

**THE EFFECT OF PATIENT GENDER ON MEDICAL DECISION
MAKING :
THE INFLUENCE OF DECISIONAL STRESS**

by

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ABSTRACT

The Effect Of Patient Gender On Medical Decision Making : The Influence Of Decisional Stress

by Antonietta Di Caccavo

This research investigated the influence of patient gender as a non-clinical variable on treatment decisions made in general practice. Responses to exploratory interviews carried out with 34 GPs supported the relevance of decisional stress in general practice. Decisional conflict theory therefore provided a theoretical basis for predicting that gender differences in management would be most likely to occur under conditions of decisional stress. This is because GPs are likely to rely on gender stereotypes to simplify decision tasks as this allows them to selectively search and appraise information. Responses to interview questions regarding the influence of patient gender on decision making were analysed in order to establish a set of collective GP expectations about the characteristics and behaviour of male and female patients.

Following the interview study, a subset of 23 GPs supplied information for each patient seen over approximately six surgeries, providing data for 1380 consultations in all. GPs recorded information about presenting complaints, management decisions, a range of patient characteristics, three measures of decisional stress and a measure of feeling towards patients. Log-linear analysis of these data suggested that when not feeling positively towards patients, GPs managed male and female patients presenting with certain complaints differently. Women were more likely to be prescribed drugs while men were more likely to be given advice or

referral. This disparity only occurred for patients presenting with psychological and musculo-skeletal complaints.

In order to identify whether consultation processes mediated these differences, corresponding audio-taped consultations also collected from the 23 GPs were analysed. Verbal interaction between GP and patient was coded according to the functional style and content of communication. However, no significant differences in either of these aspects of the consultation process emerged to explain differences in management outcome. This may be because treatment differences are mediated by implicit processes rather than by observable consultation behaviour.

Research carried out in the thesis furthers the understanding of medical decision making by recognising that non-clinical factors such as patient gender and feeling towards patients, as well as medical factors influence the way that GPs manage their patients.

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AUTHOR'S DECLARATION

Research described in the thesis was carried out in the context of a larger project concerned with Medical Decision Making In Primary Care. This project was funded by a grant from the Polytechnics and Colleges Funding Council from September 1992 to September 1995.

Seven team members were involved in the project. Clare Harries and Antonietta Di Caccavo were employed as postgraduate researchers, and registered for PhDs. Other members included Professor Jonathan Evans (Project Co ordinator), Dr. Fraser Reid, Dr. Michael Hyland, Dr. Ian Dennis and Dr. John Dean (Medical Advisor).

The research projects of the two postgraduate researchers were carried out separately, although they shared the initial subject sample. All team members were involved in the recruitment of the original sample and the design of the checklist data collection tool described in Chapter five.

Throughout the course of the Medical Decision Making Project, meetings with other researchers interested in medical decision making in general practice were attended. These included meetings with Dr. Michael Whitfield, University of Bristol and Dr. Rolf Wahlstrom, Karolinska Institutet, Stockholm, Sweden.

Relevant conferences were regularly attended. Three papers were presented at British Psychological Society Social Section

conferences and one paper was published in an international health journal. Details of conference attendance and publications are given below :

Publications

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Chapter 1

INTRODUCTION

The general practice consultation is both a familiar and mysterious experience for most people. At some point in their lives, people are likely to have consulted with their GPs regarding concerns with their health or the welfare of their families. As the organisation of general practice is well established, individuals know that they are required to present symptoms and expect some sort of management from their doctors. The mystery of primary care lies in doctors' abilities to translate sets of physical or psychological reactions, feelings and sensations into symptoms of specific illnesses and to manage these appropriately according to patients' individual needs. It is this somewhat enigmatic aspect of general practice that is explored in the thesis. More specifically it aims to develop a theoretical basis for describing this decision making process which takes into account non-medical as well as medical considerations.

