2. However, on watching her video recorded consultation, and in conversation with her during our subsequent interview patient 2.4 appeared happy to have seen nurse practitioner 2.2 despite the complexity of her multiple presenting problems.

When comparing consulting with a nurse practitioner to consulting with a GP the mother of patient 2.10 made the point that if she had a long term medical problem she would prefer to see a doctor:

> *"…if I had …an ongoing illness that was long term, I would probably want to see doctor…" {Mother of child patient 2.10}*

Again, as with patient 2.4, this is a paradoxical statement because increasingly nurses, who are not even necessarily nurse practitioners, are now independently monitoring and managing long term medical conditions such as asthma, diabetes, and hypertension without medical doctor supervision.

Patient 2.8 spoke about being happy to see a nurse practitioner for problems that are not particularly serious, but also realised that if she thought she did have something serious she could in the first instance also discuss that with a nurse practitioner:

> "I always find that, because I am not going in for anything particularly serious, I am more than happy to see them … I would probably, in the first instance [with a potentially serious problem], I would talk it through with them and then see from there". {Patient 2.8}

As this issue of consulting with doctors for perceived serious problems was raised by a number of the patients it was also broached with the nurse practitioners in their interviews. Nurse practitioner 1 questioned what medical problems the patients actually classified as being 'serious', because she felt the majority of presenting problems in general practice can be dealt with by nurse practitioners:

> "What are they classing as serious? There is not a lot we aren't doing that a GP is doing to be honest…if we look at the patients that are coming in that the GP is seeing, probably of a whole [appointment] list, probably 90 per cent, it is all nurse practitioner stuff…when they say they have a got a serious problem, what do they mean by serious problem? Actually we [the nurse practitioners] could deal with that". {Nurse practitioner 1}

An example of patients' perceptual difficulties in determining what is a serious medical problem versus a minor medical problem, and therefore the appropriate type of clinician to consult with was provided by nurse practitioner 2. She cited the complex case of a patient seen and referred with new onset seizures by herself, who then asked her in the same consultation if he needed to see the doctor for a spot on his finger:

> "I'll never forget a patient who came to see me about new onset seizures, and I referred him to a neurologist…at the end of the consultation, he said, 'There's one other thing, it's something I've got on my finger, but do I need to see the doctor about that?'…it was so funny because to me, I thought having a seizure, a first grand mal seizure when you're 60, that's serious, you know? ...yet he felt perfectly comfortable talking to me and I dealt with the whole thing and I referred him to hospital and everything. Yet, he had a little spot on his finger and he said, 'Do you think I need to see the doctor about that?'" {Nurse practitioner 2}

In the preceding example a contradiction can be seen to exist between the complexity of the patient's neurological problem the nurse practitioner had assessed and managed, and the simplicity of the finger problem the patient thought needed to be seen by a doctor.

Nurse practitioner 3 countered the perceived demarcation between nurse practitioners dealing with more minor problems and doctors dealing with more serious problems. She felt that if a patient got answers to their problems, whether they are minor or more complex, they probably do not actually mind which type of clinician is providing the answers, so long as they are competent to do so:

> *"I feel as long as the patient gets what they want and get answers to their problems, they don't really mind who's doing it…I probably wouldn't mind who was doing it , if I knew there was someone competent doling it". {Nurse practitioner 3*

When comparing consulting with a nurse practitioner to consulting with a GP, the mother of child patient 2.10 expressed a similar opinion to that of nurse practitioner 3 when she said she just wanted the nurse practitioners to be there to help her when needed:

> *"I've never had an issue where they [a nurse practitioner] couldn't resolve it, and I've never had to be referred to a GP because they were unsure…so I know they are always [there] to help me, and that's the end of what I need, really". {Mother of child patient 2.10}*

Aside from doctors dealing with serious illness patients/carers also highlighted the perceived differences in the education and training of doctors and nurse practitioners. For example patient 2.9 said she would expect a GP to be more educationally prepared for their role than a nurse practitioner, though she acknowledged her experiences of consulting with both types of clinician were similar:

> *"…I would expect the GP to be more prepared [educationally], but so far, I mean, I thought both were really similar". {Mother of child patient 2.9}*

Patient 2.4 also expressed her views on the comparative knowledge of GPs and nurse practitioners, expecting doctors to have more detailed medical knowledge, and there were consequently valid reasons for role demarcations between doctors and nurses:

> *"…I don't know that much about the profession, but I would imagine that doctors have more of an in-depth knowledge of various conditions. I know nurses have very good knowledge as well, but obviously there's a reason why a nurse is a nurse and a doctor is a doctor". {Patient 2.4}*

Nurse practitioner 3 also commented on the differences in medical knowledge between doctors and nurse practitioners, noting that this difference also led to differences in the relative authority of each clinician type, which in turn led to nurse practitioners over-compensating for this knowledge difference:

> *"I think as nurse practitioners what you tend to do is …overdo everything because you haven't got the medical training…I think if you mean knowledge authority…we can't have the same medical knowledge as doctors have because it's completely different training and I think therefore probably what you tend to do is …over [compensate] …I think it also is that we dot all the I's and cross the T's". {Nurse practitioner 3}*

In contrast to the careful attention of nurse practitioners, it was also felt by nurse practitioner 3 that doctors, due to their more extensive medical knowledge were able to 'skim', meaning they could more quickly process their clinical reasoning than nurse practitioners in consultations, so they could proceed in a faster style within a time constrained 10-minute consultation:

> *"…because I think if you have more knowledge, you skim it. You've only 10 minutes and you do skim it, there's no doubt". {Nurse practitioner 3}*

Nurse practitioner 2 also commented on the different clinical reasoning styles of doctors and nurse practitioners, noting doctors tend to start with the overall clinical picture and then focused on the patient, whilst she started focused on the patient and then moved out to the overall clinical picture:

> *"…I think doctors tend to start big and move in. I think I tend to start small in the patient and work out…" {Nurse practitioner 2}*

Aside from differences in the types of medical problem each clinician type should deal with and their comparative educational and clinical reasoning differences, some patients also spoke about other differences such as gender and personalities. It was positively noted by some of the patients that all the nurse practitioners at Lime Tree Way were women, and that this was one of the reasons why they enjoyed consulting with them. For example patient 3.6 said:

> *"…but quite happy to talk to them…I suppose also… because they're all ladies, I feel more comfortable with a lady". {Patient 3.6}*

Patient 2.2 commented that he liked consulting with the female nurse practitioners as male doctors could have a more 'severe' style than female clinicians:

> *"I think it may be something to do with because they're all ladies…I'm not saying anything about doctors but a man doctor is sometimes a bit more severe, a bit more not forthcoming [sic]". {Patient 2.2}*

Similar preferences for seeing nurse practitioners because they are often female clinicians have been noted in previous studies of patients' views of consulting with a nurse practitioner, such as the qualitative interview study of Perry *et al.* (2005), in which the patient participants reported feeling at ease consulting with a female nurse practitioner compared to a male doctor.

Patient 1.3 also similarly compared the consulting styles of the nurse practitioners and doctors, noting doctors had a more 'official' style:

> *"I mean I find them [the nurse practitioners} quite pleasant, with a doctor they tend to be a bit more official and all that sort of stuff". {Patient 1.3}*

In contrast patient 1.10 noted comparisons of nurse practitioners and doctors were difficult to make and were dependent on their individual communication abilities and personalities, rather than their actual clinical roles:

> *"Well, I can't say generally, that I could compare…it depends on the communication ability of both the nurse and the doctor and…sometimes it is the personality of the person, isn't it, with you and them?" {Patient 1.10}*

In overview the theme of *Nurse practitioner-GP comparisons* comprises the role differences between nurse practitioners and GPs noted by participants in the study. A prominent feature of this theme was that many patient/carer participants expected the nurse practitioners to be dealing with more minor or 'general' problems, whilst they would expect to see a GP for more 'serious' problems. However the nurse practitioner participants questioned what was actually meant by 'serious', and cited examples where they had dealt with more complex presenting problems. It was also noted that not all patients may recognise this distinction as they just want to see a competent clinician who can provide a coherent answer to their presenting problem. It was also observed that nurse practitioners and doctors have different education

and knowledge base, which may subsequently impact on how they are expected to practice by patients, and also actually how they apply their education and knowledge in consultations. It was further observed by some of the patients that all the nurse practitioners at the clinic were female and that they generally preferred consulting with female clinicians, instead of male clinicians as female clinicians were perceived to have a more amenable consulting style. Conversely it was also noted that it can be difficult to make general comparative distinctions between nurse practitioners and doctors as such comparisons are not dependent on their actual clinical roles, but instead relate to their communication skills and personalities.

4.5.3 Lifeworld content or lifeworld style

The theme of '*Lifeworld content or lifeworld style*' relates to the presence of the lifeworld being part of the content or style of the nurse practitioner-patient/carer discourse in consultations. This theme addressed the research question of: What are patients', carers', and nurse practitioners' perceptions regarding the inclusion of lifeworld information in their consultations? During the interviews the patients/carers were asked for their opinion of discussing lifeworld issues in consultations. Many, though not all the patients, expressed a view this was beneficial. For example patient 3.10 said:

> *"I think that sort of conversation [lifeworld discussion] helps with an illness anyway…if someone is worrying about something that's happening within their family…if you speak about it, it's half the problem gone and they [the nurse practitioners] listen". {Patient 3.10}*

Patient 1.3 said that he felt 'at ease' about discussing lifeworld issues in consultations and that such discussions should be part of a consultation. Patient 2.4 also emphasised the importance of lifeworld discussions in consultations and noted the nurse practitioners were 'good' at integrating it:

> *"Yes, I think that they're both very good at that [lifeworld discussion] and I think that that [sic] is really important. It's nice on various occasions they do ask what you do, and are sensitive to how that might impact upon your health…" {Patient 2.4}*

Patient 3.5 observed the nurse practitioners were prepared to talk with her about wider matters in her life such as her family:

"They're quite prepared to sit and talk to you. They talk to you about your family as well and how you're doing … well even just say, 'How are you? How's the family?'…" {Patient 3.5}

The mother of child patient 2.10 felt that if she wanted to talk about lifeworld issues with the nurse practitioners she could do that:

"Yes, if I had an issue like that [lifeworld], I wouldn't have a problem with talking about it …I think if I had a stressful time of my life, I wouldn't have a problem going to them [the nurse practitioners] and talking about it". {Mother of child patient 2.10}

However, in contrast patient 2.9 said she too would feel happy discussing lifeworld issues with a nurse practitioner, but wouldn't feel happy to do so with a GP as she would expect a GP to be more focused on medical matters rather than the everyday of the lifeworld:

"Well, I would feel ok [discussing lifeworld issues with a nurse practitioner]. I would probably not feel the same about the GP, about doing that with the GP … probably I expect them [GPs] to be more on the medical side…rather than on the everyday side". {Mother of child patient 2.9}

Patients 2.8 and 3.6 felt lifeworld issues should only be discussed if they are relevant to the reason for attending for a consultation. For example patient 2.8 said:

"I would only do it [discuss lifeworld issues] if it was relevant to the reason I was going in for, otherwise I would probably not waste their time on things that were not valid". {Patient 2.8}

Conversely two of the patients were vehement that lifeworld discussions should not be part of a clinical consultation. This view was clearly expressed by both patient 1.5 and patient 1.10:

"I think it is better that you go in and talk about to the doctor or the practitioner [sic] about what is actually medically wrong with you. You can talk to your friends or family about [other things]". {Patient 1.5}

"I would not involve them [the nurse practitioners in lifeworld discussions] because I believe their role is to be clinical". {Patient 1.10}

The nurse practitioners were also asked for their views of lifeworld discussion being present in their consultations, and were generally supportive of lifeworld inclusion. Nurse practitioner 1 felt that she was mindful of lifeworld discussions in her consultations:

> *"I think I do that [integrate lifeworld discussions] quite a lot, because I think it is important … I feel that a lot of patients, a lot of the time, there are other issues, or other worries … that are on their mind or behind the problem they are presenting with". {Nurse practitioner 1}*

Nurse practitioner 1 also recognised that not all patients may wish to discuss lifeworld issues. She noted she would elicit the need for such discussions by:

> *"… by generally asking if there is anything they are worried about, or anything else they want to say". {Nurse practitioner 1}*

Nurse practitioner 2 felt that she could combine lifeworld discussions with explanations about medical problems:

> *"… I think we can combine those, being family orientated and person centred with explaining about medical terminology, medical problems … I think you can combine the two quite successfully". {Nurse practitioner 2}*

Nurse practitioner 2 also noted lifeworld discussions may also require some self-disclosure or self-revelation on the part of the nurse practitioner, if they too had experienced a similar everyday life experience to the one a patient sought to discuss, such as bereavement following the death of a close relative. Nurse practitioner 3 felt inclusion of lifeworld discussions in consultations was an example of being holistic and looking at the person, instead of solely focusing on their presenting medical problem:

> *"To me the holistic [element] is you're looking at the person and you're looking at the problem they present with and how the other life influences or health influences or ill-health influences are affecting that problem". {Nurse practitioner 3}*

Nurse practitioner 3 went on to say that she hoped she responded to patients' lifeworld cues in her consultations:

> *"…I hope I take all that [lifeworld issues] into consideration and if they share that with me then they must want me to know about it". {Nurse practitioner 3}*

Nurse practitioner 1 also noted attention to lifeworld issues in consultations is an example of holism in practice and taking full account of the patient's perspective:

> *"… it [lifeworld discussion] is the sort of holistic thing, taking the whole picture". {Nurse practitioner 1}*

In relation to holism and the educational preparation of nurses, nurse practitioner 2 noted the influence of holism upon nurse practitioners, and the consequent enhanced sensitivity of nurse practitioners to patients' social situations:

> *"…we've got that sort of holistic grounding that does allow you to be more patient sensitive and more sort of social, understand the social set ups and the family set ups, which I think is very helpful…" {Nurse practitioner 2}*

As all the interview participants had their video recorded consultations analysed with RIAS it is possible to comparatively determine the degree to which the style of their consultations interactions, and observed inclusion of lifeworld discussions, corresponded with their opinions on the inclusion of lifeworld information in consultations. This combined information is displayed in Table 4.27.

Table 4.27: RIAS coding outcomes and observed occurrence of lifeworld interactions compared to opinions on lifeworld inclusion

Patient/carer and appointment type	RIAS coding outcome for either patient-centred or biomedical interactions	Observed occurrence of lifeworld discussions	Patient's/carer's lifeworld inclusion opinion as expressed in interview
Patient 1.3 Pre-booked	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion
Patient 1.5 Same day	Biomedical	No lifeworld discussion	Not supportive of lifeworld inclusion
Patient 1.10 Same day	Patient-centred	Minimal lifeworld discussions	Not supportive of lifeworld inclusion
Patient 2.2 Pre-booked	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion
Patient 2.4 Pre-booked	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion
Patient 2.8 Same day	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion if relevant
Mother of child patient 2.9 Same day	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion
Mother of child patient 2.10 Same day	Patient-centred	Minimal lifeworld discussion	Supportive of lifeworld inclusion
Patient 3.5 Same day	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion
Patient 3.6 Pre-booked	Patient-centred	Lifeworld discussion occurred	Supportive of lifeworld inclusion if relevant
Patient 3.10 Same day	Patient-centred	No lifeworld discussion occurred	Supportive of lifeworld inclusion

In Table 4.27 it can be seen the majority of patients (n=7) fully supported the inclusion of lifeworld information in consultations and that their consultations were correspondingly conducted in a patient-centred interaction style. Six of the lifeworld supporting participants had lifeworld discussions in their consultations. One of the lifeworld supporting participants, patient 3.10 did not have any lifeworld discussions in her consultation. However patient 3.10 attended as an urgent same day appointment with acute back pain following a cystoscopy. Her consultation was focused on the assessment and management of her acute back pain, so it is understandable there was minimal discussion of lifeworld issues, but still a patient-centred style of communication occurred. For the two patients (2.8 and 3.6) who

thought lifeworld issues should only be discussed if relevant their consultations were also conducted in a patient-centred style, even though they did not attend with lifeworld-orientated presenting problems. Additionally in both of those patients' consultations the occurrence of lifeworld style discussions was observed. For the two patients (1.5 and 1.10) who felt that lifeworld issues should not be discussed in consultations, one of their consultations was conducted in a predominantly task-focused style (patient 1.5) with no lifeworld discussion, whilst the other patient (1.10) had the lowest patient-centred interactions ratio score amongst the interview participants, and a minimal amount of lifeworld discussion. Looking at the detail of patient 1.10's RIAS outcomes she interacted in a pre-dominantly patient-centred style, albeit one of the lower patient-centred ratio scores found in the study, whilst the nurse practitioner 1 responded to her in a predominant biomedical style. In the single biomedical interaction style consultation, the patient dominated those interactions, presumably negotiating the interactions in his preferred biomedical task-focused style.

It can also be seen in Table 4.27 that a preference for lifeworld discussion inclusion occurred in both same day and pre-booked appointment types. The two patients, who said lifeworld discussion should not be part of consultations, both attended for same day appointments, but presumably would have said the same if they had attended for a pre-booked consultation instead, as they were both quite emphatic that lifeworld discussion should not be part of consultations. This comparison of the analysis of the consultation interactions styles to the participants' opinions of lifeworld inclusion in consultations shows that their actual interaction styles generally corresponded with their elicited views on lifeworld inclusion.

The theme of *Lifeworld content or lifeworld style* provides clear evidence of the presence of the lifeworld in many of the observed consultations, with patients/carers feeling comfortable speaking about lifeworld issues, and the nurse practitioners responding positively by encouraging the inclusion of such information. This observed inclusion of the lifeworld was further bolstered stylistically by the high frequency of patient-centred style interactions occurring in the majority of consultations.

4.5.4 Nurse practitioner role ambiguity

In the theme of '*Nurse practitioner role ambiguity*' the topic of the ambiguous nature of the nurse practitioner role, whilst being noted in one of the case study propositions, was not initially planned as a discrete interview topic within the semi-structured interview schedule, instead participants were asked to reflect on their comparative experiences of consulting with nurse practitioners and GPs in order to see what differential perceptions they would reveal. However, the topic, was raised, without prompting, by patient participants in the initial two interviews, so it was subsequently pursued as a discrete topic of enquiry in the remainder of the interviews for both patients/carers and nurse practitioners. This theme addresses the research question of: What are patients', carers', and nurse practitioners' perceptions of the social status of the nurse practitioner role?

An example of the perceived ambiguity of the nurse practitioner role was provided by patient 1.10, when she said she was uncertain about whether to see a nurse practitioner or GP for different medical problems, which also links to previously noted clinician role demarcation for minor versus serious illness noted in the nurse practitioner-GP comparisons coding node:

> "*I am still unsure when I would ask for a doctor and when I would ask for a health care assistant [sic] [nurse practitioner]. It is difficult to judge how ill you are and what sort of diagnosis you are looking for". {Patient 1.10}*

It must be noted patient 1.10 referred to the nurse practitioner as a 'health care assistant', which she did on three occasions in her interview even though she was actually talking about the nurse practitioner. This is perhaps an illustration of her perceptual uncertainty of meaning of the nurse practitioner role.
Despite this expressed misperception patient 1.10 did correct herself and subsequently referred to the 'nurse practitioner'. She went onto say that with experience of seeing the nurse practitioners she had developed more confidence in the role and would not necessarily now always insist on seeing a doctor:

> "*…I am more confident to go straight to a nurse practitioner than I would have been before, whereas before, I might have dug my heels in and insisted on seeing a doctor". {Patient 1.10}*

The mother of child patient 2.9 also expressed a sense of vagueness about the precise nature of the nurse practitioner role when first asked about the differences between an nurse practitioner and a GP:

> *"Well probably I just have a vague idea; I haven't got any clear idea". {Mother of child patient 2.9}*

When asked further about the nurse practitioner role the mother of child patient 2.9 confirmed she knew the nurse practitioner was not a doctor, but that she also knew the nurse practitioner could perform similar clinical activities to that of a doctor.

Patient 3.5 also said she did not have a precise idea of what the nurse practitioners actually were, but did recognise they had a high level of education, and that they were not quite the same 'status' as a doctor:

> *"Not precisely, no I don't [know what the nurse practitioners actually are]. I do know there's high level of learning involved for them and obviously [they are] not doctor status …but I mean quite almost I think, they must do as much studying. It seems to be more on the job rather than go to hospitals, university…" {Patient 3.5}*

Patient 3.5 went onto say that it is easy to get confused about the different clinicians' role titles, but that similarly to patient 1.10 she had also learnt through experience which clinician type she should see for different medical problems at Lime Tree Way.

Patient 2.10 also defined the nurse practitioners by their presumed comparative status to doctors, and also to general nurses, such as the practice nurse:

> *"No, I know that they're nurse practitioners; I know what I go and see the nurse there for; the general nurse. I'm aware that the nurse practitioner is an in-between, I guess, between a nurse and the doctor, I'm presuming". {Patient 2.10}*

Other patients indicated they felt they had a clear idea about the nurse practitioner role, such as patients 2.8 and 3.6:

> *"Yes, I do understand [the nurse practitioner role], I know they can diagnose and they can give medication". {Patient 2.8}*

> *"I understood that they're well paid and they can prescribe medicines and sign prescriptions as much as a doctor…"* {Patient 3.6}

When asked about possible perceptual ambiguity of the nurse practitioner role nurse practitioner 1 said clarifying the nurse practitioner role was an ongoing concern which could still confuse patients:

> *"I think that is still an issue. Not just here [Lime Tree Way], I think all over …because we know that we are still trying to clarify our role. Understandably because of that, patients will be confused".* {Nurse practitioner 1}

Nurse practitioner 1 also commented that aside from difficulties in defining the nurse practitioner role in comparison to a doctor's role, some people had difficulties ascertaining the discrete difference between the practice nurse role and the nurse practitioner role, with the terms 'nurse practitioner' and 'practice nurse' being used synonymously, which she found quite frustrating:

> *"…sometimes it is so frustrating. You might be out somewhere, or just out socially, and they say, 'So you are a practice nurse then?' No it's not. Then sometimes I think, oh I can't be bothered to explain the difference now".* {Nurse practitioner 1}

In contrast nurse practitioner 2 conceptualised the perceived ambiguity of the nurse practitioner role in a different way, recognising that as the role is not tightly defined in the UK, it has resultantly allowed for a wide scope of nurse practitioner practice:

> *"I do think probably that the fact the role's not incredibly tightly defined has allowed us to push the boundaries … if the role were incredibly tightly defined, perhaps we wouldn't be here having this conversation".* {Nurse practitioner 2}

Nurse practitioner 2 went onto say that apart from patients being confused about the nurse practitioner role; nurse practitioners themselves may feel a sense of ambiguity about their role:

> *"Mind you, if I'm honest, sometimes I think it's difficult, you know, what are we, who are we, what are we trying to do? Do we really know? It's tricky, isn't it?"* {Nurse practitioner 2}

Nurse practitioner 2 elaborated that an important component of defining any clinical role is being aware of where personal role boundaries are:

> "…I think ah, that's it, I've reached my boundary [when working as a nurse practitioner]. Of course, the important thing about the nurse practitioner role is in fact, any clinician, [is] that you understand where your boundaries are". {Nurse practitioner 2}

Nurse practitioner 3 took a further different tack on the question of nurse practitioner role ambiguity when she commented on sometimes being called 'doctor' at the end of her consultations, despite introducing herself as a 'nurse practitioner'. She said that previously she had corrected patients when they her called 'doctor', but had more recently stopped doing that as she felt doing so could 'destroy' the therapeutic effect of the consultation interactions:

> "…I always feel I'm cheating a little bit when they call me doctor, but I spent the first …four years here [at Lime Tree Way] saying, 'Hi my name is …, I'm a nurse practitioner', and at the end of the consultation they'd say, 'Thank you doctor'…if they said, 'Hello doctor', and you corrected them, that would destroy the whole consultation, so then I just stopped it altogether [correcting being called 'doctor']…" {Nurse practitioner 3}

Nurse practitioner 3 then stated she felt many patients were 'ambivalent' about the nurse practitioner role, but she did also recognise some of them may understand the role:

> "So yes, patients are ambivalent; they just don't know what we're about, they really don't. There's a certain percentage do [know about the nurse practitioner role]". {Nurse practitioner 3}

Nurse practitioner 3 also observed that from a historical perspective doctors had traditionally always run general practice clinics, and that to have nurse practitioners in that role at Lime Tree Way was relatively unique, and accordingly that traditional historical perspective was probably an underlying source of continuing confusion for patients.

Another source of data to consider here is the notes from the field journal where it commented that the nurse practitioner role was, to an outsider looking in, relatively well advertised and explained to patients/carers by Lime Tree Way. All the nurse

practitioner wore name badges with their clinical role indicated on them. Both the clinic's information leaflet and its website clearly indicated the clinic was staffed by nurse practitioner and explained what the nurse practitioner role was and its purpose. In the waiting room there was a noticeboard indicating the staff names and role types on daily duty, and there was also a photo gallery of the entire clinic's staff denoting their names and roles next to the reception area. Furthermore, it was observed in the video recorded consultations the nurse practitioner introduced their clinical role to patients they were not familiar with. I also observed the clinic's receptionists, when booking appointments for patients, usually indicated to patients that they would be seeing a nurse practitioner. Yet despite all this nurse practitioner role information provision some patients still expressed uncertainty about the nurse practitioner role in their interviews, and also the nurse practitioner themselves recognised some patients remained confused about the precise nature of the nurse practitioner role.

Summarily *Nurse practitioner role ambiguity* can be seen to represent the ongoing perceptual uncertainty existent amongst some patients/carers and the nurse practitioner themselves regarding the precise function and status of the nurse practitioner role. However, it must be acknowledged all the patient/carer interview participants had at least a vague understanding of the nurse practitioner role, but this understanding was not as concrete as their intrinsic, enduring understanding of a doctor's role. This sense of ambiguity may also have been reflected in many of the patients'/carers' previously discussed perceptions that they should see a nurse practitioner for 'minor' medical problems and a GP for 'serious' medical problems, which would indicate they perceived a boundary or ceiling existed to the plausible extent of the nurse practitioners' clinical role capabilities.

4.5.5 Creating the impression of time

The theme of '*Creating the impression of time*' arises from the sense conveyed by many patients/carers in their interviews that they felt the nurse practitioner had more time available to see them and that they did not feel 'rushed' when consulting with one of the nurse practitioners. This sense of increased time in turn led to more detailed consultation discussions occurring, which the patients/carers felt were more related to their agendas. This theme addressed the research question of: What are patients', carers', and nurse practitioners' impressions of the time length durations of nurse practitioner consultations?

For example patient 3.5 observed the nurse practitioner were very good at conveying the impression they had time to see her:

> *"…they're very good at giving you the impression they have all the time in the world for you…they don't rush you out…they're quite prepared to sit and talk to you". {Patient 3.5}*

Patient 3.5 also said that when she saw a doctor she felt they were very busy and that you should not 'waste' their time and should aim to get in and out of a doctor consultation quickly:

> *"…you feel as though a doctor is busy and you can't waste his time all the time, you've got to [be] in and out". {Patient 3.5}*

Patient 2.4 also commented on feeling rushed when consulting with a doctor, which was related to the pressures of doctors' time:

> *"Sometimes you feel doctors that you can be a little bit rush[ed], because obviously they've got to see so many …people, and their time is limited, and you do feel like you're always imposing and taking up their time, once you're there". {Patient 2.4}*

Patient 3.6 corroborated the sense of not feeling rushed when seeing the nurse practitioner and said there was time to look at her problem 'properly':

> *"…I felt like I wasn't rushing, that she checked it properly and she didn't dismiss it". {Patient 3.5}*

Patient 2.2 noted that he did not feel like his consultations with the nurse practitioner were closed prematurely and that he could extend them if required:

> *"They don't mind spending another 5 minutes asking [and answering questions} – they don't say, 'Oh no your time is up, off you go'". {Patient 2.2}*

Patient 1.3 also noted time existed in the nurse practitioner consultations for fuller discussions, beyond the narrow confines of solely medical matters, which in turn supports the previously discussed lifeworld presence in the consultations:

> *"They should allow the time to ask how you are and what things are going on and that sort of stuff, which generally [nurse practitioner 1] does anyway…" {Patient 1.3}*

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The nurse practitioners were asked about the patients saying they felt they had more time when seeing a nurse practitioner. In response nurse practitioner 1 said she encouraged the patients to vocalise their concerns and tried not to rush them:

> "I always try never to rush a patient. I guess that might be a nursey [sic] thing…but it does get hard when you are pushed for time or running over [the appointment slot time], but I still think we are quite good at that. I always try and allow the patient time to express what they are trying to say. Make them feel that they have told you everything as well". {Nurse practitioner 1}

Nurse practitioner 1 then elucidated the perceived benefits of creating the impression of having time for patients:

> "…the patient is going to feel that they've got what they wanted, or they have managed to say, you know talk about their problems". {Nurse practitioner 1}

Nurse practitioner 3 noted that time constrained 10-minute appointment slots can be difficult to manage and that to do so successfully required the combined application of her clinical reasoning skills and experience in order to assess patients medical problems, whilst concurrently allowing them to express their concerns. Similarly nurse practitioner 2 noted taking time to listen to a patient's concerns; even though they might only have 10-minute appointment slot it can actually speed up a consultation as active listening can aid a quicker mutual understanding of the patient's needs:

> "So it was quite a quick consultation, it didn't take very long …because I listened and then verbalised what I was thinking". {Nurse practitioner 2}

Nurse practitioner 2 went onto say that if a patient needed longer, particularly in the shorter 10-minute same day appointment slots, she would give them longer, and sometimes just allowing the patient freedom to speak can create the illusion of more time being available:

> "I suppose, on-the-day [same day] appointments, if a patient needs longer, I will give it. Hopefully, by allowing the patient to say their bit, you're giving them an illusion of time, because there's nothing worse than butting in your patient and made them feel that they haven't had a very good consultation". {Nurse practitioner 2}

It is important to recognise this representative theme is more about the nurse practitioners creating the illusion or impression of time rather than them actually having extended consultation times. The previous analysis of the video recorded consultation time length analysis showed the median time of 10-minute appointment slot consultations was 9.3 minutes and for 15-minute appointment slot consultations was 13.4 minutes. So the nurse practitioners were more or less adhering to the allocated appointment slot times in their consultations, yet were still managing to convey the sense of having time for the patients. This finding from the interviews is also supported by the questionnaire findings. In the two items on the questionnaire that related to consultation time evaluations 100% of respondents either agreed (n=18) or strongly agreed (n=49) they were satisfied with the amount of time the nurse practitioner spent with them, and similarly 95.5% of respondents either agreed (n=21) or strongly agreed (n=43) the nurse practitioner was not rushed.