Research in general practice has been carried out by social scientists, such as sociologists and psychologists as well as by doctors themselves. However, the motivations and research interests of these three groups are somewhat different. Studies involving doctors as subjects of investigation are often concerned with the doctor-patient relationship and how this is managed through communication and other consultation skills. Findings tend to have implications for GP education and training in terms of improved GP performance and higher levels of patient satisfaction and compliance. As a major institutional authority, medicine is generally believed by sociologists to reflect inequalities that exist in society as a whole. Consequently, researchers are interested in identifying power differences in the doctor-patient relationship. This is generally achieved by

microanalysis of the interaction between doctor and patient that occurs in the consultation. Although psychologists have also made contributions to the understanding of doctor-patient communication, they are perhaps more importantly associated with research on medical decision making. By attempting to access the cognitions of doctors, researchers have investigated the organisation and processing of information used to diagnose and manage patients.

The aim of this chapter is to introduce the psychological approach taken in the thesis, in the context of other main approaches to research on general practice. Findings from studies of doctors' decision making behaviour are discussed more fully in Chapter two as these are most relevant to the thesis and therefore deserve more comprehensive discussion.

DOCTOR-PATIENT COMMUNICATION

In addition to investigation of strictly clinical aspects of general practice, doctors have carried out research on more social and interactional aspects of their work. The main focus of these studies has been on consultation style and patient satisfaction and compliance with doctors' advice.

Doctor-centred and Patient-centred Styles of Consultation

The importance of doctor-patient interaction was perhaps first put forward by Balint (1968), whose distinction between patient-centred medicine and illness-centred medicine has led to the now widely recognised styles of patient-centred and doctor-centred communication. According to Levenstein, Brown, Weston, Stewart, McCracken and McWhinney (1989), doctors who use the former style allow patients to express all their reasons for attendance, so that they

can understand each individual patient's ideas, expectations and feelings about their complaints. This is achieved by using open and non-directive questions, following up what patients say with reflective comments and silences. Therefore, using the patient-centred method, doctors' aims are to ascertain patients' agendas and reconcile these with their own. Patient-centred communication has been likened to client centred therapy (Rogers, 1951), involving unconditional positive regard towards patients. There is an implicit assumption in this research that patient-centred approaches are preferable to doctor-centred approaches as they allow diagnosis and management of problems as experienced by patients, rather than as perceived by doctors.

In sharp contrast, McWhinney (1985) suggests that using the doctor-centred method, doctors pursue their own agendas with little attempt to understand patients', so that presentations of illness are interpreted in terms of doctors' own explanatory frameworks. This typically involves assigning patients' complaints to conventional disease categories, such as respiratory or musculo-skeletal complaints. The more precise the classification of illness, the more easily the cause can be inferred and specific management prescribed. In order to achieve success in these terms, doctors use a series of closed, short answer questions. These tend to be very directive, and comments made by the patient which are seen to fall outside the requirements of these questions are often not followed up, or even ignored as they are perceived as irrelevant information.

One of the most extensive studies of doctor-patient communication in general practice was carried out by Byrne and Long (1976). On the basis of a large number of consultations, they identified a set of common communication behaviours, e.g. asking closed questions,

using patient ideas, which they referred to as either doctor-centred or patient-centred in orientation. These were used to develop a classification tool which was employed to distinguish the two styles of consulting. After using this classification system to analyse audio-tapes of approximately 1000 consultations, they found that the consultation styles of doctors could be classified as either doctor or patient-centred and that these styles became standardised so that the same method of communication was used irrespective of the nature of the complaint brought forward. Although Byrne and Long suggest that individual doctors have their own static styles of communicating with patients, they recognise that under certain circumstances, such as time pressure, or urgency of complaint, doctors whose consultations are usually patient-centred may find it necessary to be more directive with patients.

A critique of Byrne and Long's work has been put forward by Buijs, Sluijs, and Verhaak (1984). This is directed at the assumption that a type of expression can be rated for being doctor-centred or patient-centred, and will occur exclusively in corresponding consultations. They analysed 36 consultations using Byrne and Long's classification checklist and found that only a small number of categories occurred frequently enough to be measured with sufficient reliability, and that discrimination between doctor-centred and patient-centred communication was minimal.

Researchers who have established the doctor-centred and patient-centred modes of communication have contributed much to the understanding of interaction between doctor and patient and to the teaching of communication skills in general practice. However, in practice, doctors may only be able to employ the preferred patient oriented approach under ideal consultation conditions. When required

to work under stressful conditions, such as time pressure, doctors may be more likely to use more controlling strategies that serve to terminate consultations more quickly. The success of the patient-centred approach is also dependent on doctors' positive or at least neutral feelings towards patients. Research carried out by doctors themselves indicates that patients are not always regarded so favourably and sometimes provoke feelings of irritation and dislike (e.g. Bradley, 1992). Due to its lack of attention to logistic and patient variables, the patient-centred approach may be more prescriptive than descriptive of general practice consultations.