In contrast to the 15-minute long pre-booked nurse practitioner appointments all the GP appointment slots at Lime Tree Way, which are all pre-booked appointments, are 10-minutes long. So for pre-booked appointments the Lime Tree Way patients do have 5-minutes longer available when they see a nurse practitioner compared to seeing a GP there. The findings comprising this themes are similar to those noted by Williams and Jones (2006) who also found the patients in their interview-based study of nurse practitioner consultations appreciated the sense of increased time they felt they had when consulting with a nurse practitioner in comparison to a GP. In Williams and Jones (2006, p. 190) study the nurse practitioner's consultation time lengths were reported "an average of 10-15 minutes", whilst for the GPs at their study's clinic, Williams and Jones (2006, p. 190) said "On average, GPs in the practice devoted 4-6 minutes to each consultation", which, as with Lime Tree Way, is a shorter time span than was available for the nurse practitioner.

4.5.6 Expectations for safety netting

In the theme of '*Expectations for safety netting'*, or making post-consultation contingency plans in case the clinician is either uncertain or wrong about their initial diagnosis or selected therapy, relates to the expectations many patients/carers expressed that the nurse practitioners would seek a further opinion from a GP if needed. It also comprises the patients/carers perceived arrangements for post-consultation follow-up, and the nurse practitioners related responses to managing

clinical uncertainty. This theme addresses the research question of: What are patients' and carer' expectations of consulting with nurse practitioners?

Patient 2.8 conveyed the sense the nurse practitioners would consult with a GP colleague as needed, which resultantly helped her feel confident in seeing the nurse practitioners for perceived 'serious' problems:

> *"I would probably, in the first instance; I would talk it through with them and then see from there. Because I know that they consult, I know that [Nurse Practitioner 2} and that will always consult with colleagues". {Patient 2.8}*

Patient 3.6 also expressed a similar view that if needed the nurse practitioners would seek a further opinion:

> *"…I'm quite confident if there's something they [the nurse practitioners] needed to double check or have a doctor come into the consultation, they could do that". {Patient 3.6}*

Patient 1.10 commented that if she was uncertain about how ill she was, she would book an appointment with a nurse practitioner and then expected to be referred to a GP if needed:

> *"I would just book for a health care assistant [sic] [nurse practitioner] and then they would refer me to the, I suppose, in-house GP, if they felt the need". {Patient 1.10}*

This expectation amongst patients that nurse practitioners, when feeling uncertain would consult with a medical colleague, has also been reported in Barnes *et al.'s* (2004) previously reviewed study of patients' perceptions of clinical uncertainty in nurse practitioner consultations.

Aside from perceiving that the nurse practitioners would seek further medical advice if needed, some patients also expressed a view that the nurse practitioners made it clear it was permissible to return for further assessment if needed, for example, if a prescribed treatment did not work:

> *"… [nurse practitioner 1] did say if it did not work out, to come back in again". {Patient 1.5}*

All the nurse practitioners commented on the link between clinical uncertainty, that is to say not being certain about what either is wrong with a patient or how to proceed

with their treatment, and discussing such cases with a GP. For example nurse practitioner 1 said:

> "I usually explain that … [if] I am not happy to do or don't know, I will send them to a GP, always. I think generally here [Lime Tree Way] they [the patients] know [that]". {Nurse practitioner 1}

Nurse practitioner 3 discussed the link between clinical experience, and being able to manage uncertainty so the patient feels comfortable, and the need to highlight discussion of uncertainty with clinical colleagues to patients/carers:

> "I think managing the uncertainty comes with experience, because you know how to deal with – as you get older there's almost nothing you haven't come across and I think when you're inexperienced …you haven't got the way to actually mask it, to make the patient feel comfortable. But if you're uncertain … I do say, 'Well let me discuss it with my colleague'. {Nurse practitioner 3}

Nurse practitioner 2 also noted she would discuss any clinical uncertainties she had with a GP colleague, but also noted in that situation her GP colleagues would often not know much about the patient presentation in question and would refer on to a specialist:

> "…you say, 'I haven't come across that at all' …I'll ask the GP to have a look at this patient…usually I find the GP says, 'Oh my God, I don't know anything about that, I'll have to refer to the specialist'…" {Nurse practitioner 2}

So in the theme of *Expectations for safety netting* it can be seen that part of the sense of patients/carers feeling comfortable in seeing the nurse practitioners arises from their belief that if the nurse practitioner felt uncertain about their presenting problem they would discuss their case with a doctor. This finding is further supported when looking at the interview participants' questionnaire responses to the question of whether or not they thought their case would be discussed with a doctor; seven interview participants thought it would be, three participants said no, and one participant was uncertain. All three nurse practitioners confirmed this process of safety netting is overtly discussed with patients/carers in order to provide them with further reassurance.

4.6. Summarily comparing and representing the findings of the quantitative and qualitative data analyses

One of the most popular options for merged data analysis comparisons in mixed methods studies are "…side-by-side comparisons in a … summary table …" followed by merged interpretation of the findings in a discussion (Creswell and Plano Clark, 2011, p. 223). Accordingly in this mixed methods case study a summary table (Table 4.28) has been included at the end of this findings chapter to summarily show how the parallel quantitative and qualitative analyses have been synthesised via the usage of research questions converging on the same topic of enquiry, which have been applied to both the quantitative and qualitative data strands. This summary table is then followed by a diagrammatic representation of the emergence of the findings arising from the convergent parallel mixed methods approach presented in Figure 4.4, which comprises illustrative main findings from each of the data strands, and the subsequent integrated findings arising from converged findings. This diagramatic representation has been adapted from an exemplar of displaying the mixing of findings in mixed methods research presented by Dures *et al.* (2011).

Table 4.29 provides a concluding summary of this chapter and presents briefly the answer arising from this study in relation to each of the research questions. The answers shown in shaded green cells arise from convergence of quantitative and qualitative data. This convergence occurs in the discussion chapter so more complete answers to these questions will be found in chapter 5.

The ensuing discussion chapter then discursively converges the qualitative and quantitative findings together in relation to the case study's aims and objectives.

Table 4.28: Summary comparative representation of the synthesis of the quantitative and qualitative analyses in the convergent parallel mixed methods case study design

Discrete quantitative data analyses ⇨	Converged quantitative data analyses ⇨	Convergence of qualitative and quantitative data analysis findings
Statistical analyses of questionnaire data measuring patients' expectations, satisfaction, and enablement. Quantified frequency analyses of the interactions and timings of the video recorded nurse practitioner consultations.	Usage of research questions answered by converged quantitative data analysis of findings from both questionnaires and video recorded consultations: • Comparatively analysing interaction styles and patient satisfaction and enablement. • Comparatively analysing consultation time lengths and interaction styles. • Comparatively analysing consultation time lengths and patient satisfaction and enablement.	Usage of a research question requiring discrete collection and analysis of both quantitative and qualitative data for the concomitant investigation of the same topic, which is then further converged in the ensuing discursive interpretation within the discussion chapter: • Determining the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations. In the discussion chapter all of the discrete and converged findings of the quantitative and qualitative data analyses are then merged to discursively address the aims and objectives of the case study within its conceptual framework of sociological critical consultation interaction analysis.
Discrete qualitative data analyses ⇨	**Converged qualitative data analyses ⇨**	
Emergent and computerised thematic analyses of the interviews with the patient, carer, and nurse practitioner participants of the video recorded nurse practitioner consultations.	Usage of research questions answered by qualitative data analysis which converges on data also scrutinised via quantitative data analysis: • Eliciting participants' perceptions of nurse practitioner consultations regarding interaction styles, including usage of lifeworld (patient-centred) information. • Eliciting participants' impressions of the time length durations of nurse practitioner consultations. • Eliciting patients' and carers' expectations of nurse practitioner consultations.	

Figure 4.4: Diagrammatic summary representation of the emergence of the findings arising from the convergent parallel mixed methods approach

Data collection	Data analysis	Illustrative main findings	Integrated findings arising from converged findings

Video recorded consultations → Quantified frequency analysis (RIAS) →

- Patient centred style interactions occur significantly more frequently than biomedical style interactions.
- No significant differences in verbal dominance rates between interactants.
- 10.97 minute mean consultation duration.

Questionnaires → Statistical analysis →

- Patients expect nurse practitioners to use advanced clinical skills.
- Patients had an ambiguous perception of the nurse practitioner role.
- Patients were highly satisfied and enabled after their consultations.

Interviews → Thematic analysis with *NVivo* →

- Consulting style of nurse practitioners.
- Nurse practitioner role ambiguity.
- Nurse practitioner-GP comparisons.
- Lifeworld content or style.
- Creating the impression of time.
- Expectations for safety netting.

Integrated findings arising from converged findings:

- Favourable outcomes of consultations in terms of increased patient centredness, and high levels of satisfaction and enablement, achieved in comparatively short consultation times (from video and questionnaire data, see discussion sections 5.2 and 5.4).

- Ambiguous perceptions of the nurse practitioner role and uncertain expectations for medical doctor involvement in nurse practitioner consultations (from interview and questionnaire data, see discussion section 5.3.1).

- Patients and carers having a sense of more available time in nurse practitioner consultations even though those consultations are not necessarily longer (from interview, questionnaire, and video recorded data, see discussion sections 5.3.3 and 5.4).

- Incorporation and appreciation of lifeworld style interactions in nurse practitioner consultations (from interview and video recorded data, see discussion sections 5.2 and 5.3.5).

Table 4.29: Summary of findings in relation to each research question (answers shaded in green are developed more fully in the discussion chapter).

Propositions	Research questions	Summary of answers
1. Nurse practitioners emphasise patient-centred styles of communication in their consultations.	Q1.1 Do patient-centred styles of communication occur more frequently than biomedical styles of communication in nurse practitioner consultations?	Yes, patient-centred styles of communication occur significantly more frequently than biomedical styles communication.
	Q1.2 Do nurse practitioners and patients use similar frequencies of patient-centred and biomedical interaction styles in their consultations?	Nurse practitioners and patients use similar frequencies of patient-centred interactions. Nurse practitioner use significantly more biomedical style interactions than patients.
	Q1.3 Where in the consultation do nurse practitioners and their patients use patient-centred interactions and where do they use biomedical style interactions?	In the opening and closing phases of the consultations patient-centred interactions occurred significantly more frequently. In the history taking and exam phases no significant differences in the frequency usage of either patient-centred or biomedical style interactions was noted.
2. The discrete features of styles of communication and social interactions used in nurse practitioner consultations have not been fully elucidated and nor have patients', carers', and nurse practitioners' views of such styles of communication.	Q2.1 What are the discrete features of the communication processes and styles of interaction occurring in nurse practitioner consultations?	The discrete communication processes of nurse practitioner consultations are characterised by social interactions showing high levels of agreement, social conversation, and exchange of information related to medical conditions and therapeutics. Higher levels of question-asking by patients are seen in nurse practitioner consultations in comparison to those seen in previous studies of medical doctor consultations. Neither nurse practitioners nor patients are more verbally dominant over each other in their consultations.
	Q2.2 What are patients', carers', and nurse practitioners' perceptions regarding the inclusion of lifeworld information in nurse practitioner consultations?	Many patients, carers, and nurse practitioners view the inclusion of lifeworld information in their consultations as being a positive feature of communication within their consultations. However, not all patients and carers are of the same opinion and accordingly minimise the inclusion of lifeworld information in their consultations.

Propositions	Research questions	Summary of answers
	Q2.3 What are patients', carers', and nurse practitioners' perceptions regarding the interaction styles used by nurse practitioners in their consultations?	Patients, carers, and nurse practitioners perceive the interaction styles used in their consultations as facilitating opportunities for their active participation, underpinned by clear explanatory communication, and patients and carers have a sense of being listened to, and consequently feel their concerns are being directly addressed.
3. Patients have uncertain expectations of the nurse practitioner consultation and an ambiguous understanding of the nurse practitioner role.	Q3.1 What are patients' and carers expectations of consulting with nurse practitioners?	Patients and carers do expect nurse practitioners to be able to utilise advanced clinical practice skills such as diagnosis and prescribing, however there are more mixed perceptions regarding the medical supervision of nurse practitioners, and the extent of their clinical capacities.
	Q3.2 What are patients', carers', and nurse practitioners' perceptions of the status of the nurse practitioner role?	Many, though not all patients and carers, have an ambiguous perception of the nurse practitioner role, as they are not quite clear whether nurse practitioners are functioning at a level a nurse would normally be expected to work at, or whether they function at a similar level to that of a medical doctor.
	Q3.3 Do patients' and carers' expectations (independent variable) of consulting with nurse practitioners affect their subsequent evaluations of post-consultation satisfaction (dependent variable)?	Patients who expect a nurse practitioner to diagnose their presenting medical problem have significantly higher levels of general satisfaction than those who are not expecting a nurse practitioner to diagnose their presenting medical problem.
	Q3.4 Do patients' and carers' expectations (independent variable) of consulting with nurse practitioners affect their subsequent evaluations of post-consultation enablement (dependent variable)?	Pre-consultation expectations had no significant effects on post-consultation enablement.
4. Patients will report high levels of satisfaction with nurse practitioner consultations.	Q4.1 From a UK perspective how satisfied are patients and carers after consulting with nurse practitioners when satisfaction is measured with an instrument specifically devised for measuring satisfaction with those types of consultations?	Patients and carers appear to be highly satisfied after consulting with nurse practitioners when satisfaction is measured with an instrument specifically devised for measuring patient satisfaction nurse practitioner consultations, with minimal levels of variability.

Propositions	Research questions	Summary of answers
5. Patients will report high levels of enablement and those patients with the highest levels of satisfaction will be most enabled.	Q5.1 How enabled are patients to manage their own health after consulting with a nurse practitioner?	Patients are highly enabled.
	Q5.2 Do the outcome variables of patient satisfaction and patient enablement after consulting with nurse practitioners have any associative relationship?	There is an associative positive relationship between general satisfaction and patient enablement, and there is a tendency for both variables to increase together.
6. Levels of satisfaction and enablement are affected by the interaction style with patient-centred styles of interaction increasing satisfaction and enablement.	Q6.1 Do interactions styles (independent variables) used in nurse practitioner consultations affect subsequent patient satisfaction and enablement (dependent variables) after consulting with nurse practitioners?	Interaction styles used in nurse practitioner consultation show no significant effects on post-consultation patient satisfaction or enablement.
7. Patients have a sense of more time in the consultation when they consult a nurse practitioner.	Q7.1 What is the mean time length of nurse practitioner consultations?	The mean time length of nurse practitioner consultations in this case study is 10.97 minutes.
	Q7.2 Does the frequency occurrence of different communication and interaction styles in the consultations affect the time length of nurse practitioner consultations?	The time lengths of nurse practitioner consultations do not affect the frequency occurrence of styles of communication and interaction in those consultations.
	Q7.3 Does the time duration (independent variable) of nurse practitioner consultations affect the outcomes of patient satisfaction and enablement (dependent variables)?	No significant relationship has been found between the time lengths of nurse practitioners and levels of post-consultation satisfaction and enablement.
	Q7.4 What are patients', carers', and nurse practitioners' perceptions of the usage of time in nurse practitioner consultations?	Patients have a sense that nurse practitioners have more time available to see them and that consequently they do not feel rushed when consulting with a nurse practitioner, and are also satisfied with the amount of time they feel they have in their consultations. Nurse practitioners recognise the necessity for creating a sense of time in their consultations even when they are practically constrained by consultation appointment scheduling.

Chapter 5 Discussion

5.1 Overview of the discussion chapter

This chapter critically discusses and integrates the findings of the quantitative and qualitative data analysis together with existing literature to produce a more complete understanding of their conceptual linkages and contextual meanings. In a convergent parallel mixed methods design where different data sets have been collected and analysed mostly independently, such as in this case study, the merged discursive interpretation of the different findings provides the "primary point of interface for mixing" of findings to address research aims and objectives (Creswell and Plano Clark, 2010, p.74). To provide coherence to the chapter the existing empirical evidence and theories that relate to the merged interpreted findings are discursively interpreted within the context of the study's aims and objectives, in relation to the conceptual framework of sociological critical consultation interaction analysis.

The chapter begins with a discussion of the distinct micro-sociological perspectives pertaining to the observed communication processes and social interactions of nurse practitioner consultations. This is followed by accounting for the way nurse practitioners interact in their consultations via a consideration of the macro-sociological reasons for the occurrence of the discrete communication processes and social interactions of nurse practitioner consultations. An explication of the reasons for the active presence of the lifeworld in nurse practitioner consultations is then considered. The factors influencing patient satisfaction and enablement in nurse practitioner consultations are then explored. The concluding part of the chapter considers the identified communicative features as determinants of shared decision making processes in consultations.

5.2 What is distinctive about the communication processes and social interactions in nurse practitioner consultations?

This section contextually pinpoints the distinct communication processes and interaction styles used by the nurse practitioner and patients / carers in the consultation utilising findings from both the RIAS coding and thematic analysis of the interviews.

The findings of this case study have shown that in the observed nurse practitioner consultations, patient-centred style interactions were used significantly more frequently than biomedical style interactions (Table 4.19). Nurse practitioners and patients / carers were both found to have no significant differences in their overall respective usage of patient-centred interactions. Furthermore a larger proportion (66.7%) of the consultations were conducted in a congruent interaction style, meaning that both interactants used the same style of interactions, with the majority of those congruent consultations comprising patient-centred style interactions (Table 4.20).

Within the consultations there was sharing of verbal dominance as neither type of interactant was significantly more dominant in their frequency usage of interactions. However on analysis of the discrete interactions in the observed consultations, it was found the nurse practitioners used significantly more interactions which are used to control the sequence of a consultation; namely transition words and giving orientations or instructions. This comparative finding indicates that whilst the nurse practitioners and patients / carers were found to be using similar frequencies of interactions, the nurse practitioners retained control over the sequence of interactions from the opening to the closing phases of the consultations. In this interpretation of the findings nurse practitioners can be seen to be providing an overt guiding sequence of interactions to their consultations, such as discretely signposting the different phases of consultation interactions from opening to closing, and directing the patients / carers in the exam phase. However nurse practitioners do not necessarily verbally dominate the interactions within those sequences. They often allow patients and carers to actively participate by allowing them to introduce interactions related to information giving, and relatedly to ask more questions, particularly open-ended questions related to medical conditions, therapeutics, and psychosocial information (Tables 4.16 and 4.17).

Question asking in consultations has been characterised as a method of social control in consultations, allowing the dominant question-asker to assert control over interactions (Defibaugh, 2014a). Conversely, question-asking by patients or carers can be viewed as an indication of the extent of patient activeness in a consultation, with more question-asking by patients or carers indicating higher levels of participatory interactions (Peräkylä *et al.,* 2007). Previous studies of consultation interactions have found that clinicians, particularly medical doctors, often direct question-asking in consultations (Roter and Hall, 1992). Rates of question-asking

amongst patients / carers have been noted to be only up to 10 per cent of all questions in a consultation, with some studies putting the figure as low as 3 per cent (Roter, 1984; West and Frankel, 1991). In this study the observed rates of patient / carer question-asking is higher, 19.9% of questions asked (section 4.4.2), almost double the rate noted in previous studies. Based on the premise of Peräkylä *et al.* (2007) this potentially provides evidence of increased patient participation in consultations.

In relation to the five phases of the consultations (opening, history, exam, counsel, and closing) it was seen that patient-centred style interactions were used significantly more frequently in the opening phase of the consultations (Table 4.21). This finding is expected as the typical types of interaction occurring in this first phase were personal remarks or social conversation, and open-ended questions from the nurse practitioners for establishing the agenda of consultations. The interview findings also revealed the opening phase as an important time for the interactants to establish social affinities with each other, such as remembering and commenting on previous attendances at the beginning of consultations, as they had often consulted together on previous occasions. This opening phase process of remembering and knowing each other has also been noted in previous nurse practitioner consultation communication research, such as Johnson (1993) reporting a nurse practitioner verbally recalling her prior understanding of a patient's previous problem in a new consultation with the patient. Similarly, Brykczynski (1989) has noted that nurse practitioners remembering patients provides a form of coordinated continuity of care, with a supportive relationship and trust being built up over a period of time, ensuring a sustained shared understanding of a patient's perspective.

In the history phases patient-centred style interactions occurred more frequently than biomedical style but not significantly so (Table 4.21). On comparison of the nurse practitioners and patients / carers in the history phases, the nurse practitioners used patient-centred style interactions significantly more frequently than the patient / carers did (Table 4.22). Examples of such patient-centred styles of interaction used by the nurse practitioners were showing agreement or understanding and also back-channel responses, all of which are communication strategies used to encourage the other interactant to carry on speaking (Table 4.14). This is of particular importance to a clinician in the history phase of a consultation, when trying to elicit a coherent history from a patient or carer. This is because

encouraging the patient / carer to speak allows them to fully relate the story of their presenting problem (Launer, 2002). The interviews, in the theme of *Consulting style of nurse practitioners* in the sub-themes of *Patient / carer participation* and *Open consultation style* (section 4.5.1) , also demonstrated the history phases were times where the patients were given space to raise multiple agenda items. These multiple agendas were often elicited by the nurse practitioners using open initial questions, such as 'How can I help?', bolstered by back-channel responses from the nurse practitioners when the patients / carers spoke, which encouraged the raising of any issues patients / carers wanted to discuss. This multiplicity of agenda items is also revealed in eight of the 30 (26.6%) video recorded consultations across the different nurse practitioners having two or more presenting problems being dealt with. Similarities to this open style of consulting have also been noted in Kleiman's (2004) identification of 'openness' in nurse practitioner consultations with the nurse practitioners in Kleiman's (2004) phenomenological study being ready and receptive to listen to their patients' concerns. However, it must be noted that open initial questioning styles are not unique to nurse practitioner consultations having also been noted in Paniagua's (2011) discourse analysis study of both nurse practitioner and GP consultations. During the observed consultations in response to this elicitation of multiple agenda items the patients / carers used biomedical style interactions significantly more frequently in the history phases; this mainly comprised giving information about medical conditions and therapeutic regimens.

The interview findings, in the theme of *Consulting style of nurse practitioners* in the sub-theme of *Nurse practitioner interaction skills* (section 4.5.1), also determined that the nurse practitioners' interaction skills encompassed attributes encouraging patients to speak in a two-way conversation, rather than the consultations being history taking sessions solely focused on nurse practitioner question-asking and patient-provided answers. These attributes included: a combined usage of verbal and non-verbal communication styles facilitating a sense of personal interest in their patients, including the application of active listening skills which encourage patients to make revelatory comments; and a recognition that focusing on communication strategies in consultations, or more simply how things are done, as opposed to emphasising the application of medical knowledge, is key to promoting patient-focused consultations whereby patients feel comfortable to express what they actually want to say and to ask questions. Such communication strategies have been characterised in previous exemplars of nurse practitioner practice as "healing begins with listening", in which patient assessments are more attuned to patients

relating what is going on in their lives, with the nurse practitioner asking for clarifications as needed, instead of using interrogative interaction styles (Brykcynski, 2012, p.559).

The exam phases were characterised by less frequently coded interactions occurring than in the history or counsel phases, though neither patient-centred nor biomedical style interactions were used significantly more frequently. In the exam phases the nurse practitioners and patients / carers were found to be using similar frequencies of patient-centred style interactions, such as showing agreement or understanding. The nurse practitioners, however, used significantly more frequent biomedical style interactions in the exam phase, particularly giving orientation or instructions which were used for guiding the patients during clinical examinations (Tables 4.16 and 4.22). On watching the video recorded consultations it was logged in the field journal that many of the patients were examined by the nurse practitioners, particularly those presenting with acute problems in the same day appointments. Those examinations were further noted to be often concurrently supported by what is known in the consultation communication research literature as 'online commentary' (Mangione-Smith *et al.,* 2003), whereby the nurse practitioners verbally reported what they were doing and were finding during physical examinations of patients. Those types of interactions were coded as the biomedical style interactions, of either 'Gives orientation, instructions' or 'Gives information – medical condition'. In the theme of *Consulting style of nurse practitioners* in the sub-theme of *Integrated clinical reasoning* (section 4.5.1), reporting negative findings, that is to say findings where minimal or no clinical signs were noted, was seen by the nurse practitioners as providing reassurance to patients. Providing reassurance, such use of online commentary has been found to help manage patients' expectations of their chances of receiving medications, particularly so in relation to unrealistic expectations for receiving antibiotics (Mangione-Smith *et al.,* 2003).

Online commentary forms part of the process of *Integrated clinical reasoning*, noted as a sub-theme emerging from the interviews in the theme of *Consulting style of nurse practitioners* (section 4.5.1). This is a process used by all three nurse practitioners to verbalise their cognitive clinical reasoning to the patients and carers. Similar evidence of integrated clinical reasoning exists in prior studies of nurse practitioner interactions in consultations such as Paniagua (2009) where nurse practitioners thought aloud about their clinical reasoning, and also Brykcynski (1989) where nurse practitioners shared their clinical uncertainties with patients. The

benefits of overt clinical reasoning being an integral part of the consultation interactions were seen by the nurse practitioners in this current study in the 'Integrated clinical reasoning' theme as facilitating an improvement in patient / carer understanding of the imprecise nature of differential diagnoses that may be discussed with them, and also enhanced reassurance regarding their medical conditions and treatment plans.

In the counsel phases, where diagnosis (if required) and treatment planning occurs, patient-centred style interactions were overall used significantly more frequently than biomedical style interactions, typically comprising showing agreement or understanding by both interactants or personal remarks and social conversation (Table 4.22). On comparison with patients / carers, the nurse practitioners used biomedical style interactions significantly more frequently in the counsel phase (Table 4.22). Such interactions typically comprised giving information about medical conditions and therapeutics, and also counselling regarding therapeutic regimens such as discussing medicine to be prescribed. As with the exam phase of the consultation, the counsel phase incorporated overt clinical reasoning, particularly when the nurse practitioners discussed their reasoning related to differential diagnoses with the patients and carers (section 4.5.1). Counselling regarding medical conditions and therapeutic regimens, whilst being coded in RIAS as directive biomedical style interactions which are "…characterized by the intent to persuade, influence, direct or change [the patient's behaviour]" (Roter, 2011, p.48), typically in the observed consultations comprised components of negotiation over proposed treatment plans, rather than the nurse practitioners just telling the patients / carers what was to be done as an unalterable plan. For example in one of the post-consultation interview comments coded to the *Explanation, enablement, and information* sub-theme of the theme *Consulting style of nurse practitioners* (section 4.5.1), Patient 2.8 spoke of the negotiations she had with one of the nurse practitioners regarding delaying taking statins for treating hyperlipidaemia and instead initially trying alternative therapies and lifestyle interventions.

In the interviews all of the nurse practitioners spoke of the importance of negotiation strategies for encouraging patient / carer participation, which was revealed in the interview findings as being reliant on the nurse practitioners making the patients and carers feel comfortable to express their ideas, concerns, and expectations in the consultations. These linked ideas of feeling comfortable with the nurse practitioners and creating a safe space for disclosure have similarity with the theme of

'connection', noted by Kleiman (2004) where in her phenomenological study patients and nurse practitioners being comfortable with each other facilitated effective communication in consultations. In the sub-theme of *Patient / carer participation* of the theme *Consulting style of nurse practitioners* (section 4.5.1)*,* through putting patients at ease, patient and carer participation was seen to be encouraged via two-way negotiations over care planning, such as joint decisions on medicines management, clinical investigations, and onward referrals.

The ultimate aim of a clinical consultation is to jointly make a therapeutic decision for the benefit of the patient. In the counsel phases of the observed consultations the nurse practitioners were seen to make such therapeutic decisions in their consultations, but doing so collaboratively with their patients based on shared clinical reasoning, negotiation and explanation. During the counsel phases, via the process of shared clinical reasoning nurse practitioners were seen to be concurrently commenting on findings elucidated from history taking and clinical examinations. The nurse practitioners verbalised their contextual thoughts on clinical reasoning and differential diagnoses so that their consulting patients and carers could become cognisant of the clinically assessed nature of their presenting problems. The nurse practitioners, through permitting such an insight to their cognitions, enabled the patients and carers to develop a knowledge of presenting medical conditions from an 'insider' perspective. This insider perspective arises because in addition to the patients and carers 'lay' interpretations of health and disease, the nurse practitioners, via using overt clinical reasoning, frequently laid bare for the patients and carers the 'workings out' of their 'expert' biomedical interpretations of presenting medical problems and related therapeutics. In the sub-theme of *Explanation, enablement and information* of the theme of *Consulting style of nurse practitioners* (section 4.5.1)*,* collaboration was then seen to be bolstered by proffering clear explanations of differential diagnoses and therapeutics, which nurse practitioners were then seen in the RIAS coding findings to be augmenting by actuating opportunities for question-asking by the patients and carers. For example in the theme of *Consulting style of nurse practitioners* in the sub-theme of *Explanation, information, and enablement* (section 4.5.1) participants frequently spoke of the clear explanations they received form the nurse practitioners, which they felt were important to receive for improving their understandings of their medical conditions and related therapeutics.

In the closing phases of the consultations, as with the opening phases, patient-centred interaction styles significantly predominated. These closing patient-centred interaction styles were frequently coded as personal remarks or social conversation related to friendly gestures and goodbyes. Some biomedical style coded interactions did still occur in the closing phases, often related to the final parts of counselling regarding medical conditions and therapeutic regimens, whereby the nurse practitioners discussed follow-up plans including worsening and persisting signs of medical conditions which would prompt cause for concern, as was noted in the interviews in the theme of *Expectations for safety netting* (section 4.5.6).

Overall across all the interaction phases of the consultations patient-centred style interactions occurred significantly more frequently than biomedical style interactions. For both nurse practitioners and patients a large proportion of those patient-centred interactions comprised demonstrations of agreement between the nurse practitioners and patients / carers, with this agreeableness being accentuated by the frequently congruent styles of interaction seen in the consultations. In addition to showing agreement a further frequently occurring coded interaction for both nurse practitioners and patients / carers was personal remarks and social conversation, which was often where the participants' lifeworlds entered the consultations. By this entry of the lifeworld, I mean that in the interactions coded as 'Personal remarks and social conversation' the participants shared and empathetically corroborated their expressions of everyday life experiences, in the manner of a friendly conversation, as was pertinent to their requirements at the time of consulting. That is not to say the lifeworlds of the participants necessarily always formed part of every nurse practitioner consultation, because it was not always an observed constituent part, but a lifeworld oriented friendly conversation style was frequently a component of the observed consultation interactions, even when not discussing lifeworld-derived content. For example, in the interviews in the sub-theme of *Patient / carer participation* of the theme *Consulting style of nurse practitioners* (section 4.5.1), participants often spoke of the nurse practitioners conversing with them in a friendly style, and the friendly conversational styles of the video recorded consultations watched and initially reflected on, was noted in the field journal before any substantive RIAS coding occurred.