Patient Satisfaction and Compliance

In order to improve the quality and effectiveness of health care, researchers have attempted to identify factors which promote patient satisfaction and compliance. Studies generally indicate that patients feel more satisfied with doctors who adopt affiliative rather than controlling styles of communication. These include behaviours that establish and maintain positive relationships by showing interest, friendliness and empathy towards patients. These two styles have been described by other researchers in terms of patient-centred and doctor-centred communication (e.g. Stewart, 1984). Buller and Buller (1987) suggest that the affective component of the doctors' communication is a major factor in patients' evaluations as patients lack the medical knowledge to judge the outcomes of consultations in terms of quality and appropriateness of medical care.

Typically, research in this area involves coding doctor behaviour that occurs in consultations as affiliative or controlling according to established schemes, such as Bales' interaction process analysis (1951). Following this, corresponding patients are asked to complete scales to indicate their levels of satisfaction with consultations. These

measurements are by no means uniform across studies and include patients' satisfaction with the professional competence of the care given (Stewart, 1984), satisfaction in terms of feeling helped by the doctor (Savage and Armstrong, 1990), and satisfaction with the interpersonal communication shown by the doctor (Buller and Buller, 1987). In a study by Woolley, Kane, Hughes and Wright (1978) separate measures of satisfaction with the process of care and with the outcome of care were taken. Results indicate that two thirds of patients were satisfied with the process and outcome of their consultations even though they reported their health status to be worse following their consultations. The authors explain this by suggesting that satisfaction may reflect overall appraisal of the interpersonal aspects of encounters with doctors rather than medical aspects of the outcome.

In contrast to studies that have found a patient preference for affiliative communication, results from Savage and Armstrong's work (1990) indicate that patients were more satisfied with a directing style, especially those who presented with physical problems and received prescriptions. However, a directing style was not found to give greater satisfaction to those patients who described their complaints as psychological. This suggests that preference for affiliative styles may depend on the type of symptoms presented. In this way, simple physical illnesses that respond to the traditional biomedical model of diagnosis and treatment benefit from a directing style, while psychological illnesses that have recognisable and large psycho social components require more affiliative styles which convey empathy and social orientation.

In addition to type of illness, Buller and Buller (1987) found that severity of illness also determined the style of communication

patients felt most satisfied with. Although the satisfaction levels of patients with less severe complaints were influenced by affiliative and controlling styles of communication, there was no significant preference for either style for patients with severe illnesses. The authors explain this by suggesting that under more serious conditions, communication style may be less salient as it is not critical to patients overcoming their illnesses. Instead more importance may be attached to technical competence and treatment success.

In Stewart's study (1984), patient as well as doctor behaviour was coded according to Bales' interaction process analysis. High patient satisfaction was not associated with patients expressing themselves, but with doctors asking for patients' opinions and help. In addition, patient behaviour was not significantly related to compliance with treatment. Again it was doctors' behaviour that was found to be influential, particularly with regard to agreeing with patients.

Patients' satisfaction with doctors and medical treatments have been found to be important determinants of compliance (e.g. Korsch and Negrete, 1972; Woolley, Kane, Hughes and Wright, 1978). Korsch and Negrete's study examines the compliance of mothers attending paediatric clinics with their children. In addition to interviewing mothers, they checked medicine containers and instructions to obtain a more objective measure of compliance. The authors found a significant correlation between mothers' expressed satisfaction with doctors' behaviour during consultations and their compliance with instructions. Of highly satisfied mothers 53% co-operated completely with advice given, in contrast to 17% of highly dissatisfied mothers. In her study, Stewart (1984) also took subjective and objective measures of compliance and found that patients were more likely to comply with the instructions of doctors who used patient-centred

communication, which was found to be significantly related to higher levels of satisfaction.