On the basis of this discursive interpretation, nurse practitioners do recurrently appear in this study to be open to the possibility of the lifeworld entering their consultations, whether that be either lifeworld interaction content or lifeworld

interaction styles, being introduced and integrated in their consultations, either by themselves or by the patients or carers consulting with them. This discursive finding related to lifeworld content supports previous research of the nurse practitioner consultation identifying lifeworld content and interaction styles as a component of those consultations (Brykcznski, 1989; Johnson, 1993; Barratt, 2005a; Kleiman, 2004; Paniagua, 2011). However, this current study extends the finding of lifeworld content further by emphasising that lifeworld styles of interaction can be an important component of nurse practitioner communication processes even when there is minimal lifeworld content being discussed.

It was found the nurse practitioners are able, as required, to combine patient-centred interaction styles with the collection and analysis of task-focused biomedical information. For example, the nurse practitioners used more patient-centred interaction styles than biomedical interaction styles in the history phases to help elicit biomedical information. This combination can be interpreted as a hybrid interaction style in which patient-centred oriented interactions are used by the nurse practitioners as a conduit to collect, analyse, and render biomedical information. This discursive finding supports previous research of the nurse practitioner consultation which has similarly found nurse practitioners utilise hybrid interaction styles such as in Johnson's (1993) identification of the hybrid 'voice of nursing', combining lifeworld and biomedical interactions. However the current study contends that these hybrid features of interaction can be as much about the style of interactions incorporating features of lifeworld discourse, as they can be about the content of those interactions integrating features of interactants' lifeworld experiences.

A final point of consideration in relation to the details of the interactions observed in the nurse practitioner consultations is that the significantly higher frequency of patient-centred style interactions are not necessarily dependent on lengthy consultation times, as the RIAS time data indicated the mean time length of the consultations was just 10.97 minutes, which is within the time range of the 10-15 minute booked appointment slots used for the consultations. The interview findings, in the theme of *Creating the impression of time* (section 4.5.5), also revealed the patient / carer participants felt the nurse practitioners were able to convey the impression of not being rushed in their consultations and also of having time for listening to patients' and carers' concerns, even within the confines of a short 10-minute appointment slot, when they do not necessarily have more time available. In

noting nurse practitioners are able to give the impression of not being rushed in their consultations and having time for listening to patients' and carers' concerns, this feature made some patients and carers think, as has been noted in this study, that their consultation time with a nurse practitioner is longer than that with a doctor. Though that may not necessarily be a correct interpretation on their part, as often the nurse practitioners often had the same appointment slot times as GPs, particularly so for same day appointments which at Lime Tree Way are all 10-minutes long. This finding of creating the impression of time and still utilising patient-centred interaction styles whilst working within the allocated time parameters of appointment slots, confounds the findings of earlier analyses of the time lengths of nurse practitioner consultations having lengthier consultation times then GP consultations, thus permitting more usage of patient-centred styles of interaction, such as Kinnersley *et al.* (2000); Venning *et al.* (2000); Horrocks *et al.* (2002); and Seale *et al.* (2006).

5.3 What accounts for the ways in which nurse practitioners consult?

Working from a macro-sociological perspective, this section discursively accounts for the previously identified micro-level communication processes and social interactions of nurse practitioner consultations. This macro-level of interpretation requires linkage of the case study findings to the wider social factors influencing societal attitudes towards the purpose of nurse practitioners. This macro-level understanding is situated in three linked interpretations of the study's findings, which underpin the discrete communication processes and social interactions of nurse practitioner consultations. These linked interpretations are: the perceived role ambiguity of nurse practitioners; patients' ensuing expressed preferences for doctors to deal with 'serious' medical problems and nurse practitioners to deal with 'minor' medical problems; and the social status of nurse practitioners. The subsequent discussion identifies that these linked interpretations derivatively determine nurse practitioner communication processes and social interactions whereby nurse practitioners 'pass' as credible nursing-based practitioners of medicine.

5.3.1 The perceived role ambiguity of nurse practitioners

From a macro perspective explicating the discrete communication processes and social interactions observed in nurse practitioner consultations begins with analysis of the ambiguous status of nurse practitioners. In this study the sense of ambiguity of the nurse practitioner role has emerged from the findings of both the interviews and questionnaires. The findings arising from the interviews in the theme of *Nurse practitioner role ambiguity* (section 4.5.4) have indicated that some of the patients / carers and the nurse practitioners themselves viewed the nurse practitioner role as being somewhat ambiguous in terms of the clinical purpose of the role and its relative positioning between nursing and medicine. The questionnaire findings on pre-consultation expectations showed that a significant proportion of patients expected the nurse practitioners they were consulting with to utilise advanced practice skills such as diagnosis and prescribing (Table 4.3). However, it was found many questionnaire respondents were unsure about the level of supervision nurse practitioners require to make clinical decisions as many of them thought the nurse practitioner would discuss their presenting medical problem with a doctor (Table 4.3). This questionnaire expectation finding, that their medical problems would be discussed with a doctor, did not significantly vary across same day appointments for simpler problems, or pre-booked appointments for more complex problems (section 4.3.2). This finding provides further evidence of patients' perceived ambiguity of the nurse practitioner role, as despite a statistically significant proportion of questionnaire respondents expecting the nurse practitioners to be using advanced practice skills such as diagnosis and prescribing, just over half of those respondents still anomalously thought the nurse practitioner would discuss their case with a doctor.

It is not known how many of the non-video recorded questionnaire respondents' presenting medical problems were discussed with a doctor, as their only participation in the study was completing the questionnaire. However none of the 30 video recorded patients had their medical problems discussed with a doctor. All of their presenting medical problems were independently managed by the nurse practitioners themselves, despite 16 of the video recorded participants expecting their case to be discussed with a doctor. These findings illustrate that even when patients/carers are expressly aware of the advanced clinical capabilities of nurse practitioners they still do not fully realise the autonomous nature of nurse practitioners' clinical decision making capacities. A question then arises as to why the perceived deference of nurse practitioners to doctors exists amongst some

people who consult with nurse practitioners. This perception may simply exist because some people just presume the clinical work of a nurse is directly supervised by a doctor, with this presumption possibly emerging from social structural discounting of the nurse practitioner role noted by Martin and Hutchinson (1999), which was previously discussed in Chapter 1 when defining the scope of the nurse practitioner role.

However, patients and carers sometimes believing their medical problem would be routinely discussed with a doctor after consulting with a nurse practitioner is not an accurate reflection of contemporary primary care practice. This is because nurse practitioners, such as the clinical participants of this case study, via gradual shifting of the boundaries of between healthcare professionals, are now essentially independently practising features of medicine on the same basis as GPs. This is because nurse practitioners are now similarly engaged in key aspects of primary care medical practice such as establishing differential diagnoses, prescribing medicines, and referrals to specialists, all whilst still being registered nurses, rather than being registered medical practitioners who would be normally expected to perform such activities (Prosser and Olson, 2013). However, this independent practising of medicine by nurse practitioners is neither widely acknowledged nor fully recognised in society, as the pre-consultation expectations findings of this study highlight (Hankins-Farber, 2007). This tension existing between the ambiguous perceptions patients and carers have of the function of the nurse practitioner role, and the actual everyday reality of nurse practitioner clinical practice links to the next interpretation of the macro-sociological perspectives of nurse practitioner consultations. This interpretation encompasses the level of severity of medical problems, as perceived by patients and carers, that doctors and nurse practitioners should respectively be dealing with.

5.3.2 Patients' expectations for doctors to deal with 'serious' medical problems and nurse practitioners to deal with 'minor' medical problems

In this study some patient/carer participants conveyed the view in the theme of *Nurse practitioner role ambiguity* (section 4.5.4) that the nurse practitioners were practising beyond the scope of a general nurse, but were not quite of the same calibre as a doctor. This perception was further exemplified when some of the patient/carer participants expressed the view, in the theme of *Nurse Practitioner –*

GP comparisons (section 4.5.2) that consulting with a nurse practitioner was fine for 'general' or minor illnesses, but they would prefer to see a doctor for more 'serious' problems. Similar findings have also been reported in the work of Redsell *et al*. (2007b) when looking at patients' accounts of the differences in nurses' and GPs' roles in primary care based on their experiences of consulting with either a nurse practitioner or GP. Redsell *et al.'s* (2007b) qualitative interview study revealed that nearly all of the 28 adult patients in the study expressed a preference to see a GP if they thought they had a more serious problem. However it must be noted the data in Redsell *et al.'s* (2007b) study was collected in 2004, before the changes in nurse prescribing, which enabled full access to the British National Formulary, which may have negatively affected the participants' views of the capabilities of nurse practitioners they consulted with as they were still having to get some prescriptions authorised and signed by a GP.

Conversely though, all the nurse practitioners in this study were independent nurse prescribers, most of the patients/carers were aware of this, and yet some patients still expressed the view that they would prefer to see a doctor for more serious illnesses. Further evidence of patients' ambiguous perceptions of nurse practitioner roles is provided by a survey of patients' knowledge of the role and scope of practice of nurse practitioners conducted with 244 participants sampled from a university in the USA presented by Price *et al.* (2015). This survey found that most respondents understood what a nurse practitioner was, but they were unsure as to the extent of the scope of practice of nurse practitioners. For example, 34.2% of respondents thought nurse practitioners were never allowed to write prescriptions, and 58.4% of respondents were of the opinion that nurse practitioners cannot practice independently of medical doctors, even though prescribing and independent practice are typical features of nurse practitioner delivered care in the USA (Price *et al*., 2015). Furthermore, supporting this study's and Redsell *et al*.'s (2007a; 2007b) findings of patients preferring to see doctors for serious problems, Price *et al.* (2015) found 87% of respondents would prefer to see a doctor for emergency care. These findings of Price *et al.* (2015) are more surprising than those of this study and Redsell *et al.* (2007a; 2007b), as the survey was undertaken in the USA, where the nurse practitioner role has been long established for over 40 years, so it could be reasonably expected that patients would potentially be more familiar with the scope of the nurse practitioner role than here in the UK, where the role has been developing for a shorter period of time.

The preference for seeing doctors with a more serious problem was often expressed in Redsell *et al.'s* (2007b) study because GPs were seen to have a higher level of knowledge and clinical judgement than that of nurses. Conversely, in the theme of *Nurse practitioner – GP comparisons* (section 4.5.2), the nurse practitioners in the current study questioned what the patient/carer participants meant by 'serious' illness as they felt they did already deal with such problems and were able to cope with clinical complexity such as managing a patient with multiple co-existing morbidities and associated polypharmacy. As such by being able to deal with both complex and minor presenting medical problems the nurse practitioners participants have moved beyond the binary model of nurse practitioner practice initially conceived 20 years ago in the UK, whereby nurse practitioners dealt solely with same day acute minor illness problems, to free-up GP time for dealing with more complex cases. There is now a unitary model where both groups of clinicians are dealing with mixed caseloads of patients with either minor or complex problems. A significant impetus behind this changed practice of nurse practitioners has been the widening of nurse prescribing in 2006 to full formulary access. This change enabled nurse practitioners working in clinical settings such as general practice and walk-in centres, to provide fully independent care for their patients, unfettered by a need to necessarily discuss their clinical decision-making with a doctor to authorise a prescription.

However, it is questionable how informed patients and carers have been about the changing nature of the nurse practitioner role so that they realise nurse practitioners "are highly capable in primary care situations", being "experts in primary care" by their own right, and are not just practising primary care medicine only in collaboration with doctors (Hankins-Farber, 2007, p.99). If patients and carers had such a realisation they probably would be less likely to express the views seen in this study that nurse practitioners are best suited for minor problems and GPs should deal with more serious problems, or that patients' cases would be discussed with a doctor. These views indicate many of their patients do not completely comprehend the extent and scope of independent medical practice now undertaken by nurse practitioners, as they are often uncertain as to the precise function of the nurse practitioner, and hence do not necessarily expect a nurse practitioner to be able to independently assist them to the same extent a doctor can. However, as was found in this study in the themes of *Nurse practitioner – GP comparisons* (section 4.5.2), and *Nurse practitioner role ambiguity* (section 4.5.4), nurse practitioners are aware of this perceptual dichotomy amongst some patients/carers of the appropriate

type of primary care clinician for dealing with 'minor' and 'serious' illnesses. Consequently they have a resultant need to convince patients/carers they can deal with the vast majority of commonly occurring presentation seen in primary care. This need to respond to this perceived role ambiguity, and convince patients/carers of their full clinical capabilities, can be seen from a macro-sociological perspective. To be informing the consultation communication strategies nurse practitioners deploy in their consultations to gain the trust of potentially sceptical patients, particularly so when dealing with more complex or 'serious' medical problems, that may be perceived by some patients or carers as being only within the remit of a doctor.

5.3.3 Social status of nurse practitioners

Aside from issues of role ambiguity and the severity of illnesses nurse practitioners should be dealing with, it has also been seen in the current study that some participants felt that the doctors' time was more precious than the nurse practitioners' time. For example in the theme of *Creating the impression of time* (section 4.5.5), patient participants commented they felt doctors' time was limited. The corollary of such views on the pressured high value of doctors' time is that nurse practitioners' time must be perceived as more available and so less valuable than doctors' time, even though they are performing a very similar clinical function to doctors, and have similarly burgeoning caseloads. Whilst this perception of the higher value of doctors' time makes it permissible for patients to feel able to use more of a nurse practitioner's time to discuss a wider range of concerns when consulting with them, as was seen in the theme of *Consulting style of nurse practitioners* in the sub-theme of *Open consultation style* (section 4.5.1), it equally demonstrates patients place less saliency on nurse practitioners' time, which can be seen as a form of social discounting of the comparative worth of the nurse practitioner role.

This finding of the discrepant respective value of doctors' time and nurse practitioner's time helps reveal the perceived unequal social status of the nurse practitioner role in comparison to that of a doctor in society. It has long been noted in critiques of the medical profession that it has ascendancy over other professional groups in health care and consequently doctors have been able to control their own work as well as directing the work of other clinicians, such as nurses (Friedson, 1970; Bosk, 2006; Timmermans and Oh, 2010). The elevated position of medicine may well have been eroded in recent years due to the rise of phenomena such as

increased patient consumerism, the rise of evidence based practice, and the expansive influence of pharmaceutical companies, but nevertheless medicine still occupies a position of authority over other healthcare disciplines (Timmermans and Oh, 2010). This position of authority is expectantly recognised by patients and carers, and in part, may contribute to the perceptions that doctors should deal with serious medical problems and nurse practitioners with more minor problems, and of the comparably different values placed upon their time in consultations.

Social structural discounting of nurse practitioners has been noted by McMurray (2010), in an ethnographic study of the occupational position of nurse practitioners, as essentially arising from the comparative, competing socio-political positions of nursing and medicine in contemporary society. This competitive socio-political positioning places doctors' work as being specially privileged and associated with "… scientific discourses, abstract knowledge and … rationed interventions" (McMurray, 2010, p. 806). Whilst concurrently nursing work is seen as diffuse, associated with social sciences, and concerned with "the messy and dirty work of emotions, bodies, fluids, relations, attending, nurturing and being there" (McMurray 2010, p. 806). Conversely, in many ways nurse practitioners challenge the hegemony of the medical profession over providing curative care in contemporary society, as they too can provide curative care in addition to the nurturing care traditionally associated with nursing. However, this curative capacity of nurse practitioners is often derogated by medical policy makers in order to maintain the hegemonic position of medicine in society (McMurray, 2010). A contemporary example of this derogation can be seen in the recently released Primary Care Workforce Commission (2015, p.18) report into the future of primary care which chose "…not to focus on individual nursing job titles or roles in our recommendations (such as specialist nurse, advanced nurse practitioner)…", whilst concurrently noting "some primary care professionals, such as physician assistants and pharmacists, can manage significant parts of the primary care workload" and going onto recommend in detail how that could be operationalised (Primary Care Workforce Commission, 2015, p.16). Such a stance, in what is a significant policy report, denies the contemporary reality of the contribution nurse practitioners make to primary care services across the UK, thus demonstrating further evidence of macro socio-political discounting of the nurse practitioner role.

Negotiating their contested social position in the hierarchy of healthcare can also be seen to further inform the consultation communication strategies used by the nurse

practitioners in this study. For example the nurse practitioner participants in this study, in the theme of *Nurse practitioner – GP comparisons* (section 4.5.2), spoke about the perceived decreased authority of nurse practitioners compared to doctors. In their interviews the nurse practitioner participants also referred to the communication strategies they use to bridge this perceptual gap such as focusing on optimising interactions with patients and carers by being very mindful as to how they communicated in their consultations.

It has been found in this study in the themes of *Nurse practitioner role ambiguity* (section 4.5.4) and *Nurse practitioner – GP comparisons* (4.5.2), that the nurse practitioner participants had an awareness of their compromised macro-social position. This macro-social role awareness can also be seen to be contributing to the previously discussed realisation that to practise successfully as clinicians, nurse practitioners must compensate the perceptual gap existing between what they are actually required to do on a day-to-day basis in practice, and what other people, particularly patients, presume they do. Consideration of nurse practitioners' compensation of this perpetual gap reveals the nub of how micro-socially nurse practitioners respond to the macro-social denigrations of their role; this compensatory process is now discussed in the next section.

5.3.4 Nurse practitioners 'passing' as credible nursing-based practitioners of medicine

Coming back to actuality of nurse practitioner-patient communication processes, the combined macro-sociological effect of the ambiguous status of nurse practitioners, patients' lack of understanding of their autonomous scope, and their comparatively perceived decreased social status leads nurse practitioners to develop social interaction styles which enable them to 'pass' as credible nursing-based practitioners of medicine in the frequently doubtful eyes of their patients. From their experiential knowledge of consultation communication, nurse practitioners understand that patients are very receptive to patient-centred communication styles, as opposed to problem-centred communication styles. Accordingly nurse practitioners use patient-centred communication styles to mitigate against the often unspoken doubt many patients experience when consulting with a nurse practitioner, as they perceive them to be less competent and less knowledgeable than a doctor. So placing privilege on how they interact with patients enables nurse practitioners to gain the trust and respect of sceptical patients through the usage of

collaborative lifeworld-oriented interaction styles, whilst correspondingly their patients respond positively to those communication styles, as has been seen in this study's findings.

What interaction processes underpin this concept of nurse practitioners 'passing' as credible nursing-based practitioners of medicine in the sometimes sceptical eyes of their patients? The notion of 'passing' in social encounters comes from Garfinkel's (1967) ethnomethodological studies of how people negotiate their everyday activities in order to comport or 'pass-off' themselves in socially accepted modes of interaction, particularly when there is a potential perceptual discrepancy, such as has been noted for the nurse practitioner role. Understanding the details of this process of passing requires a return to the sociological interactionist work of Goffman (1959). Central to Goffman's (1959) interactionist work is his theory that the self is a social product arising first, from the performances people display in social situations, and second, from the constraints of their relative status in any given social hierarchy. Goffman (1959) emphasises we do not have a completely free rein in our self-presentations to others as we also need to concurrently maintain congruence with the statuses, roles and relationships of the social order accorded by our perceived social role. This feature of social role congruency may in part explain why nurse practitioners do not solely rely on demonstrations of their applied medical knowledge in consultations in order to present themselves as credible practitioners to their patients. This is because applying Goffman's (1959) theory to nurse practitioners implies that nurse practitioners must know patients are aware of the constraints of their relative status as nurses in the social hierarchy. Therefore to act solely as if they were a medical doctor would cause an incongruent perception amongst their audience of patients and carers; that incongruent perception may then not be fully accepted by the audience as they do not always fully realise, as has been shown in this study, that nurse practitioners possess very similar medical knowledge and skills attributes to doctors. So alternatively nurse practitioners choose to act in a hybrid style, which combines application of medical knowledge with the more patient-centred, collaborative interaction styles, which in turn enables nurse practitioners' audiences of patients and carers to accept their clinically enhanced role, as it then fits their macro-socially determined perceptions of how a nurse should act.

Further evidence of nurse practitioner impression management of their consultations interactions can be seen in a follow-on study presented by Defibaugh (2014b), using

the same dataset of audio recorded consultations with one nurse practitioner based in a diabetes clinic in the USA that were analysed in the earlier discussed paper of Defibaugh (2014a) presented in the section 2.4 of the literature review. In this follow-on study Defibaugh (2014b) uses discourse analysis of the transcripts of the audio recorded consultations to examine how the sociolinguistic concept of 'indirectness' or 'indirect speech' in the nurse practitioner's interactions was used to indirectly challenge patients when discussing their self-management of diabetes. For example, Defibaugh (2014b, p. 65) found that the nurse practitioner, instead of directly confronting a patient by asking them if they were having difficulty measuring their insulin dosages, said more generally, "…counting up to those high numbers can cause some people trouble … are you finding that you're alright with that?". An example from the current study of such indirectness in communication is nurse practitioner 2 discussing with patient 2.4 his averseness for starting anti-hypertensives, speaking generally of some people with hypertension not being keen to take medications as they preferred lifestyle interventions for lowering their blood pressure, instead of challenging patient 2.4 directly about his reluctance to take medication. Defibaugh (2014b) comments that choosing to use an indirect style of communication enabled the nurse practitioner to provide medical care in the lexicon of nursing, as such indirectness was "conforming to 'nurse speak'". Consequently this use of indirectness facilitated the nurse to construct her status as a competent nurse practitioner when needing to challenge patients about their diabetes self-management, as indirect challenging permitted the patients to save face, whilst also fitting in with 'positive talk' features such as "providing encouragement, reassurance, and agreement and approval" (Defibaugh, 2014b, p.69). Such interactions have been identified as components of a patient-centred communication style, and have also been noted as prevalently coded features of nurse practitioner interactions in this study in the RIAS codes of 'Show agreement or understanding', 'Back-channel responses', and 'Reassures, encourages, shows optimism'.

A recent example of impression management research of relevance to this current study is the work of Huppatz (2010). In a qualitative study, Huppatz (2010) interviewed 39 women employed as either nurses or social workers, enquiring about the role of social respectability in their professional work. Huppatz (2010, p.75) indicates she sampled a varied range of nurses and social workers employed in different positions, including "nine practitioners", though it is not clear how many of those 'practitioners' were nurse practitioners, and how many, if any, were social workers. In relation to impression management and respectability the nurses in

study, more so than the social workers, particularly emphasised impression management strategies when performing their work, such as maintaining good manners and a sense of propriety so as to present a respectable image of themselves as professional nurses. The nurse participants went on to note that whilst they felt they were respected for the actual work they did and the decorous manner in which they were perceived to do it, they did not feel respected, by their audience, for their knowledge. Accordingly, Huppatz (2010) postulates that whilst nurses are esteemed for the nature their work and how they do actually perform it, their social position is not as highly valued as that of the knowledge-laden profession of medicine. In the context of the current study Huppatz's (2010) research supports the existence of impression management strategies influencing the interactions of nurses with their patients. It also gives further credence to the notion of the perceived social discounting of nurses, whether they are general nurses, or more advanced nurses, such as nurse practitioners, which is one of the underlying processes prompting nurse practitioners to make careful usage of impression management in their consultations with patients and carers.

5.3.5 Explaining the reasons for the active presence of the lifeworld in nurse practitioner consultations

This section will explain the reasons for the active presence of the lifeworld in nurse practitioner consultations through the influence of holistic ideology, holistic-biomedical hybridity, and social narrative epistemology. In the preceding discursive interpretation of the study's findings it has been established that nurse practitioners, through the process of impression management, prioritise *how* they interact with their audience of patients and carers over the application of their clinical knowledge, in order to facilitate acceptance of their advanced clinical role by their audience. Now it must be asked why the active presence of the lifeworld is a recurring feature of the content and style of nurse practitioner consultation interactions in both this study and previous other studies of nurse practitioners' consultations (Brykcznski, 1989; Johnson, 1993; Barratt, 2005a; Kleiman, 2004; Paniagua, 2009; Defibaugh, 2014b). Those studies have consistently shown nurse practitioners choose to integrate and respond to the lifeworld in many of their consultations. Furthermore, in contrast to GP consultations, such as those in Barry *et al.'s* (2001) sociological domain study, where doctors were seen only to be positively responding to the lifeworld for mainly psychological presenting problems, with nurse practitioners in this current study the lifeworld integration and responses occurred regardless of

whether a patient presented with a physically-orientated or a more psychologically-orientated problem.

The answer to the question of why the active presence of the lifeworld is frequently evident in nurse practitioner consultations begins to be evident in the theme of *Lifeworld content or lifeworld style* (section 4.5.3), where the nurse practitioners spoke of the influence of holism in nursing guiding them to attend to patients' lifeworlds in their consultations.

In this study all of the nurse practitioners spoke in the interviews of the importance they placed on a holistic approach to care, mention of which they associated with the prior influence of their profession of nursing. Holistic nursing practice integrates biomedical care with psycho-social-spiritual care to strive for the enhancement of healing of the whole person, and is a common discourse in accounts of the development of registered nurses (Benner 1982; 1984), and in particular those concerning nurse practitioner role development (Brykczynski, 1997). This healing emphasis of the whole person is in contrast to the 'allopathic' model of traditional biomedicine, which is primarily concerned with the control or cure of the symptoms of pathophysiology (Dossey *et al.,* 2000). So interpretively it can be determined the nurse practitioners, by virtue of their pre-registration and post-registration general nurse education and experiences retain nursing's ideological emphasis on holism. However, as a clinical necessity, they also need to integrate the detailed analysis of biomedical information into their social interactions in order to successfully make higher-order clinical decisions at the same level as doctors. This combined integration of the ideology of holism with biomedical information analysis provides a partial explanation of the presence of the lifeworld in nurse practitioner consultations.

In contrast to doctors who are immersed in the ideology of problem-based biomedical cognition from their formative development as medical students onwards, nurse practitioners typically come to an understanding of problem-based biomedical cognition later in their careers, when they are training and starting advanced practice as nurse practitioners. However, at this point nurse practitioners have previously experienced the power and utility of holism for optimising patient care, so do not allow their newly acquired biomedical cognitive ideology to subsume their experiential holistic ideology. Instead they use a hybrid style of interaction which gives precedence to holism as seen in patient-centred, collaborative, lifeworld

styles of interaction, such as have been observed in this case study, which attend to the psycho-social-spiritual elements of a person, whilst simultaneously collecting, evaluating, and acting upon biomedical information.

It is here at the juncture of what can conceptually be called 'holistic-biomedical hybridity' that the reasons for the emergence and prominence of the lifeworld in nurse practitioner consultations can be elicited. As such, for a nurse practitioner to ideologically care for the needs of the whole person, rather than having a reductionist emphasis on assessing and managing their clinical signs and symptoms, it is necessary to attend to a person's everyday life; that is to say their lifeworld, whether that be in content or style, in order to integrate the everyday with presenting health problems and so create a unified assessment, which articulates the needs of the whole person. This application of a concept of holistic-biomedical hybridity to nurse practitioner consultations is practically demonstrated when patients introduce lifeworld issues and interact in a lifeworld oriented interaction style in their consultations, and nurse practitioners correspondingly integrate lifeworld oriented interaction styles; and also when nurse practitioners integrate the collection of objective biomedical information within a lifeworld oriented interaction style in their consultations.

This discursive interpretation of holistic-biomedical hybridity in nurse practitioner consultations partially reflects the previously discussed hybridity of the nurse practitioner role straddling the domains of both nursing and medicine. Discussing the dominant discourses shaping knowledge of the nurse practitioner role, Rashotte (2005) comments that recognition of the role hybridity of nurse practitioners has arisen from analyses of nurse practitioner role classifications, functions, and responsibilities, such as Brykcznski's (1989) work on the clinical expertise of nurse practitioners. Rashotte (2005) further states this sense of role hybridity has also arisen from comparison studies of the clinical skills of nurse practitioners and doctors, such as the RCTs reviewed in section 1.4.1 (Kinnersley *et al.,* 2000; Venning *et al.,* 2000). Rashotte (2005) notes such comparison studies have been seen to emphasise the technological, instrumental features of the nurse practitioner role, which has sometimes swung the balance of empirical understanding of the benefits of the nurse practitioner role towards a Habermasian system-based understanding of the role, in which nurse practitioners are mainly characterised as enhanced healthcare resources, benefitting the organisation and provision of healthcare, rather than for their humane provision of medical care when taking the

place of doctors. Contrastingly to that system-based understanding of the benefits of the nurse practitioner role, this current case study contends engagement with the lifeworld is a cogent component of nurse practitioner practice, and that when combined with biomedical analytic knowledge provides a hybridised beneficent approach to clinical practice which is appreciated by patients and carers.

Aside from the nursing ideology of holism does anything else compel nurse practitioners towards lifeworld integration in their consultations? Epistemologically, it can be seen that through their receptiveness to lifeworld content and interaction styles nurse practitioners make frequent usage of their knowledge of everyday life, instead of emphasising biomedical knowledge. Interpreting that balance in relation to the evident postmodernist nature of the nurse practitioner role tells us that nurse practitioners privilege the type of knowledge, Lyotard (1984) calls 'social narrative', instead of the scientific metanarrative of biomedicine. This precedential position of social narrative over the metanarrative of biomedicine in nurse practitioner discourse is a point of contrast between the stylistic interaction dynamics of nurse practitioner consultations and those of medical practitioner consultations, where the reverse position has been observed in comparing GPs and nurse practitioner interactions such as Paniagua (2011). That is not to say the metanarrative of biomedicine is excluded in nurse practitioner consultations, because evidently it is not, as it is obviously essential for safe clinical practice, but biomedicine is not typically given prime position in their consultations.

So ultimately it can be seen that in nurse practitioner consultations the combined application of holistic ideology and social narrative epistemology by nurse practitioners, creates a condition of lifeworld predilection, resistant to subsumption by system-based objective scientific-technological knowledge. This lifeworld predilection of nurse practitioner consultations confers the conditions for the very provision of humane clinical care, which Mishler (1984) first postulated is actually required for person-centred care, yet was being lost in the domination of the system-based voice of medicine over the everyday voice of the lifeworld in the doctor-patient consultations he analysed 30 years ago. Alternatively in nurse practitioner consultations we typically see preponderance for the voice of the lifeworld, either in interaction style and / or content, selectively combined with a less dominant, yet still extant, voice of medicine, which creates optimal circumstances for effective bio-psycho-social-spiritual intercommunication between nurse practitioners and their patients. It is at this bio-psycho-social-spiritual juncture we can begin to understand

why patients report high levels of satisfaction and enablement after consulting with nurse practitioners.

5.4 What factors influence patient satisfaction and enablement: the effects of patients' expectations, consultation time lengths, and interaction styles

As discussed previously by other commentators on nurse practitioner consultations such as Redsell *et al.* (2007a), the clinical autonomy and knowledge of nurses working in advanced roles is not always expected or understood by some patients. Consequently they may have lower expectations of seeing a nurse rather than doctor. Redsell *et al.* (2007a) go on to say if these lowered expectations are exceeded patients may consequently have greater comparative satisfaction with nurse consultations over doctor consultations. This idea of lowered expectations leading to increased satisfaction was tested in the current study with the results generally showing the reverse of the effect postulated by Redsell *et al.* (2007a). Where patients / carers expected the nurse practitioners to demonstrate advanced practice care, both the median general satisfaction and median communication satisfaction were often reported as being higher with a range of +2.5 to +8 points increase for median general satisfaction score and +1 to +2.5 points increase for median communication satisfaction score. The exceptions to this trend in relation to general satisfaction were for examination expectations and expectations for doctor discussion for which the same median score noted for both positive and negative expectations. For communication satisfaction respondents expecting their case to be discussed with a doctor had a higher median score (+2) than those participants not expecting their case to be discussed with a doctor.

In this current study on exploring the relationship between pre-consultation expectations and post-consultation satisfaction, the finding that increased satisfaction is generally reported when patients / carers expect the nurse practitioner to use advanced practice skills, does not provide support for Redsell *et al.'s* (2007a) previously discussed assertion that patients' lowered probability expectations of nurses' abilities in consultations may lead to increased satisfaction. Indeed it seems in this study that the opposite effect has been found; patients/carers who are actually expecting their nurse practitioner to utilise advanced clinical practice skills are generally more satisfied when their expectations are met, than those

patients/carers who are not actually expecting the nurse practitioner to utilise advanced clinical practice skills. Similarly, in relation to pre-consultation expectations and post-consultation enablement where respondents actually expected the nurse practitioners to demonstrate advanced practice care, post-consultation enablement was mainly reported as being higher.

The mean consultation time length noted in this study for the video recorded consultations was 10.97 minutes. How does this figure compare with the average length of GP consultations? NHS England has recently reported that the mean consultation time length for GPs is approximately 12 minutes (Parkinson, 2013). The mean consultation times of 10.97 minutes noted for the nurse practitioners in this study compares very favourably with the similar mean GP consultation time length quoted by NHS England, with a one sample *t*-test showing this study's consultation time length is not significantly different to the time length of 12 minutes quoted by NHS England ($p = 0.280$) (95% confidence interval 9.27, 12.82). This recently quoted GP consultation mean time length figure is slightly longer than the mean time duration of 11.14 minutes reported for GP consultations in Horrocks *et al.'s* (2002) systematic review of nurse practitioner and GP comparative consultation outcomes. This study's mean consultation time length of 10.97 minutes for nurse practitioner consultations is 3.92 minutes shorter than the mean time of 14.89 minutes noted for nurse practitioner consultations in Horrocks *et al.'s* (2002) systematic review. On comparison a one-sample *t*-test shows this study's mean consultation time length is significantly shorter ($p < 0.001$) than that reported in Horrocks *et al.'s* (2002) study. This significantly shortened time length shows that, facilitated by full formulary access nurse prescribing (Nursing and Midwifery Council, 2006), which was unavailable for the nurse participants of the studies included in Horrocks *et al.'s* (2002) review, nurse practitioners are now able to conduct consultations of a very similar time length to that of the average length of a GP consultation.

This study's nurse practitioner mean consultation time length of 10.97 minutes is important to recognise as for the first time in a UK-based study of nurse practitioner consultations the findings are derived from research of nurse practitioners autonomously managing exactly the same types of patient presentations GPs manage, using a similar amount of time for their consultations. Additionally all the video recorded patient participants were independently managed by the nurse practitioner participants, with no advice at the time of consultation being sought from a medical doctor. These are salient points to note as the positive findings of

previous studies of nurse practitioner consultations have been somewhat limited through their sampling focuses on nurses managing minor illness patients without independent prescribing decisions, supported by medical doctor advice and prescription authorisations, sometimes with extended consultation times (Kinnersley *et al.,* 2000; Shum *et al.,* 2000; Venning *et al.,* 2000; Horrocks *et al.,* 2002). Accordingly those limitations mean such studies do not represent either the full complexity or pressures of contemporary primary care medical practice, which nurse practitioners now regularly engage with. Conversely the current study sampled a wider spectrum of patient types, comprising both acute and long term health problems, including mental health problems, across the age ranges from infants to elderly people, attending for either same day or pre-booked appointments. This sampling strategy has given a much more accurate picture of the current practice experiences of nurse practitioners working in primary care in the UK.

Whilst the quantified time lengths of the video recorded consultations have been noted as being of a similar average time length to GP consultations, the patient and carer participants of those consultations have reported high levels of post-consultation satisfaction. No significant correlation was found between increased consultation time lengths and post-consultation patient satisfaction scores. This finding is in contention to the findings of previous RCTs and systematic of nurse practitioner consultations finding that increased consultation time lengths for nurse practitioners are associated with high levels of patient satisfaction (Kinnersley *et al.,* 2000; Shum *et al.,* 2000; Laurant *et al.,* 2005). However it must be noted the sample size of 26 patients used in this study to determine the relationship between consultation time lengths and satisfaction was much smaller than that used in the previously cited RCTs which had much larger sample sizes ranging from 1368 to 1815 patients (Kinnersley *et al.,* 2000; Shum *et al.,* 2000), though in studies of that size even very small correlations will be significant (Maltby *et al.,* 2007). So it is feasible that if a similarly positive correlation was found in a study with a larger sample size it is possible that would be a significant finding. However it must be noted that high levels of post-consultation satisfaction were generally a consistent finding in this study with mostly no significant variations in satisfaction scores for being video recorded or not video recorded, gender, ethnicity, age group, employment category, household income, and education level.

The lack of significant variability indicates that the patient / carer participants of the consultations were consistently satisfied after consulting with one of the nurse

practitioners in the study with a high mean general satisfaction and communication scores of 78.48/85 and 26.37/30 respectively. In Agosta's (2009b) survey of patient satisfaction with nurse practitioner primary care services, using a sample of 300 adult patients, the comparative mean general satisfaction score was 81.99. In contrast to Agosta's (2009b) results the mean general satisfaction score in this study of 78.48 (95% confidence interval 76.7, 80.3), is 3.51 points below Agosta's (2009b) mean score of 81.99 which is not within the 95% confidence interval. A one-sample t-test showed the mean general satisfaction score noted in this study was significantly lower ($p < 0.001$) than mean general satisfaction score of 81.99 found in Agosta's study. The mean communication satisfaction score of 26.37 (95% confidence interval 25.7, 27.1), is 1.79 points below the mean score of 28.16 found in Agosta's study. A one-sample t-test showed the mean communication satisfaction score of 26.37 in this study was also significantly lower ($p < 0.001$) than Agosta's (2009b) mean communication satisfaction score. One point of difference to note when comparing the results of the current study with those of Agosta (2009a; 2009b) are the differences in sample sizes, with Agosta's (2009a; 2009b) survey having 229 more respondents. The sample size in this study is smaller than that in Agosta's (2009a; 2009b) survey so mean satisfactions scores have lower precision, however, the levels of post consultation satisfaction are still very high in both studies

Previous studies of patient satisfaction with nurse practitioners have found some evidence of variability in satisfaction scores across age groups. For example Knudston (2000) found that younger patients were more satisfied after consulting with a nurse practitioner, whilst Agosta (2009b) found the reverse, with young adult patients being the least satisfied in her study, but not significantly so. Similarly to Agosta (2009b), in this current study younger patients had the lowest mean general satisfaction subscale scores, but this was not a significant difference compared to other age groups.

Turning now to post-consultation enablement, the current study's mean score of 6.08 is 1.48 points higher than the combined mean enablement score of previous PEI studies[8] (Venning *et al.,* 2000; Simmons and Winefield, 2002; Denley *et al.,* 2003; Ford *et al.,* 2003; MacPherson *et al.,* 2003; McKinley et al., 2004; Price *et al.,* 2006; Haughney *et al.,* 2007); Wensing *et al.,* 2007; Adzic *et al.,* 2008; Pawlikowska *et al.,* 2009; Hudon *et al.,* 2011; Mercer *et al.,* 2012; Pawlikowska *et al.,* 2012;

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[8] The enablement scores for the each of the individual studies of patient enablement are presented in Appendix G.

Brusse and Yen, 2013). A one sample *t*-test shows this study's mean enablement score is significantly higher (*p* = 0.003) than 4.6 (the combined mean of previous studies), and hence indicates the participants of this study did feel more highly enabled after consulting with a nurse practitioner than other participants did after consulting with other types of clinicians in previous studies of patient enablement (95% confidence interval 5.12, 7.03).

It must be noted high enablement is not unique to patients of nurse practitioners as higher enablement has also been noted in patients of doctors in Adzic *et al.'s* (2008) study of patient enablement in Croatia. However, Adzic *et al.* (2008) comments that the high enablement score in their study may be due to cultural differences between Croatian patients and English-speaking patients, as they note other PEI studies, have found that patients speaking languages other than English at home also report significantly higher enablement scores than native English speakers (Howie *et al.,* 1999), or that BME patients also report significantly higher enablement levels (Denley *et al.,* 2003). In Howie *et al.'s* (1999) study patients speaking languages other than English at home had a mean enablement score of 4.5, which was significantly higher than their study's overall mean enablement score of 3.1. In Denley *et al.'s* (2003) study BME respondents had significantly higher mean enablement score of 5.8. Supporting such findings, in this current study, BME respondents also had a higher mean enablement score of 7.31, though this was not significantly higher than the study's enablement mean score of 5.65 for white ethnicity respondents.

In section 2.5.4 of the literature review chapter it was noted that in comparison to studies of patient enablement after seeing a GP there are far fewer available studies of patient enablement after consulting with a nurse practitioner. Venning *et al.'s* (2000) comparative RCT of nurse practitioners did assess patient enablement using the PEI and found that 335 patients consulting with a nurse practitioner had a mean enablement score of 4.92, indicating moderate enablement, which was not significantly higher than the mean enablement score of 4.43 found for patients consulting with GPs in that study. Using a one-sample *t*-test it can be seen that this current study, albeit with a smaller sample size of 51 patients, had a mean level of enablement score of 6.08 that was significantly higher (*p* =0.019) than the mean enablement score after seeing a nurse practitioner that was reported in Venning *et al.'s* (2000) study. What differences between the two studies could explain the different enablement scores given that both studies were undertaken in general

practice clinics? Venning *et al.* (2000) only sampled same day consultations, whereas this study included both same day consultations and pre-booked appointments. Furthermore the nurse practitioners in Venning *et al.'s* (2000) study had to get prescriptions authorised by doctors as full-formulary access nurse prescribing did not exist when the RCT was conducted in 1997-1998. Contrastingly the nurse practitioners in this study were able to make fully autonomous clinical decisions for patients with both acute and long term conditions, which may have had a differential impact on patients' evaluations of post-consultation enablement.

In this study correlation analysis was used to explore the relationship between patient enablement and patient satisfaction, to investigate if any relationship exists between enablement and satisfaction. This correlational analysis found general satisfaction was significantly positively correlated with enablement, and also a non-significant small-moderate positive correlation between communication satisfaction and enablement. These findings indicate the more enabled a patient feels, the more satisfied they also feel. Conversely these findings, being based solely on correlational analyses, whilst indicating association between enablement and satisfaction, do not provide causative evidence that high enablement causes high satisfaction or vice versa. Indeed it has been noted in prior studies of patient enablement arising from primary care consultations, that a patient can feel both enabled and dissatisfied at the same time, as they may feel enabled to self-manage their health through a clinician's patient-centred communication style, but may remain dissatisfied as their prior expectations of the consultation may still have not been met (Brusse and Yen, 2013). What else could explain the positive correlations between enablement and satisfaction? Studies of patient enablement have found that patients being previously familiar with their consulting clinician predict higher enablement (Howie *et al.,* 1997; Brusse and Yen, 2013), and that patients' perceptions of demonstrable clinician empathy also predicts higher enablement (MacPherson *et al.,* 2003; Price *et al.,* 2006). In this study many, of the patient / carer participants knew the nurse practitioners they were consulting with, as was noted in their clinic attendance profiles, and also in the interviews. Whilst this study did not directly measure patients' perceptions of the nurse practitioners' empathy, features of empathetic communication were clearly demonstrated in their significant usage of patient-centred communication strategies such as demonstrating interest in the whole person. Furthermore a primary care based survey study of predictors of patient satisfaction has found that the presence of unmet expectations post-consultation is a significant predictor of patient dissatisfaction (Jackson *et al*., 2001).

Whilst looking at satisfaction Jackson *et al.'s* (2001) study is relevant to consider, as in the current study 100% of respondents felt their expectations of coming to see the nurse practitioner had been met, which in turn may have contributed to the study's reported high levels of satisfaction. It can therefore be speculatively postulated that this study's observed effect of enablement and satisfaction scores increasing with one another seen can be explained by the combination of patients' familiarity with the nurse practitioners, patient-centred empathetic communication strategies, and a lack of unmet expectations amongst the patients and carers.

The relationship between enablement scores and consultation time length duration was also analysed in this study as previous, larger studies of patient enablement have noted higher enablement scores are positively correlated with longer consultation times (Frost *et al.,* 2015). This study found enablement was slightly negatively correlated with consultation time lengths, albeit a small, non-significant correlation based on a limited sample of 26 patients / carers. This finding suggests that feelings of high enablement can be engendered in patients by nurse practitioners independent of consultation time length durations, and indeed can even be achieved with shorter consultation time lengths. This is an important finding of this study as together with the similar finding related to consultation time length duration and satisfaction, it shows that higher levels of patient enablement and satisfaction in the consultations studied are not determined by the length of time patients / carers spend in their consultations.

In relation to the categories of interactions observed in the consultations namely, verbal dominance, patient-centred interactions, biomedical interactions, and interactions congruency no statistically significant associative relationships were found to exist between those interaction categories and either consultation time lengths or satisfaction or enablement scores. These non-significant findings may in part be due to the small sample size of 30 patients used for the comparative analysis of consultation time lengths, and the even smaller sub-sample of 26 video recorded questionnaire respondents used for the comparative analysis of satisfaction and enablement scores. These analyses show that the usage of a lifeworld oriented interaction style is not constrained by consultation time length, with a tendency, albeit non-significant, for consultations dominated by either patient-centred interactions or congruent interaction styles, to be of shorter time length durations. This finding contradicts the notion that usages of such interactions are expedited by the increased consultation time lengths of nurse practitioner

consultations (Seale, 2005; 2006). However these same findings do not indicate that consultations with predominantly lifeworld oriented styles of interaction are associated with higher levels of patient satisfaction and enablement as no significant differences were found for the interaction style (patient-centred or biomedical interactions) in relation to enablement or satisfaction scores. This finding may in part be due to the small sample size, but it may also be potentially attributed to the generally high levels of satisfaction and enablement reported across the participants which meant there was a lack of variability in those scores.

5.5. The communication processes and styles of social interactions used in nurse practitioner consultations determining shared decision-making

In this concluding part of the discussion the observed features of nurse practitioner communication processes and social interaction styles are compared with the processes of shared decision-making in clinical practice. Comparison of the nurse practitioner style of consultation communication with the processes of shared decision-making arises from the Government's recent policy report and consultation, "*No decision about me, without me*" (Department of Health, 2012), which seeks to make shared decision-making in clinical practice a reality. The conceptualisation of this policy has been supported by a preceding report from the King's Fund clarifying what is envisioned by the phrase 'shared decision-making' and what capabilities and resources are required to instigate it in day-to-day clinical practice (Coulter and Collins, 2011). In this context shared decision-making is seen as "a process in which clinicians and patients work together to select tests, treatments, management or support packages, based on clinical evidence and the patient's informed preferences" (Coulter and Collins, 2011, p. vii). This process of shared decision making has been noted as requiring a form of consulting style which emphasises "… partnership and support … [and is] curious, supportive, [and] non-judgemental …" (Coulter and Collins, 2011, p.25). A shared decision-making consulting style has been noted to have the following communicative features: "developing empathy and trust; negotiated agenda-setting and prioritising; information sharing: re-attribution (if appropriate); communicating and managing risk; supporting deliberation; and summarising and making the decision" (Coulter and Collins, 2011, p.25). The nurse practitioner communication processes and social interactions seen in this current study provide practical evidence of how many of those communicative features of a

shared decision-making consulting style can be implemented via the observed stylistics of nurse practitioner consultation communication.

'Developing trust and empathy' involves asking open-ended questions to encourage patients and carers to relate their stories, which the nurse practitioners have been seen to be frequently doing in the observed consultations with an open-ended questioning style being a top ten frequently coded RIAS code for the nurse practitioners (Table 4.14). 'Negotiated agenda-setting and prioritising' emphasises being open to the patient's or carer's agenda items, which has been seen in this study in the sub-theme of *Open consultation style* arising from the interview data in the theme of *Consulting style of nurse practitioners* (section 4.5.1). 'Information sharing' involves asking patients what they already know about their conditions and what they are worrying about in relation to those conditions, often involving open-ended questioning styles such as has been seen to be used by the nurse practitioners in the RIAS coding (Table 4.15), and also the provision of clearly explained information about medical conditions noted in the *Explanation, information, and enablement* sub-theme of the Consulting style of nurse practitioners theme (section 4.5.1). 'Re-attribution' ascertains and realigns "…patients' beliefs about the cause of their condition or symptoms [that] may be unhelpful or incorrect (misattributed) …" in the context of their presenting problem (Coulter and Collins, 2011, p.27). A key part of this reattributing process is eliciting patients' or carers' beliefs about medical conditions, which to be fully expressed require them to feel comfortable to make such disclosures. In this current study in the sub-theme of *Patient / carer participation* of the *Consulting style of nurse practitioners* theme (section 4.5.1), nurse practitioners were seen to be creating safe spaces for disclosure by enabling patients and carers to feel comfortable interacting with them through using friendly conversational styles of communication. 'Communicating and managing risk' engages a patient in shared decision-making by communicating risk effectively in order to support them through a process of deliberation. In this current study, in the sub-theme of *Integrated clinical reasoning* of the *Consulting style of nurse practitioners* theme (section 4.5.1), the nurse practitioners involved the patients in the processes of clinical decision by sharing with them their cognitions on the likelihood of differential diagnoses and the relative merits of required therapeutics, rather than just telling patients what to do. The sequel of 'Communicating and managing risk' is 'Supporting deliberation' which is concerned with discovering patients' and carers' ideas and concerns about medical conditions and their expectations for treatment. In this current study open-ended

questioning styles were used by the nurse practitioners to elicit such information (Table 4.15), and the patients and carers were also encouraged to ask questions about treatment options, such as was seen in the higher rates of patient question-asking (Table 4.17). The sub-theme of *Nurse practitioner interaction skills* of the *Consulting style of nurse practitioners* theme (section 4.5.1) also demonstrated features of supporting deliberation such as encouraging patients to ask questions about treatment options. The final communicative feature of a shared decision-making consulting style is 'Summarising and making the decision' whereby towards the end of a consultation its discursive content is summarily surveyed. Such use of a summarising technique by the nurse practitioners in the current study was seen as part of the sub-theme of *Integrated clinical reasoning* of the *Consulting style of nurse practitioners* theme (section 4.5.1) to reinforce a patient's understanding of their condition and required therapeutics.

So in overview the stylistics of the observed consultation communication processes seen in this study show nurse practitioners demonstrate features of a shared decision-making consultation style involving listening, explaining and answering a patient's questions whilst concomitantly treating them as a whole person, coupled with clear and coherent articulations of clinically reasoned diagnoses, and therapeutic benefits and risks. Furthermore this study has shown that shared decision-making consultations do not take longer than consultations where clinicians mainly make the decisions, as has been seen in this study's consultation mean time length of 10.97 minutes. Such empirically-derived evidence provides practical pointers as to how policies espousing shared decision-making consultation styles can actually be operationalised in clinical practice.

5.6 Summary of the discussion

The component features of nurse practitioner consultation interactions are characterised by collaborative openness to agendas and questions, everyday lifeworld expressions, expanded impressions of time, clear explanations augmented with integrated clinical reasoning, and participatory negotiations. These stylistic features of nurse practitioner consultation communication arise from a combination of micro-social, macro-social, ideological, and epistemological factors pervading the operationalisation of nurse practitioner consultations. In relation to patients' expectations, in contrast to other researchers' assertions that patients' lowered

expectations of nurse consultations may boost satisfaction, this study has found that patients expecting nurse practitioners to use advanced clinical skills are generally more satisfied, than those patients who do not have that expectation. This discussion has also determined that nurse practitioners are now capable of achieving favourable outcomes to their consultations in terms of patient enablement and satisfaction within similar consultation time length constraints to GPs. This discussion has also revealed that the levels of patient enablement found in this study are significantly higher than that reported in previous studies of patient enablement. It has also been noted that higher levels of patient satisfaction are associated with higher levels of patient enablement and that this association may be related to clinician-patient familiarity, empathetic communication strategies, and a lack of unmet expectations amongst the patients in the study. It has been noted that no significant associative relationships were found to exist between categories of social interactions and either consultation time lengths or satisfaction and enablement scores. Furthermore this study reveals the usage of either patient-centred or congruent interaction styles in nurse practitioner consultations can be achieved in shorter consultation times, than using biomedically focused interactions. Finally it has been postulated that the observed stylistics of nurse practitioner consultation communication are examples of empirically-derived evidence of implementing shared decision-making in consultations.

CHAPTER 6 CONCLUSION

6.1 Introduction

This concluding chapter of thesis firstly delineates the contributions to knowledge arising from the research study. The practical implications of the case study's findings are then discussed in relation to practice, education, and policy. A reflection on the case study research strategy and the researcher's role, including the strengths and limitations of the study is then presented. Recommendations for future research are then made. The thesis concludes with remarks regarding the contextual status of the research case study and its findings.

6.2 Key findings and new knowledge

This case study comprises primary research of nurse practitioner consultation communication that has moved beyond a focus on identifying and describing the communication processes that occur in those consultations. Instead this study provides an empirically-derived theoretical exposition of the communication processes of nurse practitioner consultation interactions combined and linked with consultation outcomes. This theoretical exposition of communication processes and outcomes is based on findings that are for the first time, derived from a study of British nurse practitioners, with full prescribing rights, autonomously managing the same types of patient presentations that are managed by GPs, using a similar amount of time for their consultations. Additionally, all the patient participants were independently managed by the nurse practitioner participants, with no advice at the time of consultation being sought from a medical doctor. These are important points to note as the positive findings of previous studies of British nurse practitioner consultations have been somewhat limited through their sampling focus on nurses without independent prescribing rights managing patients with minor illnesses, with sometimes extended consultation times, which does not represent either the full complexity or pressures of primary care medical practice (Horrocks *et al.,* 2002; Seale, 2005; 2006).

This study has linked observed consultation communication processes with pre-consultation expectations, and the consultation outcomes of patient satisfaction and enablement, which has not previously been attempted by other researchers of nurse practitioner consultation communication. This linkage has been achieved via a case

study combining the mixed methods of interaction analysis of video recorded consultations with concomitant semi-structured interviews, and measures from survey instruments. This convergence of data collection techniques provides a complete picture of the nurse practitioner consultation from multiple perspectives, which is an innovation in a field that has not used such methodological convergence before (Adami and Kiger, 2005). This methodological convergence allowed the more objective findings of the consultation interaction analysis and questionnaires to be interpretively combined with the more subjective findings of the interviews. This in turn helps situate the quantitatively-derived findings in their wider social context, such as has been illustrated by the analytical linkages made between the participants' denuded social perceptions of nurse practitioners arising from the interviews, and the equivocal questionnaire responses related to pre-consultation expectations for doctor involvement in their consultations.

The integrated interpretation of the findings of this study has led to the identification of the distinctive stylistic features of nurse practitioner interactions, which enlightens current understanding of the functional and structural nature of social interactions and communication processes occurring in those consultations. This exposition has occurred through the interpretive merging of the findings arising from the different types of collected data, thus meaning this case study has been able to provide an empirically-based theoretical explication of the reasons for the inclusion of lifeworld-style interactions in nurse practitioner consultations, linked with pre-consultation expectations, and the consultation outcomes of patient satisfaction, enablement, and time lengths.

Overall the case study uses a methodological approach that is novel in nurse practitioner consultation communication research to provide new theoretical insights in that field. For the first time in nurse practitioner consultation communication the use of RIAS for analysis of nurse practitioner consultation interactions has been combined in the same study with a survey and qualitative interviewing. Whilst previous studies of nurse practitioner consultations have combined RIAS with surveys for analysis of nurse practitioner consultation communication such as Gilbert and Hayes (2009) and Sandhu *et al*. (2009), none have combined this with qualitative techniques. This case study has produced unique theoretical insights on the nurse practitioner consultation, which are of a cross-disciplinary nature, drawing jointly on conceptual knowledge from the disciplines of nursing, psychology, and sociology. This cross-disciplinary perspective has enabled the development of

theoretical insights into the nurse practitioner consultation that have created a scope of scholarship similar to that typically seen in consultation communication research of medical practitioner interactions, but which has not yet been fully apparent in consultation communication research of nurse practitioner interactions.

Consequently, this case study has added to knowledge of nurse practitioner consultation communication through a cross-disciplinary approach and incorporating different methodologies, which has resulted in a discursive synthesis of research evidence of communication in the nurse practitioner consultation that has not been recognised until now. This new knowledge has revealed that nurse practitioners can utilise patient centred communication processes and achieve favourable outcomes in terms of enhanced levels of patient satisfaction and significantly higher levels of patient enablement without using extended consultation duration time lengths.

Summarising the original contribution to knowledge of nurse practitioner consultation communication processes and social interactions, arising from this thesis is as follows: to fully understand the interactive nature of the nurse practitioner consultation in primary care it is first necessary to recognise that nurse practitioners conduct consultations with patients with much the same clinical scope and autonomy of GPs, but that crucially this wide scope and autonomy of the nurse practitioner role is not fully realised or understood in society. Accordingly many people who come into contact with nurse practitioners, particularly when doing so initially, approach them with varying degrees of role expectancy ambiguity, which is in contrast to the role expectancy certainty they have when consulting with a doctor. Nurse practitioner consultations are therefore often framed in this sense of role expectancy ambiguity, which nurse practitioners themselves are well aware of and feel the need to compensate for in their consultations. Aside from role ambiguity, nurse practitioners are also seen to have less authority than doctors to deal with medical matters, particularly when medical problems are perceived by patients and carers as being 'serious' illnesses. Furthermore nurse practitioners are subject to social structural discounting, which is particularly evident in how their available time for consultations is viewed as less precious and hence more available than that of doctors, even when they have the same time available for their consultations. These combined processes of disparagement contribute to nurse practitioners compensating for the gap existing between what they actually have to do for patients consulting with them, and what many patients expect them to be able to do.

In this compensatory process nurse practitioners present themselves as credible nursing-based practitioners of medicine by acting in a hybrid style combining application of biomedical knowledge with patient-centred, collaborative interaction styles, which boosts the acceptability of their ambiguous role to patients and carers. Aside from communicating in a hybrid style nurse practitioners also retain an emphasis on the ideology of holism in nursing, which influences them to attend to expressions of everyday lifeworld experiences whilst concurrently assessing patient's presenting medical problems using biomedical knowledge. Simultaneously, alongside hybridity and holism, nurse practitioners privilege how they interact with patients, and in so doing prioritise the presence of social narrative in their consultations over the usually dominant metanarrative of scientific biomedicine typically seen in medical consultations. These combined communication processes of hybrid self-presentation, ideological holism, and social narrative accentuation, lead nurse practitioners to interact with patients and carers in a style of communication which can potentially induce patients to feel highly satisfied and enabled after consulting with a nurse practitioner, and also provides practical evidence of shared decision-making. Furthermore these positive interactions and outcomes have been shown to be occurring in consultation time length durations similar to those of GP consultations.

In considering the key findings of the study it is important to revisit the study propositions and whether they are upheld by the study findings. As will be seen in the following seven paragraphs most of the propositions are upheld and through the answers to the research questions further insight is provided:

Proposition 1: Nurse practitioners emphasise patient-centred styles of communication in their consultations
The proposition is upheld by the study. Patient-centred styles of communication occur significantly more frequently than biomedical styles communication. Nurse practitioners and patients use similar frequencies of patient-centred interactions. Nurse practitioner use significantly more biomedical style interactions than patients. Patient-centred interactions occurred significantly more frequently in the opening and closing phases of the consultations. In the history taking and exam phases no significant differences in the frequency usage of either patient-centred or biomedical style interactions was noted.

Proposition 2: The discrete features of styles of communication and social interactions used in nurse practitioner consultations have not been fully elucidated and nor have patients', carers', and nurse practitioners' views of such styles of communication

The proposition is refuted by providing a detailed explanation of the discrete features of nurse practitioner consultations and of the views patients and nurse practitioners. The discrete communication processes of nurse practitioner consultations are characterised by social interactions showing high levels of agreement, social conversation, and exchange of information related to medical conditions and therapeutics. Higher levels of question-asking by patients are seen in nurse practitioner consultations in comparison to those seen in previous studies of medical doctor consultations. Neither nurse practitioners nor patients are more verbally dominant over each other in their consultations. Many patients, carers, and nurse practitioners view the inclusion of lifeworld information in their consultations as being a positive feature of communication within their consultations. However, not all patients and carers are of the same opinion and accordingly minimise the inclusion of lifeworld information in their consultations. Patients, carers, and nurse practitioners perceive the interaction styles used in their consultations as facilitating opportunities for their active participation, underpinned by clear explanatory communication, and patients and carers have a sense of being listened to, and consequently feel their concerns are being directly addressed.

Proposition 3: Patients have uncertain expectations of the nurse practitioner consultation and an ambiguous understanding of the nurse practitioner role

The proposition is upheld. Patients and carers do expect nurse practitioners to be able to utilise advanced clinical practice skills such as diagnosis and prescribing, however there are more mixed perceptions regarding the medical supervision of nurse practitioners, and the extent of their clinical capacities. Many, though not all patients and carers, have an ambiguous perception of the nurse practitioner role, as they are not quite clear whether nurse practitioners are functioning at a level a nurse would normally be expected to work at, or whether they function at a similar level to that of a medical doctor. In this study patients who expect a nurse practitioner to diagnose their presenting medical problem have significantly higher levels of general satisfaction than those who are not expecting a nurse practitioner to diagnose their presenting medical problem. In this study pre-consultation expectations had no significant effects on post-consultation enablement.

Proposition 4: Patients will report high levels of satisfaction with nurse practitioner consultations.

The proposition is upheld. Patients and carers appear to be highly satisfied after consulting with nurse practitioners when satisfaction is measured with an instrument specifically devised for measuring patient satisfaction nurse practitioner consultations, with minimal levels of variability.