Research generally suggests that if patients are satisfied with their consultations, they are likely to comply with their doctors' management decisions. This finding has important implications for patients' health as not taking prescribed medication or other forms of treatment may be detrimental to their conditions. Deciding not to take prescribed drugs once they have been collected may also have considerable financial implications. Although some exceptions have been noted, patients are usually more satisfied with a patient-centred approach to consultations. However, as mentioned earlier this style of consulting may not be possible under more demanding conditions. Most studies concerning satisfaction require patients to make judgements about the interaction process rather than the management decisions that they have received. The link with compliance suggests that patients are likely to follow their doctors' advice on the basis of their satisfaction with communication rather than with management decisions themselves. Unexplored by this body of literature is the influence of doctors' perceptions of patients' satisfaction and compliance on consultation style and management outcome.

SOCIOLOGICAL APPROACHES

Although sociological research is typically associated with survey approaches, studies outlined in this section involve in-depth qualitative analysis of a small number of consultations. Feminist interpretations of the doctor-patient relationship are made on the basis of historical and theoretical observations.

Power Relations in the Consultation

Some researchers (e.g. Fisher, 1984), believe that the doctor-patient relationship is organised in a way that reflects the unequal power dynamics of wider society. While doctors and other medical providers have the authority to control medical skill, knowledge and public access to services and information, they suggest that patients have very little influence on health care practices or policies. This asymmetry is ascribed to the specialised medical knowledge of doctors and also to the autonomous and self regulated organisation of the profession. Early discussion of doctor-patient interaction highlights the imbalance between the roles of doctor and patient and suggests that they do not communicate as equals (e.g. Szasz and Hollender, 1956). More recently, the structure of discourse in doctor-patient encounters has been analysed. Studies indicate that doctors ask most of the questions, showing a strong dispreference for patient initiated questions, establish most of the topics and most often control consultations (e.g. Frankel, 1984, 1990).

Researchers who are interested in power relations believe that the dominance and authority of doctors is achieved by the way discourse is structured during consultations. Consequently the verbal interaction between doctor and patient has been heavily scrutinised in order to identify the components of this unequal relationship. For example, work by Fisher (1984) suggests that while conversation in ordinary settings usually consists of two stage 'initiation' and 'response' sequences, verbal interaction between doctor and patient is more complex. More specifically, Fisher puts forward evidence to suggest a third stage of the sequence which she refers to as 'comment'. She claims that doctors use this stage to hold the floor and keep control of consultations. Using 'corrective' comments, doctors correct patients'

pronunciations of medical terms, their understanding of their medical problems and have the final say on the definition of problems.

Comments may also be in the form of 'overlaps' where doctors talk over patient responses in attempt to close sequences, regain the floor, or change topics of discussion.

Feminist Interpretations

Just as discrimination against women is pervasive in society as a whole, from a feminist perspective, researchers argue that it is also present in the doctor-patient relationship. As members of a male dominated profession, doctors are believed to gain power over women by controlling their sexuality and reproduction (Ussher, 1993). This is achieved by the medicalisation of menstruation, menopause, birth control and birth. In the nineteenth century, this control was thought to be essential as the reproductive organs, particularly the womb, were seen to be at the root of women's madness, illness and deviant behaviour (Ehrenreich and English, 1979; Ussher, 1993). When women defied their nature, questioned their roles as child bearers, or assumed the rights of men, they were defined as hysterical so that the diagnosis of illness was used to neutralise threat to the dominant social order (Ussher, 1993).

In the twentieth century Ussher (1991) argues that women continue to be controlled through labels of madness and subsequent therapy. From a feminist standpoint, these labels are based on value judgements and prescriptions for normality which support existing patriarchal power structures. In this way, the definition of mad within patriarchal society is that which is at odds with the dictates of the patriarchs. This labelling process maintains women's position as outsiders, dismissing their anger as illness and thus exonerating male oppressors. It explains women's misery in terms of internal or

biological flaws, rather than in terms of the inequity of social structures. When women are successfully labelled in this way, they are then helped to conform to the social structure with the aid of therapy and treatment.

The two sociological perspectives outlined in this section explain disparities in health care with reference to inequalities in wider society, such as those between men and women. Researchers interested in the unequal status of doctor and patient describe the consultation process in terms of interactions that maintain the doctor's powerful position over the patient. Although these interaction strategies are described as unconditional, they may actually vary according to specific patient groups and consultation conditions. This is partly recognised by the feminist perspective which suggests that attention to patient gender can widen the power differential between doctor and patient. More specifically, doctors are perceived to diagnose and manage women's complaints in a way that supports male dominance and superiority.