Proposition 5: Patients will report high levels of enablement and those patients with the highest levels of satisfaction will be most enabled.

The proposition is upheld. Patients appear significantly more enabled to manage their own health after consulting with a nurse practitioner when their enablement scores are compared with those from previous studies of patient enablement after consulting with a varied range of clinician types. There is an associative positive relationship between general satisfaction and patient enablement as this study has shown a tendency for both variables to significantly increase together, though this finding cannot determine whether general satisfaction leads to enablement or vice versa.

Proposition 6: Levels of satisfaction and enablement are affected by the interaction style with patient-centred styles of interaction increasing satisfaction and enablement.

The proposition is not substantiated. This case study has shown no significant effects from the interaction styles used in nurse practitioner consultation upon post-consultation patient satisfaction or enablement.

Proposition 7: Patients have a sense of more time in the consultation when they consult a nurse practitioner.

The proposition is upheld. The mean time length of nurse practitioner consultations in this case study is 10.97 minutes. The time lengths of nurse practitioner consultations do not affect the frequency occurrence of styles of communication and interaction in those consultations. Patients and carers have also reported a sense of having more time to consult with nurse practitioners, and the nurse practitioners have emphasised the importance of creating an impression of having time when consulting with patients, even when they themselves feel time constrained.

6.3 Practical implications of the case study

Above all else this case study has demonstrated the remarkable therapeutic importance of clinicians placing precedence on how they interact with their patients rather than prioritising how they will manage their medical conditions. This reversal of precedence of privileging interactions over treatments may seem peculiar to many clinicians as their education and role functions are dominated heavily by a requirement to use their clinical knowledge for the care of patients via judicious applications of evidence-based interventions. This case study tells us that in most instances when delivering patient care the purpose of the clinician is not solely to provide a medical treatment, but is also to attend to a patient's experience of illness. This attention is accomplished by using interactions which demonstrate compassion and concern for a patient's condition, as is seen in shared decision making, which in turn may potentially lead to improved therapeutic outcomes through empowering patients to greater enablement and self-coping.

Fundamentally this case study has been concerned with nurse practitioners and how they conduct consultations with patients and carers. Preceding research of the outcomes of nurse practitioner consultations has consistently shown that nurse practitioners in primary care are able to safely practice on a comparable level with doctors with no deleterious outcomes (Horrocks *et al.,* 2002). What this current study of consultation processes and outcomes additionally shows is that patients and carers are positively receptive to the consultation styles of nurse practitioners in a setting where nurse practitioners are replacing doctors. Taken together these findings provide robust evidence for the increased deployment of nurse practitioners in primary care to provide safe effective care, delivered in a style which incorporates specific elements of patient-centred care, such as holism for attending to bio-psycho-social-spiritual needs, collaboration for fostering participatory shared decision-making, and responsiveness to individualised care preferences, thus optimising patient-centred outcomes (Charlton *et al.,* 2008; Coulter and Collins, 2011; Sidani and Fox, 2014).

6.3.1 Stylistically modelling the communication processes and social interactions of nurse practitioner consultations as an exemplar of good consultation communication practice

Having explained the distinct nature of the communication processes and social interactions of the nurse practitioner consultation it is possible to stylistically model those processes and interactions as an exemplar of good consultation communication practice in order to aid them being understood by a wider audience of clinicians. The overall approach used by nurse practitioners in their consultation communication processes and social interactions can be summarily characterised as a stylistic exemplar of 'OPEN' consultation communication. This stylistic exemplar of consultation communication has been developed from the findings of the study. In this study the sociolinguistic term 'stylistic' has been applied to communication in nursing to construe the sequence of the beneficent social interactions of nurse practitioner consultations (Jefferies and McIntyre, 2010). This stylistic exemplar infers that nurse practitioners direct their consultations with patients and carers in a style which is agreeably open (O) to: the person and their agenda and questions (P); corroborative everyday lifeworld expressions; expanded impressions of time; clear explanations augmented with integrated clinical reasoning (E); and participatory negotiations (N).

The findings from which this exemplar has been elaborated arise conjointly from the combined analysis of the observational and interview data in the study. Openness to patients' agendas has been reported in the interview findings, such as patients reporting multiple discrete presenting problems in their consultations and the nurse practitioners positively responding to those multiple presenting problems. Openness to the person has also been seen in the interview findings with patient participants reporting that the nurse practitioners appeared personally interested in them as people, and correspondingly the nurse practitioners indicating strategies for fostering personal amiability with patients. Openness to patient and carer question-asking has been seen in the relatively higher proportions of question-asking by those participants in this study. Corroborative everyday lifeworld expressions arise from the findings of the interview analysis which demonstrated the presence of the lifeworld, and in the RIAS coding of interaction styles and communicative content related to patient-centred exchanges such as personal remarks and social conversation, laughing, reassurance, encouragement and optimism, empathy

statements, showing agreement or understanding, and information-giving and question-asking related to psychosocial aspects. Expanded impressions of time are evident in the patients / carers reporting in the interviews that they felt the nurse practitioners had more time available for them. This perception was balanced with the time analysis in the RIAS data showing that the average consultation time length was only 10.97 minutes, thus showing the nurse practitioners did not actually have longer consultations, but were good at conveying the impression of having extra time for patients. Clear explanations emerge from the interview findings showing that the nurse practitioners clearly and coherently explained medical problems and treatments to patients with those explanations augmented via the process of integrated clinical reasoning, and that they supported those explanations with relevant verbal and written information. Evidence for these clear explanations was supplemented by the RIAS coding showing the nurse practitioners encouraging question-asking amongst the patients / carers to ensure they understood what was being explained to them. Participatory negotiations are evidenced from the interview findings showing the opportunities for participation that patients and carers perceived to exist in the nurse practitioner consultations, such as friendly conversation styles, creating space for participants speak, and also opportunities for self-disclosure. The RIAS coding also showed patients and carers being able to make self-initiated requests for medical services or medications in negotiation with the nurse practitioners, bolstered with scope for question-asking about prospective treatment plans.

The lack of variability of satisfaction and enablement scores potentially indicate the application of features of the stylistic exemplar of OPEN consultation communication are able to engender high levels of patient satisfaction and enablement, without necessarily including extensive content discussions of corroborative everyday life experiences as a component of interaction, but do often include consultation interactions imparted in a lifeworld oriented-style by nurse practitioners.

Ultimately this study provides a research-generated practice application for clinicians conducting consultations via the stylistic exemplar of OPEN consultation communication. This stylistic exemplar can practically guide clinicians to understand that the optimal operant features of their consultation interactions should be openness to the person and their agenda and questions, integration of corroborative everyday lifeworld expressions, creation of expanded impressions of time, provision of clear explanations with integrated clinical reasoning, and engagement in

participatory negotiations regarding care plans. As such this stylistic exemplar provides practical guidance for clinicians as to what their interaction styles should comprise during the 'here and now' communicative pressures of a consultation. This stylistic focus of the exemplar is in contrast to the content focus of evaluative checklists of expected activities to cover in a consultation, often evident in the practice-based recommendations of consultation skills training programmes (Silverman *et al.,* 2013).

6.3.2 Implications for education

The implications for education arising from this study are linked to the preceding emphasis on clinicians privileging how they interact with their patients rather than focusing on medical treatments. Accordingly a question must be asked: can all clinicians be taught how to use similarly OPEN communication styles in their consultations or does using that form of communication require a paradigm shift in the conceptualisation of the prioritised purposes of clinical care for some clinicians? It would appear from the findings of this study and other studies of nurse practitioner consultations interactions that the clinicians in those consultations do make use of communication strategies interactions which promote potential opportunities for shared decision making amongst their patients. In doing so nurse practitioners are relinquishing ascendant associations with applied biomedical science to allow the notion that therapeutic care can arise from just using certain types of social interactions with patients, rather than only through natural healing processes or technological healing. Undoubtedly many individual practitioners of medicine have also come to this realisation via their reflective experiential knowledge of the realities of clinical practice, but what about biomedicine as a whole in society; can it collectively come to that same realisation? In answer to the initial question posed in this section it must be seen that establishing shared decision making in consultations require more than communication training checklists of required interactions to be included in consultations, and instead requires a contingent epistemological reorientation of the precedential importance of social interactions in addition to medical therapeutics in clinical care. That is not to say learning by student clinicians about using medical therapeutics is not important, for obviously medical therapeutics are an essential component of patient care. However, they are not the only requisite component of patient care, for as this study and others have shown prioritising how clinicians interact with patients is of fundamental importance for optimising patient responses to their planned clinical care. Therefore educational

programmes for all types of clinicians should further develop curricular content to emphasise even more the prime importance of how stylistically clinicians should interact with patients when delivering care so as to maximally optimise therapeutic outcomes.

6.3.3 Implications for policy

The implications for policy from this study arise from the perceived ambiguity of the nurse practitioner role amongst patients and carers which was found in both the interviews and the consultation expectations component of the questionnaires. This perceived ambiguity persisted despite Lime Tree Way taking overt steps to identify itself to its patients as a nurse practitioner-led service supported with clear information about the nurse practitioner role being available in the clinic. One possible way of addressing this perceived role ambiguity would be to regulate the nurse practitioner role as a discrete part of the professional register for nurses signifying acquisition of advanced practice competencies, which would also create regulatory similarity to the discrete regulation of medical consultants and general practitioners. In the event of potential opposition to formal regulation an alternative would be voluntary regulation, via nurse practitioners in Britain collaborating to form a nurse practitioner professional representative organisation of a similar kind to those that exist in the USA, such as the American Association of Nurse Practitioners (AANP). The AANP is a national professional membership organisation for nurse practitioners "advocating for the active role of nurse practitioners as providers of high-quality, cost-effective, comprehensive, patient-centred health care" (AANP, 2015a). The Association also offers a certification programme which recognises nurse practitioner "education, knowledge and professional expertise, as well as a process for validation of … qualifications and knowledge for practice as a nurse practitioner" (AANP, 2015b). Such formal or voluntary moves to regulate advanced nursing practice in the UK could help create increased public and inter-professional awareness of the true scope and nature of the nurse practitioner role, and thus reduce some of the evident equivocation regarding the autonomous nature of the nurse practitioner role. An alternative to an independent nurse practitioner professional representative organisation would be the current plans for the RCN to offer a mechanism for credentialing and recognising nurse practitioners, on a similar basis to the Medical Royal Colleges in the UK who credential specialist doctors with statutory links to the General Medical Council's register (Advanced Nurse Practitioner Forum, 2016). Though for the RCN nurse practitioner credentialing will

have to be without any links to the Nursing and Midwifery Council's register as there is currently no statutory imperative to enable that.

6.4 Reflections on the research process and strengths and limitations of the study

This section of the conclusion chapter presents a reflection on the rigour of the case study research process, including a consideration of emic and etic perspectives in the conduct of the research

This reflection on the use of a case study methodology follows Baillie's (2015) recommendations for promoting and evaluating scientific rigour in qualitative research (including case study research), with an emphasis on evaluating the credibility (the findings make sense), transferability (there is potential for findings to be transferred to another setting), dependability (the research has been conducted in a dependable way that can be audited), and confirmability (confirmation of the researcher's position and influence) of the case study's findings and research processes.

Reflecting on the credibility of the study the use of a case study design provided a detailed holistic account of nurse practitioner consultations based on real life situations. The case study methodology was guided by an expert source (Yin, 2009), which determined the usage of a structured research design. The data collection tools were scrutinised by the research supervisors, participant representatives (questionnaire piloting), and the ethics committee, with those data collection tools accordingly being comprehensible and likely to collect relevant data. Data convergence was accommodated with corroboration of the same phenomenon (the nurse practitioner consultation) from different types of data (video recordings, questionnaires, interviews) and sources (patients, carers, and nurse practitioners). Convenience sampling of patients from different appointment types permitted selection of a diverse range of patients typically reflective of general practice care. The field journal maintained throughout data collection and analysis provided an accurate and contemporaneous record of events. As the consultations were video recorded, and the interviews audio recorded those recordings provided an accurate record of the data collected. Once collected the data was analysed systematically, and the processes and content of the data analysis were critically reviewed with

supervisors leading to an accurate and comprehensive analysis and subsequent merged discursive interpretation.

Reflecting on the transferability the findings the chosen case study methodology entailed a case study selection of a clinic providing typical general practice care, including detailed 'thick' description of the clinic, so as to contextually situate the type of clinic for readers of the study. This thick description created a 'sense of place' in relation to the locale of the clinic for comparative transference of the case study's findings to other similar clinical settings (Massey, 1994).

Reflecting on the dependability of the case study approach, the usage of the same of interview topic guide and questionnaire (with validated components) with participants ensured consistency in the questions asked of those participants. Throughout the thesis an audit trail of research activities and processes have been provided via a detailed account of how the research was conducted and the data analysed in chapter 3, so readers can trace the researcher's decision pathways. Relatedly, reflecting on the confirmability of the findings of the case study, the detailed description deployed, and the audit trail enables readers to independently assess the context of the findings and understand how research decisions were made. Furthermore the overt strategies used to achieve credibility and consistency also promote the confirmability of the case study findings and research processes.

6.4.1 The emic and etic reflexive perspectives of a nurse practitioner researcher investigating the consultations of other nurse practitioners

This personally reflexive[9] section of the conclusion chapter considers how my experiences as a nurse practitioner influenced the choice of subject, and also how that 'insider knowledge influenced the choice of methodology and research approach. Following is then an evaluative reflection of how potential subjectivity may have suggested a polarised view of the medical model in the thesis.

As I am a practising clinical academic nurse practitioner I have an intimate familiarity with the particularities of conducting consultations with patients as a nurse practitioner. This intimacy to the subject of investigation of the case study meant that

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[9] In this subsection of the thesis, as it discusses the researcher's experiences as a nurse practitioner and nurse researcher, the personal pronoun has been used to enhance its reflexivity.

from the planning stages onward I brought to the study an emic or 'insider' perspective of practising as a nurse practitioner. Accordingly I was not solely operating from an etic or 'outsider' perspective, as is often the case in other research studies (Lambert *et al.*, 2011). In the development of this case study I was able to bring to the research process a hybrid integration of both my emic (nurse practitioner) and my etic (nurse researcher) perspectives. In many of the nurse practitioner consultation research studies discussed in this thesis some of the researchers were themselves similarly also practising nurse practitioners, such as: Bryczynski (1989); Johnson (1993); Knudston (2000); Agosta (2005); Kleiman (2004); Charlton *et al.* (2008); Gilbert and Hayes (2009); and Paniagua (2011). So it can be seen that a nurse practitioner working as a researcher investigating the consultation practices of other nurse practitioners is not an anomalous position within this field of research, and those other nurse practitioner researchers will have also had to reconcile competing emic and etic perspectives within their own studies. Nevertheless it must be acknowledged that my predominant experiences of being a nurse practitioner could have affected data analysis and interpretation through my predispositions, selective perceptions, or biases (Patton, 2015). As such it can be seen that emic and etic perspectives co-existed along a continuum of insider (nurse practitioner) and outsider (nurse researcher) knowledge in this case study.

Whilst I brought both emic and etic perspectives to the research process, I recognised the need to defer my emic sense of self as a nurse practitioner in order to become a nurse researcher independently observing the consultation practices of nurse practitioners via the investigatory processes of video recording, interviewing, and surveying (Hoare *et al.*, 2012). To aid this deferral process a key decision to be made in the planning phase of the study was whether to sample a primary care clinic where I had either worked or was working as a nurse practitioner, or alternatively where I had not been employed. Sampling a clinic where I had worked would have potentially been quite a quick process to negotiate as gatekeeper access would have been easier due to familiarity arising with a potential research setting through employment there. However it was felt sampling a clinic where I had worked could have further amplified the emic perspective and also raised ethical issues of unintentional coercion amongst potential patient and staff participants. Accordingly aside from the piloting of the questionnaire, it was decided to sample both a geographical area and primary care clinic where I had not worked, so as to create an enhanced sense of being etic when collecting the data.

My emic experiences of working as a nurse practitioner prompted the selection of the nurse practitioner consultation as the main subject of enquiry of this thesis. In those experiences I noted the somewhat conflicted struggle many patients had in resolving their pre-existing perceptions of what a nurse should be expected to be doing and what they unexpectedly found a nurse practitioner to be doing. Additionally my emic knowledge of consulting with patients and carers as a nurse practitioner informed me of the imperative need to research those consultations from the multiple perspectives of all interactants so as to accurately capture for analysis as many features of their interactions as possible. This led to the selection of a research design capable of encapsulating the multiplicity of all interactants perspectives in the nurse practitioner consultations; of which case study, with its emphasis on investigation of contemporary phenomena in their real-world contexts via collection of multiple sources of evidence, was deemed most appropriate for engaging with those real social encounters (Yin, 2009).

Aside from considering how emic knowledge influenced the choice of methodology and research approach, it is also important to reflectively evaluate how potential subjectivity, such as my predispositions, selective perceptions, or biases, may have suggested a polarised view of the medical model in the thesis. In this case study the potential influence of my predispositions, selective perceptions, or biases were mitigated against by using a number of authentication procedures for ensuring the quality of the analysis, thus demonstrating competence as a nurse researcher generating trustworthy findings (Patton, 2015). The authentication procedures for each of the three modes of data collection and analysis in the study are as follows: the survey data related to expectations, satisfaction, and enablement was collected using previously validated measures, with the combined questionnaire being piloted before usage in the main study; the analytical observations of the video recorded consultations were generated using a previously validated coding instrument designed to reduce the subjectivity of researchers' interpretations; and the transcripts of the audio recorded interviews were analysed using systematised methods of qualitative data analysis designed to ensure the credibility of the findings arising from those analyses.

My predisposing approach to conceptualising the nursing model of practice and the medical model of practice in the development of this study was influenced by the theoretical underpinnings of the nature of nursing knowledge, first articulated in Barbara Carper's (1978) pioneering analysis of the epistemology of nursing

knowledge. Through this analysis Carper (1978) identified four fundamental patterns of knowing in nursing: *empirics*, the science of nursing; *aesthetics*, the art of nursing; the component of *personal knowledge*; and *ethics*, the component of moral knowledge. Carper (1978) states nursing requires a combination of these patterns of knowledge for delivering patient-centred care, as none of them are solely sufficient. Carper's (1978) interpretation of the multifaceted nature of nursing knowledge contrasts with the emphasis the medical model of practice has on empirics, which can be seen in the privileging of biomedical knowledge in medical practice over other forms of knowledge. However the scientific pathophysiological focus of traditional biomedicine does not necessarily preclude the inclusion of other forms of knowledge in medical practice. Indeed it is recognised that some branches of medicine, such as general practice, are also concerned with other forms of knowledge, beyond empirical knowledge, such as a concern for aesthetics when communicating with patients (Sibbald, 2000). However the equality of respective emphases on empirics amongst medicine and nursing can be ascertained, with empirics or scientific biomedicine being given emphasis in medical practice before aesthetics, and the reverse occurring in nursing practice (Williams, 2000).

Accordingly Carper's (1978) analysis of the epistemology of nursing knowledge provides a 'nurse practitioner lens' for viewing their particular style of applying medical knowledge in consultations. This lens reveals that as nurses practising medicine nurse practitioners make interdependent use of all four forms of nursing knowledge: empirics for clinical reasoning; aesthetics for social interactions; personal for experiential reflection; and ethics for prudent care decisions. However what this case study has revealed is that the nurse practitioners participants privileged the aesthetic pattern of knowing over the other patterns of knowing. This privileging of aesthetics over the other patterns of knowing is seen in their recurring patient-centred, collaborative interaction styles, underpinned by holistic-biomedical hybridity and accentuation of social narrative. The privileged place of aesthetics does not mean the nurse practitioners negated the other patterns, for they too are vital for successful clinical practice, but they did emphasise how they impart those other forms of knowledge to their patients via the privileged impartation of their social interactions with patients and carers. This privileging involves integrating aesthetics, the act of caring, as a cognitional process for guiding interactions, which nurse practitioners in this study have been seen to be doing through their emphatic application of aesthetic knowledge in the observed consultations.

6.4.2 Limitations of the study

This case study was based at a nurse practitioner-led primary care clinic providing general practice services. The sampling selection of this nurse practitioner-led clinic must be queried because in comparison with most primary care clinics it is anomalous, as the majority of primary care general practice clinics are GP-led, with clinical support being provided by nurse practitioners and / or practice nurses and health care assistants. In contrast Lime Tree Way has GPs working in a support role, with the nurse practitioners independently managing the bulk of patients registered at the clinic, which is the reverse of the normal situation seen in general practice clinics. However this sampling strategy did permit a diverse range of patient presentations to be selected encompassing children, young adults, older adults, acute problems, long term conditions, and mental health problems presenting as either same day or pre-booked appointments. This diversity more accurately reflected the true nature of general practice and addressed the previous calls from some researchers such as Horrocks *et al.* (2002) and Laurant *et al.* (2005) for future research of nurse practitioner consultations to include patients with more complex health needs and long term conditions, rather than just minor illnesses and injuries as had occurred previously.

Within the nurse-led general practice clinic the consultations of only three nurse practitioners were selected, so the findings of this study are solely based on the interactions of those three clinicians. It must therefore be asked whether the observed interactions are particular to those specific nurse practitioners or whether some generalities of typical nurse practitioner interactions can be determined. In support of generalities of typical nurse practitioner interactions being determined it has been found that the styles of types of nurse practitioners interactions reported in this study have been similarly found in previous studies of nurse practitioner consultations, particularly so in relation to the observed high incidence of socio-emotional and lifeworld-style interactions, which have also been reported by Brykczynski (1989), Johnson (1993), Kleiman (2004), Barratt (2005a), and Paniagua (2011). These corresponding findings indicate that whilst the consultations of only three nurse practitioners were sampled, the observed interaction styles are not unique to those nurse practitioners and are generalised features of nurse practitioners' consultation interactions in primary care. However the findings of both this study and most other studies of nurse practitioner consultation interactions are firmly situated in primary care so it is not possible to say that similar findings would

be observed in nurse practitioner consultations occurring in more acute settings such as emergency departments where clinicians are dealing with a much greater amount of acutely ill patients requiring immediate clinical interventions.

It must also be noted that all three of the nurse practitioner participants were women, so therefore it is not possible to say that similar findings would necessarily have been generated if any of the nurse practitioner participants had been male. Some of the patient / carer interview participants did highlight the female gender of the nurse practitioners, often positively commenting that they felt it easier to talk with the female nurse practitioners. In response, many GPs are now also women, so it is perfectly possible that patients may similarly find a female GP easier to talk with than a male GP. Furthermore in relation to gender, this thesis has not considered the perspective of feminist inquiry in its conceptual framework (Patton, 2015). If this perspective had been considered it is possible that the arguments related to social structural discounting of the nurse practitioner role could have been bolstered by concomitant analysis of the gendered demarcation of nursing as a feminised occupation (Ironside, 2001; Nettleton, 2013).

The sample size for the patient questionnaire part of the study was small, only 71 completed questionnaires. The modest ambition of 100 completed questionnaires was not achieved. The small sample size was dictated by the practicalities of a single researcher conducting the study in just one primary care practice. However, this small sample size does raise concerns about the power of the study and the consequent need for caution in the interpretation of statistical tests. Some of the analyses completed using the questionnaire data were based on the smaller sub-sample of 26 video recorded questionnaire respondents, such as when patient enablement scores were compared against the interaction styles occurring in the observed consultations. Compared with other studies measuring patient satisfaction and enablement the sample numbers used in this study are relatively small, as for example, Agosta's (2011) patient satisfaction survey had 300 respondents, and the majority, though not all, previous surveys of patient enablement had samples of either hundreds (Wensing *et al.,* 2007) or thousands of patients (Mercer *et al.,* (2012). However, none of these larger studies have attempted to link satisfaction and enablement to the detailed content of the consultation which requires observation and would be very difficult on a large scale.

The application of the interaction analysis process (RIAS) in the case study must also be considered as a potential limitation as the researcher did not have any previous experience of using the tool. Preparation for the analysis relied on the researcher reading of the RIAS coding handbook (Roter, 2011), and the application of the RIAS process reported in the consultation communication research literature such as Roter and Larson (2002), Cooper *et al.* (2003), Timmermans *et al.* (2005), and Pawlikowska *et al.* (2012). Accordingly it is possible that the instructions in the RIAS coding handbook may have been misinterpreted (Roter, 2011), or the observed consultations may have been coded slightly differently if the researcher had received more detailed RIAS training. In the initial stages of the study the researcher did contact RIAS Works, the RIAS training company run by Debra Roter, to ask about the availability of RIAS training courses in the UK, but at that time training courses were only available in the Netherlands. However RIAS Works did share the RIAS coding handbook, which was then utilised in this study in conjunction with interpretive reading of previously published RIAS-based research. It is also possible that if there had been a larger sample size of video recorded consultations, a more in-depth knowledge of using RIAS and also of advanced statistical analysis techniques, such as multiple regression modelling, the study could have produced a more nuanced analysis of the discretely coded consultation interactions and their associations with the outcome measures of satisfaction and enablement; as has been done in prior RIAS-based studies of nurse practitioner consultation interactions supported by funding, RIAS-trained coders, and statisticians. An example of such funded research is Sandhu *et al.* (2009) comparing emergency nurse practitioner consultations with emergency medicine doctor consultations in an emergency department in relation to their respective communication skills and patient / clinician satisfaction.

A further area of limitation to be considered is in relation to the semi-structured interviews, particularly so the time length of some of the patient / carer interviews. The mean time duration of the three nurse practitioner interviews was 41.8 minutes, whilst the mean time duration of the eleven patient / carer interviews was much shorter at 9.6 minutes. Additionally all the nurse practitioner interviews were face-to-face interviews whilst the patient / carer interviews were a mix of face-to-face and telephone interviews. It was initially intended to conduct all the patient / carer interviews as face-to-face interviews, but when facing the realities of recruitment to the study the flexibility of offering telephone interviews ensured recruitment of a sufficient number of participants for the interview component of the study. The five

face-to-face interviews with patients had longer time ranges of 10-15 minutes and subsequently elicited more information than the six telephone interviews with patients / carers, which had shorter time ranges of 5-10 minutes. Looking at these shorter time durations for the patient / carer interviews, particularly so for the telephone interviews, it could be argued that those time lengths were not long enough to generate sufficient data in the interviews. However, interesting data was generated across the patient / carer interviews, albeit more in-depth in the face-to-face interviews. Given that the patients were reflecting on a brief 10-15 minute consultation experience, it is not so surprising the interviews were quite short. Reflecting on practising as a nurse practitioner interviewing patients in consultations, it is possible to cover a variety of diverse and fundamental issues within the confines of a 10-minute appointment slot, which helps to contextualise the scope of information that can be elicited in a similarly short research interview.

Finally in relation to limitations, it has been postulated in this study that the stylistics of nurse practitioner consultation communication processes are a practical example of shared decision making. However, an unanswered question then arises; so what if the communication of processes nurse practitioner consultations exemplify shared decision making? What are the actual measured beneficial consequences of using interactions that potentially enhance shared decision making? For example would medication adherence be enhanced? Or would physiological or psychological measures of improved health such as decreased blood pressures or augmented quality of life be observed? Such questions remain unanswered in this study as the only outcomes measured post-consultation were expectations being met, satisfaction, and enablement. Furthermore there was no longitudinal component to the study to address longer term issues such as medication adherence or quality of life.

6.5 Recommendations for future research

The recommendations for research arising from this study are: an investigation of the personality traits of nurse practitioners; a larger scale survey of patient expectations, enablement, and satisfaction in relation to nurse practitioner consultations; linking shared decision making with measured health outcomes arising from nurse practitioner consultations; and an integrative review and meta-synthesis of research knowledge of nurse practitioner communication.

This study, consistent with other studies of nurse practitioner consultations, has found that nurse practitioners generally interact with their patients in similar style, emphasising patient-centred styles of communication. This study has identified reasons for the occurrence of those styles of communication, but it is also possible that other factors may have an influence on the interaction styles that are observed in nurse practitioner consultations. One of the additional factors to consider is the personality traits of nurse practitioners. Once again, as with consultation communication research, much is known about the personality traits of medical doctors, but comparatively little is known about the personality traits of nurse practitioners (Bultemeier and Wattenberger, 2014). It is possible to speculate nurse practitioners perhaps share certain personality traits which make them more likely to prefer using open, collaborative communication strategies in their consultations. Such a study would require a survey of nurse practitioners' personalities using a validated personality trait measurement instrument such as tests which assess the 'Big Five personality traits', which are commonly used by psychologists to research personality traits in populations. An example of a Big Five personality trait that may possibly explain the collaborative communication strategies of nurse practitioners is 'Agreeableness' which is a factor measuring a trait tendency to be compassionate and cooperative and is also a measure of a person's trusting and helpful nature (Gosling, 2003).

In relation to patient satisfaction and patient enablement this study has found high levels of patient satisfaction and enablement, though as previously noted, those findings were elicited with a relatively small sample size of survey respondents. It would therefore be beneficial to repeat the survey used in this study with a larger sample of respondents seeing nurse practitioners so that the findings of this study in relation to high satisfaction and enablement scores can either be further supported or modified. The replication of the survey on a larger scale would also be particularly useful first to further examining whether other patients do not fully understand the autonomous nature of the nurse practitioner role as is elicited in the pre-consultation expectations section of the questionnaire, and second to determine whether a significant positive association still exists between patient enablement and satisfaction amongst a larger sample of patients seeing nurse practitioners. To improve reliability of the results such a larger scale survey would need a patient sample size of 300-400 respondents to have appropriate power to elicit narrow confidence intervals for estimates of patient expectations and to explore correlation

between enablement and satisfaction. For example, if a 95% confidence interval is calculated for the expectation that nurse practitioners consult a doctor about the case and the interval is required to have a total width no more than 0.1, then allowing for the worst case scenario (of half saying this is their expectation) this would require a sample size of 384 (Bland, 2000). Considering the correlation between enablement and satisfaction, to have 90% power to detect at the 5% level a correlation of 0.2 would require a sample size of 259 (Bland, 2000). Thus a study as large as 400 is likely to be adequate for the proposed study and would also be sufficient for regression modelling, which has not been possible in this current study because of the small sample size[10]. For future studies it would also be beneficial to recruit respondents across the range of primary care settings where nurse practitioners work, such as general practice, walk-in centres, urgent care centres, and out-of-hours services rather than just focusing on one type of clinic such as has been done in this current study.

It was noted in the preceding discussion of the limitations of this study that it was not designed to link the observed communication processes with positive health outcomes beyond proximate measures of expectations being met, satisfaction, or enablement. Accordingly a further research recommendation is for an experimental-type study aiming to link communication processes exemplifying shared decision making with distal positive health outcomes such as enhanced medication adherence, patient activation, and physiological and psychological measures of improved health. For example, using an experimental approach in one clinic, randomly assigned intervention group patients would attend consultations with nurse practitioners using normally occurring social interactions, whilst the randomly assigned control group patients would attend consultations with nurse practitioners using only perfunctory social interactions. The two groups would then have post-consultation health outcome measures such as medication adherence, blood pressure, blood sugars, and Quality of Life, which would all also need to be measured pre-consultation to provide a basis for comparison. However in this proposed experimental design it may be ethically and socially difficult for clinicians to consistently deliver perfunctory social interactions in the control group, particularly so if a patient became upset during a consultation, or else attended with a particularly sensitive issue such as depression. Accordingly it may be more practicable to use a pre-experimental one-group design of patients seeing nurse

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[10] The sample size calculations were conducted using http://www.sample-size.net/ (Malone *et al.,* 2016).

practitioners in consultations with normally occurring social interactions analysed with an interaction analysis system, such as RIAS, and then associated with pre and post-measures of health outcomes. However in this pre-experimental design there would be no control or randomisation to groups, which would correspondingly reduce the validity of the findings of the proposed study. This type of experimental / pre-experimental research is proposed in order to try and capture some of the potentially positive psychological and physiological effects of nurse practitioner communication styles.

Part of this case study has comprised a relatively extensive overview literature review of qualitative research regarding communication in nurse practitioner consultations. However the overview was not systematic and does not encompass all available research regarding nurse practitioner communication. Nor on preliminary literature searching would either a current meta-synthesis of qualitative research or an integrative review of research in this area appear to exist. Accordingly it is proposed that a meta-synthesis of available qualitative research, and an integrative review summarising the body of literature on nurse practitioner communication, both be completed to in order to further understand the interactive nature of communication in nurse practitioner consultations. The meta-synthesis would particularly be looking for recurring themes and inductive theories emerging from the body of qualitative research regarding nurse practitioners that would facilitate a deeper understanding of nurse practitioner communication in clinical consultations. Such work would complement other currently planned qualitative evidence syntheses of nurse practitioner roles, such as the evidence synthesis being conducted by the Cochrane Collaboration looking at barriers and facilitators to the implementation of strategies for nurses substituting doctors in primary care (Rashidian *et al*., 2013).

6.6 Concluding remarks

Building on the findings of the existing research literature of nurse practitioner consultations, this doctoral research study further demonstrates the fundamental importance of communication in clinical care and the preference many patients have for patient-centred interaction styles. Nurse practitioners' usage of such patient-centred interaction styles has been elucidated as a stylistic exemplar of OPEN consultation communication characterised by a collaborative approach which is

open to the person and their agenda and questions, corroborative expressions of everyday lifeworld experiences, expanded impressions of time, clear explanations augmented by integrated clinical reasoning, and participatory negotiations. The usage of such a style of communication has been postulated as an explanation for the occurrence of high levels of patient satisfaction and enablement observed in nurse practitioner consultations.

This study complements and extends the findings of other studies of nurse practitioner consultation communication, which all commonly identify the presence and importance of patient-centred, lifeworld style interactions in nurse practitioner consultations. However, this study has moved beyond the previous studies of nurse practitioner consultation communication by being able to explain why the particular social interactions and communication processes typically seen in nurse practitioner consultations actually occur. This case study therefore adds to the body of nurse practitioner consultation communication research by providing an explicatory understanding of the social interactions and communication processes occurring in nurse practitioner consultations, which also links to the wider corpus of consultation communication research literature.

It is hoped that recent and future dissemination of the findings of this thesis, such as the paper presented at the 2015 RCN International Nursing Research conference (Barratt, 2015), plus future planned presentations and publication of the findings (Barratt, 2016), will ultimately lead to more clinicians integrating collaborative features of the stylistic exemplar of OPEN communication in their consultations for improving communication with their patients, and enhancing shared decision-making processes.

References

Adami, M. and Kiger, A. (2005) The use of triangulation for completeness purposes, *Nurse Researcher*, 12 (4), pp.19-29.

Advanced Nurse Practitioner Forum (2016) *Credentialing for advanced nurse practitioners: what's it about?* Available from: http://tinyurl.com/jjurz9p [Accessed 28 July 2016].

Adžic, Z., Katić, M., Kern, J., Lazić, Đ., Cerovečki Nekić, V. and Dragan Soldo, D. (2008) Patient, Physician, and Practice Characteristics Related to Patient Enablement in General Practice in Croatia: Cross-sectional Survey Study, *Croatian Medical Journal*, 49 (6), pp.813–823.

Agosta, L. (2005) *Patient satisfaction with nurse practitioner delivered primary health care services*, Doctoral Thesis, University of Texas Health Science Centre at Houston.

Agosta, L. (2009a) Psychometric Evaluation of the Nurse Practitioner Satisfaction Survey (NPSS), *Journal of Nursing Measurement,* 17 (2), pp. 114-33.

Agosta, L. (2009b) Patient satisfaction with nurse practitioner-delivered primary healthcare services, *Journal of the American Academy of Nurse Practitioners,* 21, pp. 610-617.

American Association of Nurse Practitioners (2015a) *About AANP*, Available at: http://www.aanp.org/about-aanp [Accessed 23 July 2015].

American Association of Nurse Practitioners (2015b) *AANP Certification Program*, http://www.aanp.org/education/aanp-certification-program [Accessed 23 July 2015].

Andén, A., Andersson, S. and Rudebeck, C. (2006) Concepts underlying outcome measures in studies of consultations in general practice, *Scandinavian Journal of Primary Health Care*, 24, pp. 218-223.

Anthony, S. and Jack, S. (2009) Qualitative case study methodology in nursing research: an integrative review, *Journal of Advanced Nursing,* 65 (6), pp.1171–1181.

Appignanesi, R. and Garratt, C. (2004) *Introducing Postmodernism*. Thriplow: Icon Books Ltd.

Archibald, M. (2012) The holism of aesthetic knowing in nursing, *Nursing Philosophy*, 13, pp. 179-188.

Arksey, H. and Knight, P. (1999) *Interviewing for Social Scientists*. London: Sage Publications.

Baker, R. (1990) Development of a questionnaire to assess patients' satisfaction with consultations in general practice, *British Journal of General Practice*, 40 (342), pp. 487-490.

Bailey, C. (2007). *A Guide to Qualitative Field Research 2nd ed*. London: Pine Forge Press

Baillie, L. (2015) Promoting and evaluating scientific rigour in qualitative research, *Nursing Standard*. 29 (46), pp.36-42.

Ballinger, C. (2006) Demonstrating rigour and quality? In Finlay, L. and Ballinger, C. (eds.) *Qualitative Research for Allied Health Professionals: Challenging Choices*. John Wiley and Sons, Chichester.

Balint, M. (1957) *The Doctor, His Patient and the Illness.* London: Tavistock Publications.

Barnes, H., Crumbie, A., Carlisle, C. and Pilling, D. (2004) Patients' perceptions of "uncertainty" in nurse practitioner consultations, *British Journal of Nursing*, 13 (22), pp. 1350-1354.

Barratt, J. (2001) *A field study of everyday interactions in a fitness gym*. BSc (Hons) Sociology & Psychology Dissertation, City University, London.

Barratt, J. (2004) *An observational case study of nurse practitioner-patient interactions in a walk-in primary health care clinic*. MSc Nursing Dissertation, St Bartholomew School of Nursing & Midwifery, City University and Royal College of Nursing Steinberg Collection of Nursing Research, London.

Barratt, J. (2005a) A case study of styles of patient self-presentation in the nurse practitioner primary health care consultation, *Primary Health Care Research and Development,* 6 (4), pp. 327-338.

Barratt, J. (2005b) *A case study of the nurse practitioner consultation in primary health care*. Concurrent session at RCN Nurse Practitioner Association annual conference and exhibition. Warwickshire, September 2005.

Barratt, J. (2006) In response to: Seale C., Anderson E. & Kinnersley P. (2006) Treatment advice in primary care: a comparative study of nurse practitioners and general practitioners. Journal of Advanced Nursing 54 (5), 534–541, *Journal of Advanced Nursing*, 57 (1), pp.111-112.

Barratt, J. (2007) *Video recording the nurse practitioner consultation*. Concurrent session at RCN Nurse Practitioner Association annual conference and exhibition. Northamptonshire, September 2007.

Barratt, J. (2015) *A case study of the nurse practitioner consultation in primary care: communication processes and social interactions.* Concurrent session at RCN International Nursing Research conference and exhibition. University of Nottingham, April 2015.

Barratt, J. (2016) *Collaborative communication in nurse practitioner consultations: implications for practice.* Plenary session at LSBU Advanced Nurse Practitioner Students: Professional Development Day. London South Bank University, September 2016.

Barry, C., Stevenson, F., Britten, N., Barber, N. and Bradley, C. (2001) Giving voice to the lifeworld. More humane, more effective medical care? A qualitative study of doctor-patient communication in general practice, *Social Science & Medicine,* 53 (4), pp. 487-505.

Barry, C. (2002) Multiple Realities in a Study of Medical Consultations. *Qualitative Health Research*, 12 (8), pp.1093-1111.

Bazeley, P. and Jackson, K. (2013). *Qualitative Data Analysis with NVIVO. 2nd ed.* London: Sage.

Bear, M. and Bowers, C. (1998) Using a nursing framework to measure client satisfaction at a nurse-managed clinic, *Public Health Nursing*, 15 (1), pp. 50-59.

Benner, P. (1982). From novice to expert, *American Journal of Nursing*, 82 (3), pp. 402-407.

Benner, P. (1984) *From Novice to Expert: Excellence and Power in Clinical Nursing Practice*. Menlo Park: Addison-Wesley Publishing Company.

Bergin, M. (2011) NVivo 8 and consistency in data analysis reflecting on the use of a qualitative data analysis programme. *Nurse Researcher*, 18 (3), pp. 6-12.

Berry, J. (2009) Nurse practitioner/patient communications styles in clinical practice, *The Journal for Nurse Practitioners – JNP*, 5 (7), pp. 508-515.

Bland, M. (2000) *An introduction to medical statistics.* 3rd ed. Oxford: Oxford University Press.

Bonsall, K. and Cheater, F. (2008) What is the impact of advanced primary care nursing roles on patients, nurses and their colleagues? A literature review. *International Journal of Nursing Studies*, 45 (7), pp. 1090-1102.

Bosk, C. (2006) Review Essay: Avoiding conventional understandings: the enduring legacy of Eliot Freidson, *Sociology of Health & Illness*, 28 (5), pp. 637-653.

Bourdon, S. (2002) The integration of qualitative data analysis software in research strategies: resistances and possibilities. *Forum: Qualitative Social Research*, 3 (2), pp. 175-184.

Brown (1989) Response to "An interpretive study describing the clinical judgment of nurse practitioners", *Scholarly Inquiry for Nursing Practice: An Interpretive Journal*, 3 (2), 105-112.

Brown, S. and Grimes, D. (1995) A meta-analysis of nurse practitioners and nurse midwives in primary care. *Nursing Research,* 44 (6), pp. 332-339.

Brusse, C. and Yen, L. (2013) Preferences, predictions and patient enablement: a preliminary study, *BMC Family Practice*, 14:116.

Brykczynski, K. (1989) An interpretive study describing the clinical judgment of nurse practitioners, *Scholarly Inquiry for Nursing Practice: An Interpretive Journal*, 3 (2), pp. 113-120.

Brykczynski, K. (1993) Response to "Nurse Practitioner-Patient Discourse: Uncovering the Voice of Nursing in Primary Care Practice". *Scholarly Inquiry for Nursing Practice: An International Journal,* 7 (3), pp.159-163.

Brykczynski, K. (1997) Holism: A foundation for healing wounds of divisiveness among nurses, in: Kritek, P. (ed.) *Reflections on Healing: A Central Nursing Construct*. New York: National League for Nursing, pp. 234-41.

Brykczynski, K. (2012) Clarifying, affirming, and preserving the nurse in nurse practitioner education and practice, *Journal of the American Academy of Nurse Practitioners,* 24, pp. 554-564.

Buller, M. and Buller, D. (1987) Physicians' communication style and patient satisfaction. *Journal of Health and Social Behaviour*, 28, pp. 375-388.

Bulpitt, H. and Martin, P. (2010) Who am I and what am I doing? Becoming a qualitative research interviewer, *Nurse Researcher*, 17 (3), 7-16.

Bultemeier, K. and Wattenberger, D. (2014) *Personality traits of family nurse practitioner students.* Harrogate: Lincoln Memorial University and Georgetown University.

Capone, V. and Petrillo, G. (2014) Patient's Communication Perceived Self-efficacy Scale (PCSS): Construction and validation of a new measure in a socio-cognitive perspective, *Patient Education and Counseling*, 95, pp. 340–347.

Carper, B. (1978) Fundamental patterns of knowing in nursing, *Advances in Nursing Science*, 1 (1), pp. 13-24.

Charlton, C., Dearing, K., Judith A. Berry, J. and Johnson, M. (2008) Nurse practitioners' communication styles and their impact on patient outcomes: An integrated literature review, *Journal of the American Academy of Nurse Practitioners*, 20 (7), pp. 382–388.

Charney, E. Kitzman, H., Berkow, E., Cafarelli, C., Davis, L., Disney, F., *et al.* (1971) The child-health nurse (pediatric nurse practitioner) in private practice — a controlled trial, *New England Journal of Medicine*, 285, pp. 1353-1358.

Chatwin, J. (2008) Hidden dimensions: the analysis of interaction in nurse-patient encounters, *Quality in Primary Care*, 16, pp. 109-15.

Clarke, J. (1981) A multiple paradigm approach to the sociology of medicine, health and illness. *Sociology of Health and Illness*, 3 (1), pp. 89-103.

Clarke, A. (2006) Qualitative interviewing: encountering ethical issues and challenges, *Nurse Researcher*, 13 (4), pp.19-29.

Clarke, A., Sarangi, S. and Verrier-Jones, K. (2011) Voicing the lifeworld: parental accounts of responsibility in genetic consultations for polycystic kidney disease, *Social Science & Medicine,* 72 (11), pp. 1743-1751.

Cole, F., Mackey, T. and Lindenberg, J. (1999) Search and research: Quality improvement: Psychometric evaluation of patient satisfaction with nurse practitioner care instrument, *Journal of the American Academy of Nurse Practitioners,* 11 (11) pp.471-475.

Collins, S. (2005) Explanations in consultations: the combined effectiveness of doctors' and nurses' communication with patients, *Medical Education*, 39 (8), pp. 785-796.

Collins, S., Britten, N., Ruusuvuari, J. and Thompson, A. (2007) Understanding the process of patient participation, in: Collins, S., Britten, N., Ruusuvuari, J. and Thompson, A. (eds.) *Patient participation in Health Care Consultations: Qualitative Perspectives.* Maidenhead: Open University Press, pp.3-21.

Cooper, L., Roter, D., Johnson, R., Ford, D., Steinwachs, D. and Powe, N. (2003) Patient-Centered Communication, Ratings of Care, and Concordance of Patient and Physician Race, *Annals of Internal Medicine*, 139 (11), pp.907-916.

Coulter, A. and Collins, A. (2011) *Making shared decision-making a reality: No decision about me, without me.* London: The King's Fund.

Cordella, M. (2004) *The Dynamic Consultation: A Discourse Analytical Study of Doctor-patient Communication*. Amsterdam: John Benjamins Publishing Co.

Coupland, J., Robinson, J. and Coupland, N. (1994) Frame negotiation in doctor-elderly patient consultations, *Discourse & Society*, 5, 89-124.

Creswell, J. and Plano Clark, V. (2010) *Designing and conducting mixed methods research.* 2nd ed. Thousand Oaks: Sage.

Creswell, J. (2013) *Research design*. 4th ed. Thousand Oaks: Sage.

Creswell, J. (2014) *A concise introduction to mixed methods research.* Thousand Oaks: Sage.

Cronin, C. (2014) Using case study research as a rigorous form of inquiry, *Nurse Researcher*, 21 (5), pp. 19-27.

Cruz, E. and Higginbottom, G. (2013) The use of focused ethnography in nursing research, *Nurse Researcher*, 20 (4), pp. 36-43.

Dearnley, C. (2005) A reflection on the use of semi-structured interviews, *Nurse Researcher*, 13 (1) pp.19-28.

Defibaugh, S. (2014a) Solidarity and alignment in nurse practitioner-patient interactions, *Discourse & Communication,* 8 (3), pp. 260–277.

Defibaugh, S. (2014b) Management of care or management of face: Indirectness in nurse practitioner/patient interactions, *Journal of Pragmatics*, 67, pp. 61-71.

Defibaugh, S. (2015) *Identity construction in nurse practitioner-patient interactions*, Doctoral Thesis, Graduate College of the University of Illinois at Urbana-Champaign.

Denley, J., Rao, J. and Stewart, A. (2003) How do patients rate the quality of consultations in primary care? A patient enablement survey from practices within a primary care trust in Sandwell, *Quality in Primary Care*, 11, (3), pp. 181-187.

Denscombe, M. (2010) *The Good Research Guide: for small-scale social research projects 4th ed.* Maidenhead: Open University Press.

Department of Health and Social Security (1986) *Neighbourhood Nursing: a focus for Care (Cumberlege Report)*. London: HMSO.

Department of Health (2010) *Advanced Level Nursing: A Position Statement.* Leeds: Department of Health.

Department of Health (2012) *Liberating the NHS: No decision about me, without me.* London: Department of Health.

Dossey, B., Keegan, L. and Guzzetta, C. (2000) *Holistic Nursing: A Handbook for Practice.* Maryland: Aspen Publishers Inc.

Drury, M., Greenfield, S., Stilwell, B., and Hull, F. (1988) A nurse practitioner in general practice: patient perceptions and expectations, *Journal of the Royal College of General Practitioners*, 38 (316), pp. 503-505.

Dures, E., Rumsey, N., Morris, M. and Gleeson, K. (2011) Mixed methods in health psychology: theoretical and practical considerations of the third paradigm. *Journal of Health Psychology*, 16 (2), pp. 332-341.

Durham, W., Sykes, C., Piper, S. and Stokes, P. (2015) Conceptual frameworks and terminonology in doctoral nursing research, *Nurse Researcher*, 23 (2), pp. 8-12.

Ellis, R., Gates, B. and Kenworthy, N. (2003) *Interpersonal Communication in Nursing: Theory and Practice*. Edinburgh: Churchill Livingstone.

Eve, L. (2005) Defining the characteristics of the nurse practitioner role, *Nursing Times*, 101 (25), pp. 30–32.

Fineberg, H. (2012) A Successful and Sustainable Health System — How to Get There from Here, *New England Journal of Medicine* 366:1020-1027.

Ford, S., Schofield, T. and Hope, T. (2003) Are patients' decision-making preferences being met? *Health Expectations*, 6, pp. 72-80.

Friedson, E. (1970) *Profession of Medicine: A Study of the Sociology of Applied Knowledge.* Chicago: University of Chicago Press.

Frost, J., Currie, M. and Cruickshank, M. (2015) An Integrative Review of Enablement in Primary Health Care, *Journal of Primary Care & Community Health,* 6 (4), 264–278.

Gangeness J. and Yurkovich, E. (2006) Revisiting case study as a nursing research design, *Nurse Researcher*, 13 (4), pp. 7-18.

Garfinkel, H. (1967) *Studies in Ethnomethodology*. Cambridge: Polity Press.

General Medical Council (2002) *Making and using visual and audio recordings of patients – guidance for doctors*. London: General Medical Council.

General Medical Council (2015) *The Medical Register*, Available at: http://www.gmc-uk.org/doctors/medical_register.asp [Accessed 22 July 2015].

Giddens, A. and Sutton, P. (2013) *Sociology*. 7th ed. Cambridge: Polity Press.

Gilbert, D. and Hayes, E. (2009) Communication and outcomes of visits between older patients and nurse practitioners, *Nursing Research*, 58 (4), pp. 283-293.

Goffman, E. (1959) *The Presentation of Self in Everyday Life.* London: Penguin Books.

Gosling, S., Rentfrow, P. and Swann, W. (2003) A very brief measure of the Big-Five personality domains, *Journal of Research in Personality,* 37, pp. 504–528.

Greenhalgh, T., Robb, N. and Scambler, G. (2006) Communicative and strategic action in interpreted consultations in primary health care: A Habermasian perspective, *Social Science & Medicine*, 63 (5), pp.1170-1187.

Greenhalgh, T. and Heath, I. (2010) *Measuring quality in the therapeutic relationship.* London: The King's Fund.

Griffith, H. (2008) What is advanced nursing practice? in Hinchcliff, S. and Rogers, R. (eds.) *Competencies for Advanced Nursing Practice.* London: Hodder Arnold, pp. 1-20.

Guadagnoli, E. and Ward, P. (1998) Patient participation in decision-making, *Social Science & Medicine*, Patient participation in decision-making, 47 (3), pp. 329-39.

Habermas, J. (1981a) *The Theory of Communicative Action, Volume 1: Reason and the Rationalization of Society*. Cambridge: Polity Press.

Habermas, J. (1981b) *The Theory of Communicative Action Volume 2 Lifeworld and System: A Critique of Functionalist Reason*. Cambridge: Polity Press.

Hakim, C. (2000) *Research Design: Successful designs for social and economic research 2nd ed.* London: Routledge.

Hankins-Farber, R. (2007) In response to: Williams A. & Jones M. (2006) Patient's assessments of consulting a nurse practitioner: the time factor. Journal of Advanced Nursing, 53(2), 188–195, *Journal of Advanced Nursing*, 58 (1), p. 99.

Hastings, A., Lennon, M., Redsell, S. and Cheater, F. (2003) Evaluation of a consultation skills workshop using the Consultation Assessment and Improvement Instrument for Nurses, *Learning in Health and Social Care*, **2** (4), pp. 202–212.

Hastings, A. and Redsell, S. (eds.) (2006) *The Good Consultation Guide for Nurses*. Oxford: Radcliffe Publishing.

Haughney, J., Cotton, P., Rosena,J., Morrison, K. and Price, D. (2007) The use of a modification of the Patient Enablement Instrument in asthma, *Primary Care Respiratory Journal*, 16 (2), pp. 89-92.

Hayes, E. (2007) Nurse practitioners and managed care: patient satisfaction and intention to adhere to nurse practitioner plan of care, *Journal of the American Academy of Nurse Practitioners*, 19 (8), pp.418-26.

Holloway, I. and Wheeler, S. (2010) *Qualitative Research in Nursing and Healthcare 3rd ed.* Chichester: Wiley-Blackwell.

Holmes, C. and Warelow, P. (2000) Some implications of postmodernism for nursing theory, research, and practice, *Canadian Journal of Nursing Research*, 32 (2), pp. 89-101.

Horrocks, S., Anderson, E. and Salisbury, C. (2002) Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors, *British Medical Journal,* 324, pp. 819-823.

Houghton, C., Casey, D., Shaw, D. and Murphy, K. (2013) Rigour in qualitative case-study research, *Nurse Researcher*, 20 (4), pp.12-17.

Houghton, C., Murphy, K., Shaw, D. and Casey, D. (2015) Qualitative case study data analysis: an example from practice. *Nurse Researcher*, 22 (5), pp.8-12.

Howie, J., Heaney, D. and Maxwell, M. (1997) Measuring quality in general practice: Pilot study of a needs, process and outcome measure, *Occasional Paper Royal College of General Practitioners*, 75, pp. 1-32.

Howie, G., Heaney, D., Maxwell, M., Walker, J., Freeman, G. and Rai, H. (1999) Quality at general practice consultations: cross sectional survey, *British Medical Journal*, 319, pp. 738-743.

Hudon, C., St-Cyr Tribble, D., Bravo, G. and Poitras, M. (2011) Enablement in health care context: a concept analysis, *Journal of Evaluation in Clinical Practice*, 17, pp. 143-149.

Huppatz, K. (2010) Respectability and the paid caring occupations: an empirical investigation of normality, morality, impression management, esteem in nursing and social work, *Health Sociology Review*, 19 (1), pp. 73-85.

Jackson, L. and Duffy, B. (1998) *Health Communication Research: A Guide to Developments and Directions*. Westport: Greenwood.

Jackson, J., Chamberlin, J. and Kroenked, K. (2001) Predictors of patient satisfaction, *Social Science & Medicine*, 52, pp. 609-620.

Jenkins-Clarke, S. and Carr-Hill, R. (2001) Changes, challenges and choices for the primary health care workforce: looking to the future, *Journal of Advanced Nursing,* 34 (6), pp. 842-849.

Jeffery, R. (1979) Normal rubbish: deviant patients in casualty departments, in Davey, B., Gray, A. and Seale, C. (eds.) (1995) *Health and disease: a reader*. 2nd ed. Buckingham: Open University Press, pp. 345-351.

Jefferies, L. and McIntyre, D. (2010) *Stylistics*. Cambridge: Cambridge University Press.

Johnson, R. (1993) Nurse practitioner-patient discourse: Uncovering the voice of nursing in primary care practice, *Scholarly Inquiry for Nursing Practice: An International Journal,* 7, pp. 143-157.

Johnston, L. (2006) Software and method: reflections on teaching and using QSR Nvivo in doctoral research. *Social Research Methodology*, 9 (5), pp. 379-391.

Joint Formulary Committee (2014) *BNF 68*. London: BMJ Group and Pharmaceutical Press.

Jones, M. (2005) Role development and effective practice in specialist and advanced practice roles in acute hospital settings: systematic review and meta-synthesis, *Journal of Advanced Nursing*, 49 (2), pp. 191-209.

Kelly, E. and Stoye, G. (2014) *Does GP Practice Size Matter? GP Practice Size and the Quality of Primary Care. IFS Report R101.* London: Institute of Fiscal Studies.

Kenny, D., Veldhuijzen, W., van der Weijden, T., LeBlanc, A., Lockyer, J., Légaré, F. and Campbell, C. (2010) Interpersonal perception in the context of doctor-patient relationships: a dyadic analysis of doctor-patient communication, *Social Science & Medicine*, 70 (5), pp. 763-768.

Kilpatrick, K., Lavoie-Tremblay, M., Ritchie, J., Lamothe, L. and Diane Doran, D. (2011) Boundary work and the introduction of acute care nurse practitioners in healthcare teams, *Journal of Advanced Nursing*, 68 (7), pp. 1504-1515.

Kim, J., Park, S., Yoo, S. and Shen, H. (2010) Mapping health communication scholarship: breadth, depth, and agenda of published research in Health Communication, *Health communication*, 25 (6-7), pp. 487-503.

Kinnersley, P., Anderson, E., Parry, K., Clement, J., Archard, L., Turton, P., Stainthorpe, A., Fraser, A., Butler, C. and Rogers, C. (2000) Randomised controlled trial of nurse practitioner versus general practitioner care for patients requesting "same day" consultations in primary care, *British Medical Journal*, 320, pp. 1043-1048.

Kleiman, S. (2004) What is the nature of nurse practitioner's lived experiences interacting with patients? *Journal of the American Academy of Nurse Practitioners,* 16 (6), pp. 263-269.

Kleinpell, R. Hudspeth, R., Scordo, K. and Magdic, K. (2012) Defining NP scope of practice and associated regulations: Focus on acute care, *Journal of the American Academy of Nurse Practitioners,* 24, pp. 11-18.

Knudston, N. (2000) Patient satisfaction with nurse practitioner service in a rural setting, *Journal of the American Academy of Nurse Practitioners*, 12 (10), pp. 405-412.

Koeniger-Donohue, R. (2007) Nurse practitioner–client interaction as resource exchange: the nurse's view (NP–client interaction), *Journal of Clinical Nursing*, 16, pp. 1050–1060.

Kritek, P. (1997) The nurse as a professional who attends to healing, in: Kritek, P. (ed.) *Reflections on Healing: A Central Nursing Construct*. New York: National League for Nursing, pp. 175-183.

Ironside, P. (2001) Creating a research base for nursing education: an interpretive review of conventional, critical, feminist, postmodern, and phenomenologic pedagogies, *Advances in Nursing Science*, 23 (3), pp. 72-87.

Lambert, V., Glacken, M. and McCarron, M. (2011) Employing an ethnographic approach; key characteristics, *Nurse Researcher*, 19 (1), pp. 17-23.

Lattimer, V., George, S., Thompson, F., Thomas, E., Mullee, M., Turnbull, J., Smith, H., Moore, M., Bond, H. and Glasper, A. (1998) Safety and effectiveness of nurse telephone consultation in out of hours primary care: randomised controlled trial. The South Wiltshire Out of Hours Project (SWOOP) Group, *British Medical Journal*, 317 (7165), pp. 1054-9.

Launer, J. (2002) *Narrative-based Primary Care*. Oxford: Radcliffe Medical Press.

Laurant, M., Reeves, D., Hermens, R., Braspenning, J., Grol, R., Sibbald, B. (2005) *Substitution of doctors by nurses in primary care*. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD001271. DOI: 10.1002/14651858.CD001271.pub2.

Lawson, M. (2002) Nurse practitioner and physician communication styles, *Applied Nursing Research*, 15 (2), pp. 60-6.

Lees, J. (ed.) (1999) *Clinical Counselling in Primary care*. London: Routledge.

Lewis, C., Resnik, B. Schmidt, G. and Waxman, D. (1969) Activities, events and outcomes in ambulatory patient care, *New England Journal of Medicine*, 280, pp.645-649.

Ley, P. and Llewelyn, S. (1995) Improving patients' understanding, recall, satisfaction and compliance, in Broome, A. and Llewelyn, S. (eds.) *Health Psychology: Processes and Applications*. London: Chapman & Hall, pp. 75 – 98.

Lenz, E., Mundinger, M., Kane, R., Hopkins, S. and Lin, S. (2004) Primary care outcomes in patients treated by nurse practitioners or physicians: two-year follow-up, *Medical Care Research and Review,* 61 (3), pp. 332-351.

Lyotard, J. (1984) *The Postmodern Condition: A Report on Knowledge*. Manchester: Manchester University Press.

Maclaine, K. (2009) Advanced Nursing Practice in the Community, in Sines, D., Saunders, M. and Forbes-Burford, J. (eds.) *Community Health Care Nursing*. Chichester: Wiley-Blackwell, pp. 234-252.

MacLean, L., Meyer, M. and Estable, A. (2004) Improving Accuracy of Transcripts in Qualitative Research. *Qualitative Health Research*. 14 (1), pp.113-123.

Macpherson, H., Mercer, S. Scullion, T and Thomas, K (2003) Empathy, Enablement, and Outcome: An Exploratory Study on Acupuncture Patients' Perceptions, *The Journal of Alternative and Complementary Medicine,* 9 (6), pp. 869–876.

Malone, H., Nichool, H. and Coyne, I. (2016) Fundamentals of estimating sample size. *Nurse Researcher*, 23 (5), pp. 21-25.