MEDICAL DECISION MAKING

Researchers interested in doctor-patient communication and sociological approaches to the consultation are concerned with the observable surface structure of interaction between doctor and patient. Research traditionally carried out by psychologists is concerned with the cognitive processes behind diagnostic and management decisions made by doctors. More specifically, attention has been given to the organisation of medical knowledge and the way in which this is processed and used by doctors (e.g. Grant and Marsden, 1985; Elstein, Shulman and Sprafka, 1990).

While traditional perspectives are concerned specifically with medical factors that influence decision making, more recent work recognises the relevance of non-medical patient and logistic factors on the process and outcome of decision making (e.g. Bradley, 1992). It is this recent approach, that is adopted in the thesis.

Chapter 2

MEDICAL DECISION MAKING : A PSYCHOLOGICAL PERSPECTIVE

INTRODUCTION

This chapter aims to give an overview of the most established and relevant literature regarding the process of decision making in a medical context. It begins with an account of the hypothetico-deductive approach, which was perhaps the first generally accepted model of medical decision making. As a result of the perceived shortcomings of this approach, the knowledge driven model was developed and employed in order to account for differences between the decision making of novices and experts. Following the discussion of these two traditional theories, the review catalogues research that has considered the influence of non-clinical patient and logistic factors. It is argued that the consideration of such factors places medical decision making in a more realistic context and complements rather than replaces earlier models.

TRADITIONAL APPROACHES TO DECISION MAKING

Theories of decision making may be described broadly in terms of structural and process approaches. Structural approaches are concerned with the relation between information input and decision output. Typically, with the aid of mathematical or algebraic models, these approaches tend to describe decision making in terms of the different weights and probabilities that individuals assign to alternative pieces of information. Decisions are considered to be optimal or sub-optimal, depending on how closely they compare to the best possible outcomes described by normative models. In contrast, research has also concentrated on how decisions are made in

terms of underlying cognitive processes. Here, psychological principles are used to describe the steps and thoughts of decision makers as they attempt to solve problems. Although both approaches have been successfully applied to medical contexts, it is the process of decision making that is most relevant to the thesis and is therefore the focus of this chapter.

Hypothetico-deductive Model

Perhaps one of the most influential theories of decision making process to be applied to medicine is the hypothetico-deductive reasoning model (Elstein and Bordage, 1988). According to the authors, this is grounded in an information processing approach to clinical reasoning which emphasises the concept of bounded rationality (Newell and Simon, 1972). Thus, good and poor decision making are seen to be consequences of efforts to cope with the limited capacity of working memory. In discussion of the theory, Elstein and Bordage cite the original research on the psychology of medical reasoning which was carried out by Elstein, Shulman and Sprafka (1978). This involved in-depth descriptive analyses of verbal or think-aloud protocols of experienced doctors as they performed on a number of medical and non-medical decision tasks. Results indicated that while engaged in diagnostic reasoning, doctors typically generated a limited number of hypotheses, which then guided the subsequent choice of data they collected. In this way, ill defined or more open-ended problems, e.g. 'What is wrong with the patient?' were transformed into sets of more manageable alternatives, e.g. 'This could be an appendicitis or a pelvic inflammatory disease'. On the basis of these findings, Elstein and Bordage suggest that doctors work backwards so that the diagnostic criteria of each hypothesis are used as bases upon which to collect and interpret information.

Hypotheses generation occurs when information acquired by doctors via history taking, physical examinations or laboratory tests cues knowledge in long term memory. Elstein and Bordage (1988) suggest that doctors are usually limited to consideration of four or five hypotheses simultaneously, and that the total number generated for each problem rarely exceeds six or seven. When formulating initial hypotheses, Elstein Shulman and Sprafka (1978) found that doctors paid more attention to considerations of disease incidence or frequency, than to the seriousness of complaints. Elstein and Bordage suggest that such alternatives can be either formulated all at once, using the same set of cues, or at several points in the problem solving task, using different clusters of cues. Furthermore, they claim that hypotheses are generated on the bases of cues that are particularly salient and that have strong links to knowledge in long term memory. In addition to cue saliency, hypothesis saliency also has important implications for decision making. The more prominent a hypothesis is to the decision maker, the more probable or likely it is considered to be. In order to explain this phenomenon, Elstein and Bordage cite the work of Tversky and Kahneman (1973) regarding the availability heuristic which suggests that the more vivid or available the individual's experience of a possibility, the more likely they are to believe in its subjective probability.