Maltby, J., Day, L. and Williams, G. (2007) *Introduction to statistics for nurses*. London: Pearson Education.

Mangione-Smith, R., Stivers, T., Elliot, M., McDonald, L. and Heritage, J. (2003) Online commentary during the physical examination: a communication tool for avoiding inappropriate antibiotic prescribing? *Social Science & Medicine*, 56 (2), pp. 313-320.

Marks, D. Murray, M. and Willig, C. (2000) *Health Psychology: Theory, Research and Practice*. London: Sage.

Marks, D. Murray, M., Evans, B. and Estacio, E. (2005) *Health Psychology: Theory, Research and Practice. 2nd ed.* London: Sage.

Martin, P. and Hutchinson, S. (1999) Nurse practitioners and the problem of discounting, *Journal of Advanced Nursing*, 29 (1), pp. 9–17.

Massey, D. (1994) *Space, place and gender*. Cambridge: Polity Press.

McKinley, R. (2004) The relationship between measures of patient satisfaction and enablement and professional assessments of consultation competence, *Medical Teacher*, 26 (3), pp. 223-228.

McKinstry, B., Colthart, I. and Walker, J. (2006) Can doctors predict patients' satisfaction and enablement? A cross-sectional observational study, *Family Practice*, 23 (2), pp. 240-245.

McMurray, R. (2010) The struggle to professionalize: an ethnographic account of the occupational position of advanced nurse practitioners, *Human Relations,* 64 (6), pp. 801-822.

Mead, N. and Bower, P. (2002) Patient-centred consultation and outcomes in primary care: a review of the literature. *Patient Education and Counseling*, 48, pp. 51-61.

Meakin, R. and Weinman, J. (2002) The 'Medical Interview Satisfaction Scale' (MISS-21) adapted for British general practice, *Family Practice*, 19 (3), pp.257-63.

Mentink, J., Trolinger, J. and O'Hara-Devereaux, M. (1980) Nurse Practitioners in Primary Care, *Family & Community Health,* 3 (2) 35-48.

Mercer, S., Jani, B., Maxwell, M., Wong, S. and Watt, G. (2012) Patient enablement requires physician empathy: a cross-sectional study of general practice consultations in areas of high and low socioeconomic deprivation in Scotland, *BMC Family Practice*, 13:6.

Merrifield, N. (2015) Revalidation pilots reveal raft of unresolved issues, *Nursing Times*, 111 (27), pp.2-3.

Miles, M. and Huberman, A. (1994) *An Expanded Sourcebook: Qualitative Data Analysis. 2nd ed.* London: Sage Publications.

Mishler, E. (1984) *The Discourse of Medicine: Dialectics of Medical Interviews.* Norwood, New Jersey: Ablex Publishing Corporation.

Molloy, L., Walker, K., Lakeman, R. and Skinner, I. (2015) Ethnonursing and the ethnographic approach in nursing, *Nurse Researcher*, 23 (2), pp. 17-21.
Morgan, D. (2014) *Integrating qualitative and quantitative methods: a pragmatic approach.* London: Sage.

Morrison, P. and Burnard, P. (1997) *Caring and communicating: the interpersonal relationship in nursing. 2nd ed.* London : Macmillan Press Ltd.

Moulton, L. (2007) *The naked consultation: a practical guide to primary care consultation skills*. Oxford: Radcliffe Publishing.

Mundinger, M., Kane, E., Lenz, A., Totten, W., Tsai, P., Cleary, W., Friedewald, A., Siu, L. and Shelanski, M. (2000) Primary care outcomes in patients treated by nurse practitioners or physicians, *Journal of the American Medical Association*, 283, pp. 59-68.

National Organisation of Nurse Practitioner Faculties (2012) *Nurse practitioner core competencies*. Available from:
http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/competencies/npcorecompetenciesfinal2012.pdf [Accessed 14 July 2015].

Neighbour, R. (2005) *The Inner Consultation: How to develop an effective and intuitive consulting style. 2nd ed.* Oxford: Radcliffe Publishing.

Nettleton, S. (2013) *The Sociology of Health & Illness. 3rd ed.* Cambridge: Polity Press.

Northouse, L. and Northouse, P. (1998). *Health Communication: Strategies of Health Professionals*. London: Pearson Education.

Nursing and Midwifery Council (2006) *Standards of proficiency for nurse and midwife prescribers.* London: Nursing and Midwifery Council.

O'Hara Devereaux, M. (1991) Nurse practitioners in North America, in Salvage, J. (ed.) *Nurse Practitioners: Working for Change in Primary Health care Nursing*. London: King's Fund Centre, pp. 10-23.

Ong, L., De Haes, J., Hoos, A. and Lammes, F. (1995) Doctor-patient communication: a review of the literature, *Social Science & Medicine*, 40 (7), pp. 903-918.

Paniagua, H. (2009) *A study comparing the consultation practice of advanced nurse practitioners and general practitioners in primary care*. Doctoral Thesis, Swansea University.

Paniagua, H. (2011) Advanced nurse practitioners and GPs: what is the difference? *Practice Nursing,* 22 (7), pp. 383-388.

Parkinson, C. (2013) GP 10-minute appointment rule axed, *BBC News - Health*, 15 November. Available from: http://www.bbc.co.uk/news/health-24959626 [Accessed 22 July 2015].

Patton, M. (2015) *Qualitative Research and Evaluation Meth*ods. London: Sage.

Pawlikowska, T., Walker, J., Nowak, P. and Szumilo-Grzesik, W. (2009) Patient involvement in assessing consultation quality: a quantitative study of the Patient Enablement Instrument in Poland, *Health Expectations*, 13 (1), pp.13–23.

Pawlikowska, T., Zhang, W., Griffiths, F., van Dalen, J. and van der Vleuten, C. (2012) Verbal and non-verbal behaviour of doctors and patients in primary care consultations – How this relates to patent enablement, *Patient Education and Counselling,* 86, pp. 70-76.

Pendleton, D., Schofield, T., Tate, P. and Havelock, P. (1984) *The Consultation: An approach to learning and teaching*. Oxford: Oxford University Press.

Pendleton, D., Schofield, T., Tate, P. and Havelock, P. (2003) *The New Consultation: Developing doctor-patient communication*. Oxford: Oxford University Press.

Peräkylä, A., Ruusuvuari, J. and Lindfors, P. (2007) What is patient participation? Reflections arising from the study of general practice, hoemeopathy and psychoanalysis, in: Collins, S., Britten, N., Ruusuvuari, J. and Thompson, A. (eds*.) Patient participation in Health Care Consultations: Qualitative Perspectives*. Maidenhead: Open University Press, pp.121-142.

Perry, C., Thurston, M., Killey, M. and Miller, J.(2005) The nurse practitioner in primary care: alleviating problems of access? *British Journal of Nursing*, 14 (5), pp.255-259.

Pinkerton, J. and Bush, H. (2000) Nurse practitioners and physicians: patients' perceived health and satisfaction with care, *Journal of the American Academy of Nurse Practitioners,* 12 (6), 211-217.

Polit, D. and Beck, C. (2010) *Essentials of nursing research : appraising evidence for nursing practice 7th ed.* Philadelphia : Wolters Kluwer Lippincott Williams & Wilkins.

Porter, S. (2000) Qualitative Analysis, In: Cormack, D. (ed.) *The Research Process in Nursing. 4th ed.* Oxford: Blackwell Science Ltd.

Prasad, P. (2005) *Crafting Qualitative Research: Working in the postpositivist traditions.* London: M.E. Sharpe, Inc.

Price, S. Mercer, S. and MacPherson, H. (2006) Practitioner empathy, patient enablement and health outcomes: A prospective study of acupuncture patients, *Patient, Education and Counseling*, 63, pp.239–245.

Price, C., Hobbs, N., Stokes, L. and Scott, A. (2015) MD vs. NP: a study on nurse practitioner roles and responsibilities and their acceptance in our generation, in: *Phi*

Kappa Phi Research Symposium, Georgia southern University, USA, 2 June 2015. Available from: http://digitalcommons.georgiasouthern.edu/pkp/2015/Undergraduate/1 [Accessed 1 August 2015].

Primary Care Workforce Commission (2015) *The future of primary care Creating teams for tomorrow.* Leeds: Health Education England.

QSR International (2010a) *NVivo 9 Basics.* Doncaster: QSR International.

QSR International (2010b) *NVivo 9 Advanced.* Doncaster: QSR International.

Price, S., Mercer, S. and MacPherson, H. (2006) Practitioner empathy, patient enablement and health outcomes: A prospective study of acupuncture patients, *Patient Education and Counseling*, 63, pp. 239-245.

Prosser, B. and Olson, R. (2013) Changes in professional human care work: the case of nurse practitioners in Australia, *Health Sociology Review*, 22 (4), pp. 422-432.

Pulcini, J. and Gul, R. (2010) A international survey on advanced practice nursing education, practice and education, *Journal of Nursing Scholarship*, 42 (1), pp.31-39.

Rashidian A, Shakibazadeh E, Karimi- Shahanjarini A, Glenton C, Noyes J, Lewin S, Colvin CJ, Laurant M. Barriers and facilitators to the implementation of doctor-nurse substitution strategies in primary care: qualitative evidence synthesis. *Cochrane Database of Systematic Reviews* 2013, Issue 2. Art. No.: CD010412. DOI: 10.1002/14651858.CD010412.

Rashotte, J. (2005) Knowing the nurse practitioner: dominant discourses shaping our horizons, *Nursing Philosophy*, 6, pp. 51-62.

Redsell, S. (2006) New roles for nurses and consultation skills, in: Hastings, A. and Redsell, S. (eds.) *The Good Consultation Guide for Nurses*. Oxford: Radcliffe Publishing, pp. 3-14.

Redsell, S., Jackson, C., Stokes, T., Hastings, A. and Baker, R. (2007a) Patient expectations of 'first-contact care' consultations with nurse and general practitioners in primary care, *Quality in Primary Care*, 15 (1), pp. 5-10.

Redsell, S., Stokes, T., Jackson, C., Hastings, A. and Baker, R. (2007b) Patients' accounts of the differences in nurses' and general practitioners' roles in primary care, *Journal of Advanced Nursing,* 57 (2), pp. 172-180.

RIAS Works (2014) *Bibliography and Abstracts of RIAS Studies through 2014.* Available from: http://www.riasworks.com/resources_a.html [Accessed 21 July 2015].

Ritzer, G. (2008) *Sociological Theory 7ᵗʰ ed*. London: McGraw-Hill Higher Education.

Robson, C. (2002) *Real World Research. 2nd ed.* Oxford: Blackwell Publishers Ltd.

Roter D (1984) Patient question asking in physician patient interaction. *Health Psychology*, 3, pp. 395–409.

Roter, D. (2011) *The Roter method of interaction process analysis*. Baltimore: The Johns Hopkins University.

Roter, D. and Hall, J. (1992) *Doctors Talking with Patients / Patients Talking with Doctors: Improving Communication in Medical Visits*. Westport: Auburn House.

Roter, D. and Larson, S. (2002) The Roter interaction analysis system (RIAS): utility and flexibility for analysis of medical interactions, *Patient Education and Counselling,* 46, pp. 243-251.

Rounds, L. (1997) The nurse practitioner: A healing role for the nurse, in: Kritek, P. (ed.) *Reflections on Healing: A Central Nursing Construct*. New York: National League for Nursing, pp. 209-223.

Royal College of General Practitioners (2006) V*ideo Assessment of Consulting Skills in 2006*. London: Royal College of General Practitioners.

Royal College of Nursing (2008) *Advanced nurse practitioners – an RCN guide to the advanced nurse practitioner role, competencies and programme accreditation.* London: Royal College of Nursing.

Royal College of Nursing (2012) *Advanced nurse practitioners - An RCN guide to advanced nursing practice, advanced nurse practitioners and programme accreditation*. London: Royal College of Nursing.

Royal College of Nursing Research Society (2011) *Informed consent in health and social care research: RCN guidance for nurses 2nd ed*. London: Royal College of Nursing.

Rubin, H., Gandek, B., Rogers, W., Kosinski, M., McHorney, C., Ware Jr., J. *et al*. (1993) Patients' ratings of outpatient visits in different practice settings results from the medical outcomes study, *Journal of the American Medical Association*, 270, pp. 835–840.

Sandelowski, M. (2011) "Casing" the research case study, *Research in Nursing & Health*, 34 (2) pp.153–159.

Sandhu, H., Dale, J., Stallard, N., Crouch, R, and Glucksman, E. (2009) Emergency nurse practitioners and doctors consulting with patients in an emergency department: a comparison of communication skills and satisfaction, *Emergency Medicine Journal*, 26 (6), pp.400-404.

Sandvik, M., Eide, H., Lind, M., Graugaard, P., Torper, J., and Finset, A. (2002) Analyzing medical dialogues: strength and weakness of Roter's interaction analysis system (RIAS), *Patient Education and Counseling*, 46 (4), pp.235-41.

Sangster-Gormley, E. (2011) *A case study of the process of nurse practitioner role Implementation within a health authority in British Columbia*, Doctoral Thesis, Dalhousie University.

Sangster-Gormley, E. (2013) How case-study research can help to explain implementation of the nurse practitioner role. *Nurse Researcher*, 20 (4), pp. 6-11.

Sangster-Gormley, E., Griffith, J. Schreiber, R., Borycki, E. (2015) Using a mixed-methods design to examine nurse practitioner integration in British Columbia, *Nurse Researcher,* 22 (6), pp. 16-21.

Scambler, G. (1987) Habermas and the power of medical expertise, in Scambler, G. (ed.) *Sociological Theory and Medical Sociology*. London:Tavistock.

Scambler, G. and Britten, N. (2001) System, lifeworld and doctor-patient interaction: issues of trust in a changing world, in Scambler, G. (ed.) H*abermas, Critical Theory and Health*. London: Routledge, pp.45-67.

Scholz, R. and Tietje, O. (2002). *Embedded Case Study Methods: Integrating Quantitative and Qualitative Knowledge*. London: Sage.

Seale, C., Anderson, E. and Kinnersley, P. (2005) Comparison of GP and nurse practitioner consultations: an observational study, *British Journal of General Practice*, 55, pp. 938-943.

Seale, C., Anderson, E. and Kinnersley, P. (2006) Treatment advice in primary care: a comparative study of nurse practitioners and general practitioners. *Journal of Advanced Nursing,* 54 (5), pp. 534-541.

Shum, C., Humphreys, A., Wheeler, D., Cochrane, M., Skoda, S. and Clement, S. (2000) Nurse management of patients with minor illness in general practice: multicentre, randomised controlled trial, *British Medical Journal,* 320, pp. 1038-1043.

Sibbald, B. (2000) Primary care: background and policy issues, in Williams, A. *Nursing, Medicine and Primary Care*. Buckingham: Open University Press, pp.14-26.

Sidani, S. and Fox, M. (2014) Patient-centered care: clarification of its specific elements to facilitate interprofessional care, *Journal of Interprofessional Care*, 28 (2), pp. 134-141.

Silver, H., Ford, L. and Stearly, S. (1967) A program to increase health care for children: the pediatric nurse practitioner program, *Pediatrics*, 39, pp. 756-760.

Silver, H., Ford, L. and Day, L. (1968) The pediatric nurse-practitioner program: expanding the role of the nurse to provide increased health care for children, *Journal of the American Medical Association*, 204 (4), pp. 298-302.

Silverman, J. and Kurtz, S. and Draper, J. (2013) *Skills for Communicating With Patients 3rd ed*. London: Radcliffe Publishing Ltd.

Simmons, T. and Winefield, H. (2002) Predictors of Patient Enablement: The Role of Doctors' Helpgiving Style, Patient and Visit Characteristics, *Australian Journal of Primary Health*, 8 (3), pp. 39-46.

Simon, C., Everitt, H. and Kendrick, T. (2005) *Oxford Handbook of General Practice 2nd ed.* Oxford: Oxford University Press.

Simons, H. (2009) *Case Study Research in Practice.* London: Sage Publications Ltd.

Siriwardena, A. (2007) The enigma of patient-centredness, the therapeutic relationship and outcomes of the clinical encounter, *Quality in Primary Care*, 15, pp.1-4.

Spitzer, W. and Kergin D. (1973) Nurse practitioners in primary care. The McMasters University education program, *Canadian Medical Association Journal*, 108 (8), pp. 991-995.

Spitzer, W. Sackett, D., Sibley, J., Roberts, R., Gent, M. Kergin, D. *et al*. (1974) The Burlington randomized trial of the nurse practitioner, *New England Journal of Medicine*, 290, pp. 251-256.

Spitzer, W. Sackett, D., Sibley, J., Roberts, R., Gent, M. Kergin, D. *et al.* (1990) 1965-1990: 25th anniversary of nurse practitioners. A classic manuscript reprinted in celebration of 25 years of progress. The Burlington randomized trial of the nurse practitioner. 1971-2, *Journal of the American Academy of Nurse Practitioners*, 2 (3), pp. 93-99.

Stajduhar, K., Blaneaves, L. and Thorne, S. (2001) A case for the 'middle ground': exploring the tensions of postmodern thought in nursing, *Nursing Philosophy*, 2, pp. 72-82.

Stake, R. (1995). *The Art of Case Study Research*. Thousand Oaks: Sage.

Staniszewska, S. and Ahmed, L. (1998) Patient expectations and satisfaction with health care, *Nursing Standard*, 12 (18), pp. 34 – 38.

Staniszewska, S. and Ahmed, L. (1999) 'The concepts of expectations and satisfaction: do they capture the way patient's evaluate their care', *Journal Of Advanced Nursing*,   29 (2), pp. 364 – 372.

Staniszewska, S. (1999) Patient expectations and health-related quality of life, *Health Expectations*, 2 (2), 95 - 105 (1369-6513).

Stevenson, F., Barry, C., Britten, N., Barber, N. and Bradley, C. (2000) Doctor-patient communication about drugs: the evidence for shared decision making, *Social Science & Medicine*, 50, pp. 829-840.

Stevenson, F. (2007). What is a good consultation and what is a bad consultation? In S. Collins, N. Britten, J. Ruusuvuori, A. Thompson (eds.), *Patient Participation in Health Care Consultations*. Maidenhead: Open University Press, pp. 65-82.

Stewart, M. (1984) What is a successful doctor-patient interview? A study of interactions and outcomes, *Social Science and Medicine,* 19 (2), pp. 167-175.

Stilwell, B., Greenfield, S., Drury, V. and Hull, F. (1987) A nurse practitioner in general practice: working styles and patterns of consultations, *Journal of the Royal College of General Practitioners*, 37, pp. 154-157.

Street, R. and Millay, B. (2001) Analyzing patient participation in medical encounters, *Health Communication*, 13 (1), pp. 61-73.

Street, R., O'Malley, K., Cooper, L. and Haidet, P. (2008) Understanding Concordance in patient-physician relationships: personal and ethnic dimensions of shared identity, *Annals of Family Medicine*, 6 (3) 198-205.

Street, R. and Haidet, P. (2011) How well do doctors know their patients? Factors affecting physician understanding of patients' health beliefs, J*ournal of General Internal Medicine*, 26, pp. 21-27.

Street, R. (2013) How clinician-patient communication contributes to heath improvement: modelling pathways from talk to outcome, *Patient Education and Counselling*, 92, pp. 286-291.

Taylor, R. (2013) Case-study research in context, *Nurse Researcher*, 20 (4), pp. 4-5.

Timmermans, L., van der Maazenb, R., Verhaak, C., van Roosmalen, M., van Daal, W. and Kraaimaat, F. (2005) Patient participation in discussing palliative radiotherapy, *Patient Education and Counseling*, 57, pp. 53–61.

Timmermans, S. and Oh, H. (2010) The continued social transformation of the medical profession, *Journal of Health and Social Behavior*, 51 (S), pp. S94-S106.

Thomas, C. (2010) Negotiating the contested terrain of narrative methods in illness contexts, *Sociology of Health & Illness,* 32 (4), pp. 647-660.

Usherwood, T. (1999*) Understanding the Consultation: Evidence, Theory and Practice*. Buckingham: open University Press.

Venning, P., Durie, A., Roland, M., Roberts, C and Leese, B. (2000) Randomised controlled trial comparing cost effectiveness of general practitioners and nurse practitioners in primary care, *British Medical Journal,* 320, pp. 1048-1053.

Welsh, E. (2002) Dealing with data: using NVivo in the qualitative data analysis process. *Forum: Qualitative Social Research*, 3 (2), pp. 20-26.

Wensing, M., Wetzels, R., Hermsen, J. and Baker, R. (2007) Do elderly patients feel more enabled if they had been actively involved in primary care consultations? *Patient Education and Counseling*, 68, pp. 265-269.

West, C. and Frankel, R. (1991) Miscommunications in medicine. In: Coupland, N., Giles, H. and Wiemann, J. (eds.) *'Miscommunication' and Problematic Talk*. Newbury Park: Sage, pp. 166-193.

Williams, A. (2000) *Nursing, Medicine and Primary Care*. Buckingham: Open University Press.

Williams, A. and Jones, M. (2006) Patients' assessments of consulting a nurse practitioner: the time factor, *Journal of Advanced Nursing*, 53 (2), pp. 188-95.

Yin, R. (2009) *Case Study Research: Design and Methods. 4th ed*. London: Sage Publications Ltd.

APPENDICES

Appendix A: Semi-structured interview schedules

A case study of the nurse practitioner consultation in primary care

Semi-structured interview schedule for interviews with nurse practitioners

- Introduction to purpose and structure of the interview.

- Ask them to reflect on their experiences of their recently video recorded consultations.

- Chief investigator to reflect on his viewing of the nurse practitioner's consultations with further discussion ensuing from both parties' reflections.

Further possible points for discussion in the interviews:

1. Ask how they feel about patients consulting with them for the management of presenting medical problems.

2. Ask what they think about discussing lifeworld information in a consultation.

3. Ask about creating opportunities for patient participation in their consultations.

4. Ask how they try to help patients / carers to be able to manage their presenting medical problem after consulting with them.

A case study of the nurse practitioner consultation in primary care

Semi-structured interview schedule for interviews with patients / carers

- Introduction to purpose and structure of the interview.

- Ask them to reflect on their experience of their recent nurse practitioner consultation.

- Introduce video recording of their consultation and watch it together.

- Ask them to reflect on their consultation after seeing the video recording

- Chief investigator to reflect on his viewing of the patient's recorded consultation with further discussion ensuing from both parties' reflections.

Further possible points for discussion in the interviews:

1. Ask what they think about consulting with a nurse practitioner for medical problems.

2. Ask them to compare their experiences of consulting with a nurse practitioner versus a general practitioner.

3. Ask what they think about discussing lifeworld information in a consultation.

4. Ask how able they felt to participate in their consultation.

5. Ask how their ability to cope with the medical problem they consulted for was affected by their consultation with the nurse practitioner.

Appendix B: Nurse Practitioner Expectations, Satisfaction, & Enablement Questionnaire (NPESEQ)

1. What are your expectations of the nurse practitioner consultation?

(Nurse Practitioner Expectations, Satisfaction, & Enablement Questionnaire: version 1 / 3rd March 2011)

This survey is for a research study of patient expectations and satisfaction with nurse practitioner consultations. The survey is completely confidential and anonymous; this means it will not be possible to identify you or your responses. Only summary information will be reported in the study results.

The questionnaire is divided into four sections. The first section on cream paper should be completed before you see the nurse practitioner. The other sections on white paper should be completed after you have seen the nurse practitioner. In total it will take approximately 5-10 minutes to complete the questionnaire. When you have completed it please place it in the box marked 'Satisfaction Questionnaires' at reception.

This first section of the questionnaire looks at your expectations of the nurse practitioner consultation. This section should be completed before you see the nurse practitioner. Please note: if you have previously completed this survey you should not complete it again.

1. Do you expect the nurse practitioner to take a history of either your problem or the problem of the person you are accompanying ?

☐ Yes   ☐ No   ☐ Not sure

2. Do you expect the nurse practitioner to examine either you or the person you are accompanying ?

☐ Yes   ☐ No   ☐ Not sure

3. Do you expect the nurse practitioner to request some medical investigations, such as blood tests or an x-ray, for either you or the person you are accompanying?

☐ Yes   ☐ No   ☐ Not sure

4. Do you expect the nurse practitioner to diagnose either your medical problem or that of the person you are accompanying?

☐ Yes   ☐ No   ☐ Not sure

5. Do you expect the nurse practitioner to prescribe medication for either your medical problem or that of the person you are accompanying?

☐ Yes   ☐ No   ☐ Not sure

6. Do you expect the nurse practitioner to discuss either your case or that of the person you are accompanying with a doctor?

☐ Yes   ☐ No   ☐ Not sure

7. If required, do you expect the nurse practitioner to be able to refer either you or the person you are accompanying to a medical specialist?

☐ Yes ☐ No ☐ Not sure

2. Your satisfaction with the nurse practitioner consultation

This second section of the questionnaire looks at how satisfied you are after seeing the nurse practitioner. This section of the questionnaire should be completed after you have seen the nurse practitioner.

1. Overall my expectations of coming to see the nurse practitioner were met

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

2. Overall I was satisfied with my visit to the nurse practitioner

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

3. I am likely to recommend the nurse practitioner to others

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

4. The nurse practitioner was not rushed

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

5. I would rather see the nurse practitioner than a GP

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

6. My nurse practitioner is a skilled healthcare provider

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

7. My nurse practitioner discusses methods other than medication to treat my problem

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

8. I am satisfied with how the nurse practitioner treated me

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

9. I was satisfied with the amount of time the nurse practitioner spent with me

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

10. My nurse practitioner is caring

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

11. My nurse practitioner is knowledgeable about health problems

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

12. I trust my nurse practitioner

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

13. My nurse practitioner knows when to refer to or consult with a doctor

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

14. The nurse practitioner listened to what I had to say

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

15. The nurse practitioner respected me

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

16. The nurse practitioner was interested in my health concerns

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

17. I can easily talk to the nurse practitioner about my health concerns

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

18. I understood what the nurse practitioner explained to me

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

19. I understood what the nurse practitioner taught me

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

20. The nurse practitioner explained things in an understandable manner

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

21. I feel comfortable asking the nurse practitioner questions

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

22. I feel comfortable asking a GP questions

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

23. I left the nurse practitioner visit with all questions answered

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

24. I usually leave a visit to a GP with all my questions answered

	Strongly disagree	Disagree	Agree	Strongly agree	Uncertain
Tick a circle	○	○	○	○	○

25. From past experience, who do you feel has provided healthcare that you've been most satisfied with?

☐ Nurse Practitioner ☐ GP

26. From past experience, who do you feel has provided you with the best health education?

☐ Nurse Practitioner ☐ GP

27. Number of times in the past year that you have seen a nurse practitioner at The Cuckoo Lane Surgery:

☐ None ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16 or more

28. Number of times in the past year that you have seen a GP:

☐ None ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16 or more

29. Number of times in the past year that you have seen a nurse practitioner:

☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16 or more

30. Are you attending the clinic as a patient or as a carer of either a child or an adult?

☐ Patient ☐ Child carer ☐ Adult Carer

31. What health problems do you or the person you are attending with take medication for? Please tick ALL that apply

☐ None   ☐ Heart disease   ☐ Chronic bronchitis / COPD

☐ High blood pressure   ☐ High cholesterol   ☐ Cancer

☐ Diabetes   ☐ Thyroid problems   ☐ HIV

☐ Depression / anxiety   ☐ Asthma

☐ Other (please specify)

[   ]

3. Your ability to cope with your problem after seeing the nurse practitioner

This third section of the questionnaire looks at how well you feel able to deal with your medical problem after seeing the nurse practitioner. This section of the questionnaire should be completed after you have seen the nurse practitioner.

1. As a result of your consultation do you feel you are able to cope with life?

☐ Much better   ☐ Better   ☐ Same or less   ☐ Not applicable

2. As a result of your consultation do you feel you are able to understand your illness?

☐ Much better   ☐ Better   ☐ Same or less   ☐ Not applicable

3. As a result of your consultation do you feel you are able to cope with your illness?

☐ Much better   ☐ Better   ☐ Same or less   ☐ Not applicable

4. As a result of your consultation do you feel you are able to keep yourself healthy?

☐ Much better   ☐ Better   ☐ Same or less   ☐ Not applicable

5. As a result of your consultation do you feel you are confident about your health?

☐ Much more   ☐ More   ☐ Same or less   ☐ Not applicable

6. As a result of your consultation do you feel you are able to help yourself?

☐ Much more   ☐ More   ☐ Same or less   ☐ Not applicable

4. Information about yourself

This last section of the questionnaire collects demographic information such as your age and gender.

1. What is your gender?

☐ Male   ☐ Female

2. What is the highest education level you have completed?

- ☐ Less than GCSE / O-level
- ☐ GCSE
- ☐ A-Level
- ☐ Vocational / Technical qualification
- ☐ Diploma / Founation Degree
- ☐ Undergraduate Degree
- ☐ Postgraduate Degree
- ☐ Doctorate

- ☐ Other than above (please specify)

3. What is your age?

☐ 18-25   ☐ 26-35   ☐ 36-45   ☐ 46-55   ☐ 56-65   ☐ 66-75   ☐ 76-85   ☐ 86 plus

4. What is your ethnic group?

- ☐ White
- ☐ Mixed race
- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Chinese
- ☐ Other Asian
- ☐ Black Caribbean
- ☐ Black African
- ☐ Other Black

- ☐ Other than above (please specify)

5. What is your employment status?

- ☐ Unemployed
- ☐ Full-time
- ☐ Part-time
- ☐ Self-employed
- ☐ Agency
- ☐ Retired
- ☐ Student

- ☐ Other (please specify)

6. What is your marital status?

- ☐ Single never married
- ☐ Cohabiting
- ☐ Married
- ☐ Civil Partnership
- ☐ Separated
- ☐ Divorced
- ☐ Widowed

7. What is your household take home annual income?

- ☐ less than £10,000
- ☐ £10,000 - £20,000
- ☐ £21,000 - £30,000
- ☐ £31,001 - £40,000
- ☐ £41,000 - £50,000
- ☐ £51,000 - £75,000
- ☐ £76,000 - £100,000
- ☐ more than £100,000

Appendix C: Example of completed RIAS coding sheet

NP 3 / Session 1 / Patient 2.3 **Appt. type:** Same day **Time length:** 8.2 minutes **P gender:** Adult male
NP:P verbal dominance ratio- 1.13 / **Total PC:BM ratio** – 1.17 / **NP PC:BM ratio** – 1.55 / **P PC:BM ratio**: 0.93
Colours: Nurse Practitioner / **Patient.** **Coding meta-categories:** Patient-centred (PC) NP & P / Patient-centred P only / Biomedical NP & P /
Biomedical NP only

RIAS Categories		Opening	History	Exam	Counsel	Closing	Totals
Personal	Personal remarks, social conversation	4 / 2			1	4 / 7	8 / 10
Laughs	Laughs, tells jokes						
Concern	Shows concern or worry		2	1	1		4
R/O	Reassures, encourages or shows optimism			4			4
Approve	Shows approval - direct						
Comp	Gives compliment - general						
Disagree	Shows disapproval - direct						
Crit	Shows criticism - general						
Emp	Empathy statements						
Legit	Legitimizing statements						
Partner	Partnership statements (Physician only)						
Self-Dis	Self-disclosure statements (Physician only)						
?Reassure	Asks for reassurance						
Agree	Shows agreement or understanding	1	13 / 6	2 / 10	5 / 5		20 / 22
BC	Back-channel responses		3		1		4
Trans	Transition words	1	2 / 1		1		4 / 1
Orient	Gives orientation, instructions		4	11			15
Checks	Paraphrase/Checks for understanding		1				1

RIAS Categories	Opening	History	Exam	Counsel	Closing	Totals
?Understand Asks for understanding						
?Bid Bid for repetition				1		1
?Opinion Asks for opinion (Physician only)						
?Permission Asks for permission (Physician only)		1				1
Gives-Med Gives information-Medical condition		1 / 12	1 / 2	1		2 / 15
Gives-Thera Gives information-Therapeutic regimen		13		2	1	16
Gives-L/S Gives information-Lifestyle						
Gives-P/S Gives information- Psychosocial		1		2		3
Gives-Other Gives information-Other						
[?]Med Asks closed-ended questions-Medical condition		2				2
[?]Thera Asks closed-ended questions-Therapeutic regimen		2		2 / 1		4
[?]L/S Asks closed-ended questions-Lifestyle						
[?]P/S Asks closed-ended questions-Psychosocial						
[?]Other Asks closed-ended questions-Other						
?Med Asks open-ended questions-Medical condition		1				1
?Thera Asks open-ended questions-Therapeutic regimen		8				8 / 1
?L/S Asks open-ended questions-Lifestyle						
?P/S Asks open-ended questions- Psychosocial						
?Other Asks open-ended questions- Other						
C-Med/Thera Counsels-Medical/Therapeutic regimen (Physician only)				11		11
C-L/S-P/S Counsels-Lifestyle/Psychosocial (Physician only)						
?Service Requests for services (Patient only)				3		3
Unintel Unintelligible utterances			1			1

Appendix D: Example event listing matrix for Nurse Practitioner 1

Table E1 – Event listing – consultation details and summary outcomes of Nurse Practitioner 1 / recording session 1

Patient details	Consultation Type	Presenting problem	Consultation outcome	Consultation time length / Satisfied with time?	Verbal dominance ratio	PC* vs. BM** ratio	PC vs.BM split ratio / congruency	Expectations met?	Satisfied overall?	Satisfied with how treated?	See NP over GP?	Recommend NP to others?	PEI score
P 1.1, adult, 24 years old, female, white British, young child present.	Pre-booked	Depression, related medication review	Repeat script, further review appointment	5.8 mins. / Strongly agree	1.96 NP dominant	2.0 PC	NP 1.45 PC P 4.0 PC Congruent	Strongly agree	Strongly agree	Strongly agree	Uncertain	Strongly agree	6/12
P 1.2, child, 8 months old, white, mother present	Same day	Fever, teething	Self-care advice	13.1 mins. / No questionnaire	0.91 P dominant	1.97 PC	NP 1.23 PC P 3.37 PC Congruent	No questionnaire	No questionnaire	No questionnaire	No questionnaire	No questionnaire	No questionnaire
P 1.3, adult, 62 years old, white British	Pre-booked	Medication request, tiredness	Repeat script, blood test, self-care advice	15.1 mins. / Strongly agree	1.34 NP dominant	2.06 PC	NP 1.5 PC P 3.25 PC Congruent	Strongly agree	Strongly agree	Strongly agree	Strongly agree	Strongly agree	0/12
P 1.4, child, 1 year old, white Eastern European, mother present	Pre-booked	Eczema, eye infection, feeding problems	Script for emollients, self-care advice, refer to health visitor	18.0 mins. / Strongly agree	1.47 NP dominant	0.90 BM	NP 0.87 BM P 0.95 BM Congruent	Agree	Strongly agree	Strongly agree	Uncertain	Strongly agree	6/12

*PC = Patient-centred / **BM = Biomedical

Appendix E: Details of qualitative data analysis of interview transcripts

Table E1: Summary coding categories derived from emergent thematic analysis of interviews with the nurse practitioners

Summary coding categories derived from nurse practitioner interviews
• Remembering patients and engendering trust • Holistic approach • Openness and giving the impression of time • Nurse practitioner role ambiguity • Negotiation and explanation • Lifeworld presence • Declaring uncertainty and verbalising clinical reasoning

Table E2: Summary coding categories derived from emergent thematic analysis of interviews with the patients / carers

Summary coding categories derived from patient / carer interviews
• The nurse practitioner as a 'friend' • Lifeworld presence • GP is for 'serious' problems • Nurse practitioner role ambiguity • Nurse practitioner remembering the patient • Not being rushed • Female patients liking consulting with female nurse practitioners

Table E3: Co-related summary coding categories derived from emergent thematic analysis of interviews

Co-related summary coding categories derived from nurse practitioner (NP) and patient / carer (Ps) interviews
• [NPs] Remembering patients and engendering trust ⇔ [Ps] The nurse practitioner as a 'friend' • [NPs] Holistic approach ⇔ [Ps] Lifeworld presence • [NPs] Openness and giving the impression of time ⇔ [Ps] Not being rushed • [NPs] Nurse Practitioner role ambiguity ⇔ [Ps] Nurse Practitioner role ambiguity • [NPs] Negotiation and explanation ⇔ [Ps] Not being rushed • [NPs] Lifeworld presence ⇔ [Ps] Lifeworld presence • [NPs] Declaring uncertainty and verbalising clinical reasoning ⇔ [Ps] GP is for 'serious' problems • [Ps] Female patients liking consulting with female nurse practitioners

Table E4: Combined co-related summary coding categories derived from emergent thematic analysis of interviews

Combined co-related summary coding categories from nurse practitioner and patient / carer interviews
• [NPs] Remembering patients and engendering trust ⇔ [Ps] The nurse practitioner as a 'friend' ⇨ **Holistic lifeworld**   • [NPs] Holistic approach ⇔ [Ps] Lifeworld presence ⇨**Holistic lifeworld**   • [NPs] Openness and giving the impression of time ⇔ [Ps] Not being rushed ⇨**Conveying the impression of time for the patient / carer**   • [NPs] Nurse Practitioner role ambiguity ⇔ [Ps] Nurse Practitioner role ambiguity ⇔ [Ps] GP is for 'serious' problems ⇨**Nurse practitioner role ambiguity**   • [NPs] Negotiation and explanation ⇔ [Ps] Not being rushed ⇒ **Conveying the impression of time for the patient / carer**   • [NPs] Lifeworld presence ⇔ [Ps] Lifeworld presence ⇨**Holistic lifeworld**   • [NPs] Declaring uncertainty and verbalising clinical reasoning ⇨**Verbalising clinical reasoning**   • [Ps] Female patients liking consulting with female nurse practitioners ⇨**Female gender of nurse practitioners**

In Table E4 it can be seen that some of the combined co-related summary coding categories occurred more than once, so for clarity a non-iterative list of the combined co-related summary coding categories arising from the initial emergent thematic analysis process is presented below:

1) Holistic lifeworld
2) Conveying the impression of time for the patient / carer
3) Nurse practitioner role ambiguity
4) Verbalising clinical reasoning
5) Female gender of nurse practitioners

Table E5 – Initial codes derived in NVivo from the interview data

Coding name
Aesthetic knowledge
Asking for GP if needed
At ease talking with NP
Being examined
Biomed & lifeworld
Blood results - difficult scientific work
Can ask questions
Checking which person to see
Checking with a colleague
Clinical filtering and processing skills
Comfortable consulting with patients
Comfortable talking with colleagues
Comfortable talking with NP

Coding name
Comfortable with NPs
Commentary on clinical reasoning
Communication and complaints
Communication style of NP
Complaints about care
Complexity of general practice
Complexity of interactions
Confident seeing a NP
Consultation time length
Creating the impression of time
Diagnosed quickly by NP
Differences between nurses and drs
Dr's scientific knowledge
Everyday conversation style
Everyday language of NPs
Expectations of treatment
Experience and skimming
Explanation
Feeling enabled
Feeling rushed with GP
Gaining confidence with NP
Gender and NP or GP
Getting everything wanted
Given information
GP focused on medical matters
GP may know more than NP
GP more medical
GP more prepared
GP scientific training
Happy with NP
Impression of listening
Information & self-help
Information and empowerment
Interaction skills
Intuition
Knowing the NP
Knowing the NPs
Knowing the patient
Knowing when ok to see a Dr and a nurse
Knows what NP role is
Level with patients
Lifeworld issues

Coding name
Lifeworld style
Lime Tree Way arrangements
LTC - see Dr.
Multiple agendas
Negotiations and patient control
Not rushing the patient
Not understanding the NP role
NP & GP knowledge similar
NP and GP similar
NP answer all questions
NP as doctor
NP authority compared to GP authority
NP careful
NP checks with NP if needed
NP clinical skills
NP clinical uncertainty
NP communication skills
NP compared to general nurse
NP compared to GP
NP effective resource usage
NP experience
NP friendly style
NP good listener
NP holistic - whole picture
NP interactions
NP interested in the person
NP inter-team working
NP knowing the patient
NP knowledge extension
NP knows patient
NP like a friend
NP like teachers
NP managing clinical problems
NP mistaken for GP
NP privilege interactions
NP remembering previous attendances
NP role ambiguity
NP role boundary
NP role uncertainty
NP role validation
NP thorough in examining
NPs focus on day to day stuff

Coding name
NPs friendly
NPs judged more harshly
NPs know their patients
NPs leaving GPs with the complex patients
NPs receptive
NPs try harder
Nursing as an art
Open ending
Open ending to consultation
Open initial questioning
Open style of consulting
Option to return
Other clinicians problem focused
Patient enablement & Lifeworld
Patient knows the NP
Patient participation
Patient satisfaction
Patient satisfaction & lifeworld
Patient understanding
Patient's perspective incorporated
Personality of the clinician
Prefer to see NP
Prescribing and negotiations
Pre-verification and remembering
Pt's talking with NPs
Referred to GP if needed
Rehearsing what to say
Relaxed seeing NP
Responsibility for the patient
Safe space for disclosure
Safety netting
Second opinion - NP getting that
See NPs all the time
Seeing GP – arrangements
Seen NP previously
Self-revelation (NPs)
Serious illness
Serious problems
Shared clinical reasoning
Telling the NP what is wrong
Trust and rapport
Understands NP role

Coding name
Verbalising clinical reasoning
Video recording process
When to see Dr or NP

Table E6 displays line-by-line coding extracts from the 'Explanation' component of the aggregated child node of *Explanation, information, and enablement* from the parent node of *Consulting Style of Nurse Practitioners*. This example shows how the coding node of 'explanation' emerged as an important part of the consultation style of nurse practitioners.

Table E6: NVivo data extracts with direct coding[11] for 'Explanation' in bold (part of the aggregated child node Explanation, information, and enablement')

<Internals\\Nurse Practitioner interviews**NP 1** transcript> - references coded [3.69% Coverage]

Reference 2 - 1.17% Coverage

Yes well that is important. I always try and do that, or ask them what they think is wrong and what they understand about it before I start to talk about it. **But yes, it is important that they know about their medication, what they are taking. The side effects and stuff. How to take it and what to expect**. Yes, it is just about health education isn't it?

Reference 4 - 0.51% Coverage

I always try and do that, and **always at the end go over it again so they know what they are doing when you give them a prescription**, so you reinforcing it.

Reference 5 - 0.79% Coverage

Re-inforcing what they have got to do, because sometimes you go through stuff, and it is a lot for them to take in. But it also helps me with my consultation. I am kind of going back over stuff and making sure that I have covered everything.

<Internals\\Nurse Practitioner interviews**NP 2** transcript> - references coded [6.78% Coverage]

Reference 2 - 5.26% Coverage

Well, I think it's important. I think if you're going to take the patient on the journey with you, you know, sometimes things in general practice aren't always straightforward. You see patterns and you think what you're dealing with, but you can make mistakes. **So I do think it's really important to, for most patients, an intelligent person who can go with you, I'll try and say, "Look, this is what my thought process is about what I think is wrong."**

Reference 3 - 0.60% Coverage

So that's what I try to use, try to come to an understanding- Because I think basically, if you're going to have a successful consultation, you want to find out what the expectation is, **and you want to try and meet it if you can, or at least explain why you can't.**

<Internals\\Patient data**P 3.10 & 2.2** - references coded [3.77% Coverage]

Reference 1 - 1.17% Coverage

When it becomes a problem, **you've still got a problem but the problem isn't as bad as you thought it was because they've explained...**

Reference 2 - 2.60% Coverage

They've not cured you but the nurse has explained to you what to do, how to cure it or how to make it better and she prescribed something as you just said. If it doesn't work tomorrow – I mean there's no come back next week. She said, "Phone me tomorrow and I'll fit you in".

<Internals\\Patient data**P 3.5** - reference coded [2.33% Coverage]

Reference 1 - 2.33% Coverage

I mean you've got to remember, because I've just had some antibiotics prescribed, I said, "When do I take them?" "Empty stomach", "Right, okay". So you've got to clarify all of that with them.

---

[11] Coding for 'Explanation' is emphasised in bold type.

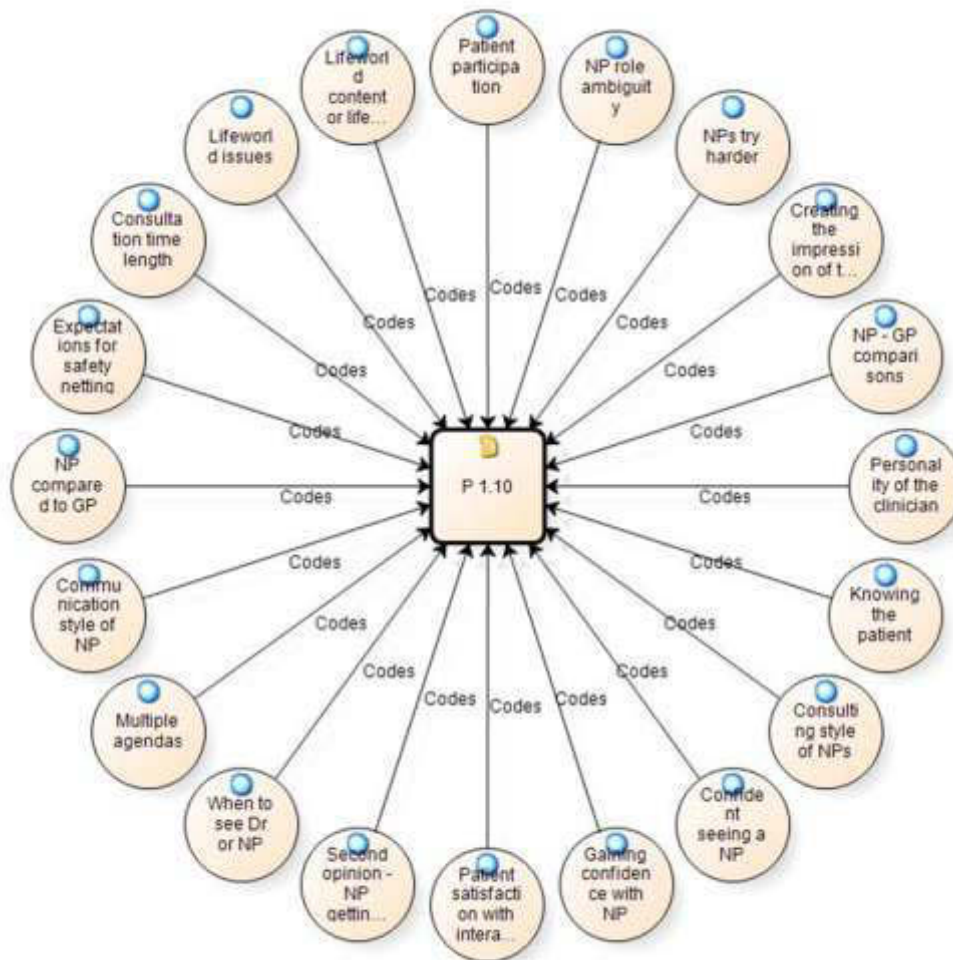**Figure E1: NVivo coding graph from interview transcript of Patient 1.10**

Figure E2: Coding node frequency chart (most coded nodes) from interview transcript of Patient 1.10
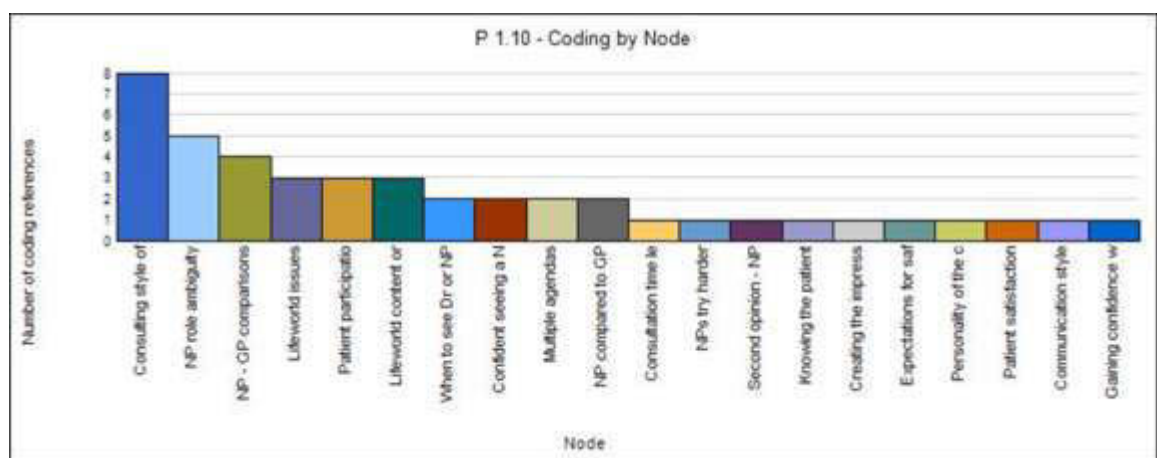
Table E7: Parent nodes representing interview data

Parent nodes
Consulting style of nurse practitioners[12]
Nurse practitioner – GP comparisons
Lifeworld content or lifeworld style issues
Nurse practitioner role ambiguity
Creating the impression of time
Expectations for safety netting
Video recording process[13]

Table E8: Aggregated child nodes of the parent node 'Consulting style of nurse practitioners'

Aggregated child nodes
Patient / carer participation
Integrated clinical reasoning
Nurse practitioner interaction skills
Explanation, enablement and information
Open consultation style
Remembering and knowing each other

---

[12] Comprising aggregated child nodes.

[13] Participants' evaluations of the video recording process were sometimes elicited as an 'icebreaker' introductory question in the audio recorded interviews. Subsequently the small amount of information generated by that question was coded to the 'video recording process' node, but as the video recording process itself was not the focus of this study, the data in that node was not used further.

Table E9: Aggregated child node 'Explanation, information, and enablement' of parent node 'Consulting Style of Nurse Practitioners'

Explanation, information, and enablement
Explanation
Feeling enabled
Getting everything wanted
Given information
Information & self-help
Information and empowerment
NP answer all questions
NP like teachers

Figure E3: NVivo tree map of aggregated child node 'Explanation, information, and enablement' of parent node 'Consulting Style of Nurse Practitioners'

Explanation, information and enablement					
Explanation	Feeling enabled	Information and empowerment	Information and self-help	Getting everything wanted	Nurse practitioners answer all questions
				Given Information	Nurse practitioners like teachers

Table E10: Aggregated child node 'Integrated clinical' reasoning of parent node 'Consulting Style of Nurse Practitioners'

Integrated clinical reasoning
Being examined
Clinical filtering and processing skills
Commentary on clinical reasoning
NP thorough in examining
Reassurance through online commentary
Shared clinical reasoning
Verbalising clinical reasoning

Table E11: Aggregated child node 'Nurse practitioner interaction skills' of parent node 'Consulting Style of Nurse Practitioners'

Nurse practitioner interaction skills
Aesthetic knowledge
Comfortable consulting with patients
Communication and complaints
Communication style of NP
Complexity of interactions
Impression of listening
Interaction skills
Intuition
Level with patients
NP communication skills
NP good listener
NP interactions
NP privilege interactions
Nursing as an art

Table E12: Aggregated child node 'Open consultation style' of parent node 'Consulting Style of Nurse Practitioners'

Open consultation style
Can ask questions
Multiple agendas
NPs receptive
Open ending to consultation
Open initial questioning
Open style of consulting
Option to return

Table E13: Aggregated child node 'Remembering and knowing each other' of parent node 'Consulting Style of Nurse Practitioners'

Remembering and knowing each other
Knowing the patient
NP knows patient
NPs know their patients
Patient knows the NP
Pre-verification and remembering patients
Trust and rapport

Table E14: Aggregated child node 'Patient / carer participation' of parent node 'Consulting Style of Nurse Practitioners'

Patient / carer participation
Comfortable with NPs
Expectations of treatment
Negotiations and patient control
Patient satisfaction with interactions
Patient understanding
Patient's perspective incorporated
Prescribing and negotiations
Pt's talking with NPs
Rehearsing what to say
Safe space for disclosure
Telling the NP what is wrong

Table E15: Child nodes of parent node 'Nurse practitioner – GP' comparisons

NP compared to GP [Complexity of general practice]

Serious problems [serious illness]

Dr's scientific knowledge and training [GP focused on medical matters, GP may know more than NP, GP more medical, GP more prepared, GP scientific training, Other clinicians problem focused]

Gender and NP or GP

See NPs all the time [Happy with NP]

Lime Tree Way arrangements

NP clinical skills

NP inter-team working

NPs try harder

Blood results – difficult scientific work [Complexity of general practice]

NP effective resource usage

NP authority compared to GP authority

NP knowledge extension

NP managing clinical problems

NPs leaving GPs with more complex patients

Personality of the clinician

(Merged child nodes in square parentheses)

Table E16: Child nodes of parent node 'Lifeworld content or lifeworld style'

Lifeworld issues

Comfortable talking with NP [At ease talking with NP]

NP friendly style [NPs friendly]

Biomedicine and lifeworld

NP holistic – whole picture

Lifeworld style [Everyday conversation style]

NP interested in the person [NP experience]

Patient enablement and lifeworld

NPs focus on day-to-day stuff

Self-revelation by NPs

(Merged child nodes in square parentheses)

Table E17: Child nodes of parent node 'Nurse Practitioner role ambiguity'

NP role ambiguity [NP role uncertainty]
Understands NP role [Knows what NP role is. NP as doctor]
NP and GP similar [NP mistaken for GP]
NP role boundary [NP role validation]
When to see Dr or NP [Checking which person to see, LTC – see Dr]
Confident seeing a NP [Gaining confidence with NP]
Differences between nurses and doctors
NP compared to general nurse
(Merged child nodes in square parentheses)

Table E18: Child nodes of parent node 'Creating the impression of time'

Consultation time length
Creating the impression of time
Feeling rushed with GP
Not rushing the patient
(There were no merged child nodes for this parent node)

Table E19: Child nodes of parent node 'Expectations for safety netting'

NP clinical uncertainty
Referred to GP if needed
Asking for GP if needed
Second opinion – NP getting that [NP checks with GP]
Checking with a colleague
NP careful
Responsibility for patient
Safety netting
(Merged child nodes in square parentheses)

Appendix F: Research ethics and governance approval letters

National Research Ethics Service

NRES Committee London - Bentham
Research Ethics Committee Offices
South House
Block A, Rooms 7-12
Royal Free Hospital
Pond Street
London
NW3 2QG

Telephone: 020 7794 0500 x34836

26 May 2011

Mr Julian Barratt
Senior Lecturer - Nurse Practitioner
London South Bank University
Faculty of Health & Social Care
London South Bank University
103 Borough Road, London
SE1 0AA

Dear Mr Barratt

Full title of study:	**A case study of the nurse practitioner consultation in primary care**
REC reference number:	**11/LO/0337**

Thank you for your letter of 19th May 2011. I can confirm the REC has received the documents listed below as evidence of compliance with the approval conditions detailed in our letter dated 07 April 2011. Please note these documents are for information only and have not been reviewed by the committee.

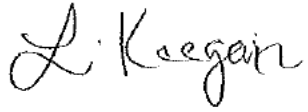**Documents received**

The documents received were as follows:

Document	Version	Date
Covering Letter		19 May 2011
Participant Consent Form	2	19 May 2011
Participant Information Sheet: For Nurse Practitioner	2	19 May 2011
Participant Information Sheet: For Patient	2	19 May 2011

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor"s responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

11/LO/0337	**Please quote this number on all correspondence**

Yours sincerely

L. Keegan

Laura Keegan
Committee Co-ordinator

E-mail: laura.keegan@nhs.net

Copy to: Prof Nicola Crichton,

███████████████████████████████████████

Direct line: 020-7815 6024
E-mail: broadwam@lsbu.ac.uk
Ref: UREC 1127

Mr Julian Barratt,
Faculty of Health and Social Care,
London South Bank University,

8 July 2011

Dear Jullian,

A case study of the nurse practitioner consultation in primary care

Thank you for submitting the documents from the review and acceptance of your study from the National Research Ethics Service Committee London.

I am pleased to inform you this ethical approval has been upheld by Chair's action on behalf of the University Research Ethics Committee.

I wish you every success with your research.

Yours sincerely,

Michael Broadway
On behalf of Prof. Curzio, Chair, LSBU Research Ethics Committee

cc:

Prof Joan Curzio, Chair, LSBU Research Ethics Committee

Applied Research Unit

Mr Julian Barratt
London South Bank University
Faculty of Health & Social Care
103 Borough Road,
London
SE1 0AA

9th June 2011

Dear Julian

Project Title:	A case study of the nurse practitioner consultation in primary care
REC	11/LO/0337
Portfolio No	N/A CSP No N/A

Thank you for your assistance providing the documentation for the scrutiny of the proposal.

I am satisfied that your proposal meets with the requirements of the Research Governance Framework (RGF). The ▮▮▮▮▮▮▮▮ Consortium for Research and Innovation is happy to approve your study on behalf of ▮▮▮▮▮▮ on the understanding that you adhere to the RGF conditions on the attached document. The end date of the R&D Form is listed as December 2014.

The documents received and approved were: -

R&D form and SSIF	
NRES Committee London – Bentham favourable opinion letter	06/05/11
NRES Committee London – Bentham evidence of compliance letter	26/05/11
All study documents as per REC letters listed above	

From the information provided and the requirement of the Research Governance Framework have been satisfied in the following areas: -

Check list
The study has received peer review by a research review committee of the Chief Investigator's host university.
The study has been approved by the practice – ▮▮▮▮▮▮▮▮▮▮▮ 23/05/11
Use of PCT resources – patients or carers attending the selected clinic for a nurse practitioner appointment, will be asked by the CI if they would be willing to have their consultation video recorded, and complete a questionnaire. They will also be asked if willing to subsequently participate in a post consultation interview. Patients or carers checking in or a nurse practitioner appointment at the selected clinic will be asked to complete a research questionnaire by the reception staff. The nurse practitioners employed at the clinic will be invited by the CIr at a clinic team meeting to participate in the research project.

Data Protection – R&D Form (A36-8) states that Personal data in the study will be kept confidential in accordance with both the NHS Code of Confidentiality, and also the Standards of conduct, performance and ethics for nurses and midwives published by the Nursing and Midwifery Council (2008). Personal data such as patients' names, addresses, or dates of birth will not be collected for the study's analysis. **Please note it is the responsibility of the sponsor to ensure all patient identifiable data stored electronically is encrypted**
Research Passport – ==The CI will requires a NHS to NHS Letter of Access with ████ before he starts his research==

Please ensure that you:

1) Report all SUSARs (Serious unexpected serious adverse reaction) to the Research Ethics Committee and any affecting our patients should be reported to ████████. Failure to abide by this will result in the withdrawal of the Trust's approval.

2) Respond to any requests from ███████, which hosts the audit function, and provide it with any project amendments, project extensions or terminations. PCTs are required by the Research Governance Framework to maintain a comprehensive database of all research projects.

3) Inform us that the study has been completed by sending a copy of the NRES 'Declaration of the End of Study' form (or completing our brief end of study report form which will be emailed to you after the end date), a summary of the final report and the number of patients/staff from ███████ who took part in your study.

Please do not hesitate to contact ████████████████████ if you require further assistance.

With kind regards

████████████████████

Sent via email
Barratt, Julian 3 [barratj3@lsbu.ac.uk]
████████████████
Academic Supervisor crichtnj@lsbu.ac.uk
████████████

Appendix G: Details of enablement mean scores from previous studies of patient enablement

Table G1: Enablement mean scores from previous studies of patient enablement

Previous studies	Sample size, clinician type (country)	Enablement mean score
Howie *et al.* (1999)	25,994 patients seeing GPs (UK)	3.1
Venning *et al.* (2000)	665 patients seeing GPs (UK)	4.43
Venning *et al.* (2000)	335 patients seeing nurse practitioners (UK)	4.92
Simmons and Winefield (2002)	103 patients seeing GPs (Australia)	5.83
Denley *et al.* (2003)	1656 patients seeing GPs (UK)	4.6
Ford *et al.* (2003)	171 patients seeing GPs (UK)	4.4
MacPherson *et al.* (2003)	192 patients seeing acupuncturists (UK)	5.39
McKinley *et al.* (2004)	388 patients seeing medical students (UK)	3.37
McKinstry *et al.* (2006)	1848 patients seeing GP registrars (UK)	4.5
Price *et al.* (2006)	88 patients seeing Acupuncturists (UK)	4.41
Haughney *et al.* (2007)	228 patients seeing GPs (UK)	5.55
Wensing *et al.* (2007)	625 patients seeing GPs (pan-Europe)	5.5
Adzic *et al.* (2008)	5,527 patients seeing GPs (Croatia)	6.6
Pawlikowska *et al.* (2009)	7,924 patients seeing GPs (Poland)	4.0
Hudon *et al.* (2011)	110 patients seeing GPs (France)	4.84
Mercer *et al.* (2012)	3,044 patients seeing GPs (UK)	3.0
Pawlikowska *et al.* (2012)	261 patients seeing GPs (UK)	4.36
Brusse and Yen (2013)	67 patients seeing GPs (Australia)	4.31
This study (2016)	51 patients seeing nurse practitioners (UK)	6.08