Once doctors have generated hypotheses about patients' problems, information or cues are interpreted in the light of these alternatives (Elstein and Bordage, 1988). In this way, information may be considered to be confirmatory, disconfirmatory or non-contributory. Elstein Shulman and Sprafka (1978) found that although there was no correlation between cue acquisition and cue interpretation, diagnostic accuracy was related to both aspects of the decision making process. Therefore, Elstein and Bordage suggest that inaccurate diagnoses may

be caused by mistakes in data collection, or in data interpretation. Such mistakes may be due to the de-emphasis of findings that disconfirm given hypotheses under consideration and the use of redundant information. The most common error of interpretation in Elstein Shulman and Sprafka's studies occurred when doctors considered information that was non-contributory to their hypotheses to be confirmatory. This may be related to the collection of excessive amounts of data which serves to bolster confidence in the decision made but does not test the accuracy of the decision as no new information of value has been gathered (Elstein and Bordage, 1988). With reference to data collection, Elstein and Bordage cite studies from Barrows, Norman, Neufeld and Feightner (1977), who found that experienced doctors actively searched for information to confirm hypotheses rather than to rule them out, and Wallsten (1978), who found that information collected in the latter part of the diagnostic task was distorted in favour of initial hypotheses. Therefore, Elstein and Bordage suggest that the final decision made is not necessarily the most optimal one. This is because due to limited information processing capacity, doctors are likely to use heuristic strategies, such as availability and also to use redundant data. Although these strategies simplify the decision task, they may also lead to selective and inefficient testing of hypotheses.

Knowledge-driven Model

Although Elstein, Shulman and Sprafka (1990) cite subsequent research that has given support for their hypothetico-deductive model of medical decision making (e.g. Neufeld, Norman, Feightner and Barrows, 1981), they also report concern from critics that analyses of verbal protocols do not differentiate experts from less experienced doctors, and neglect knowledge organisation (e.g. Patel and Groen, 1986). Using alternative methodologies, most notably short

term memory paradigms, this has led researchers to concentrate on the content of knowledge available to doctors and the organisation of this content in memory. In discussing this alternative approach, Elstein et al refer to work carried out by Muzzin, Norman, Jacoby, Feightner, Tugwell and Guyatt (1982), who found that although there was no difference between the number of items recalled by novices and experts on an intentional memorisation condition, experts recalled more items than novices in an incidental recall condition, and tended to organise recall into larger chunks. They also cite the work of Patel and Groen (1986) that showed that more experienced doctors typically made more inferences from prior knowledge when recalling case information than novices and intermediate subjects. In contrast, inferences made by less experienced groups were commonly based on the content of the experimental case information. Thus it was argued that experts could be distinguished from novices in terms of knowledge organisation and the ability to use knowledge to make inferences from clinical information.

Such conclusions led to the claim that experts engaged in *forward reasoning* rather than *backward reasoning* described by the hypothetico-deductive model. Experienced doctors were thought to adopt strategies of pattern matching and use their structured knowledge bases to apply if-then production rules so that it is possible to progress from data to diagnoses without generating any hypotheses at all (e.g. Patel and Groen, 1986). Despite criticism, Elstein et al (1990) claim that the emphasis on the organisation and structure of knowledge is consistent with their own underlying conclusions. They argue that it is not possible to form hypotheses without some reference to an organised knowledge base. Although Elstein et al agree that doctors may be more likely to employ pattern matching for familiar or simple decision making tasks, they believe that under

more complex circumstances when problems cannot be easily recognised as instances of larger classes, experts are more likely to resort to hypothesis-testing strategies.

Despite the impact of traditional approaches on the understanding of medical decision making, research findings may say more about how doctors make decisions in experimental settings than in response to real clinical situations. With regard to the use of protocol analysis, Nisbett and Wilson (1977) suggest that when individuals are required to verbalise about their cognitive processes, they do not do so on the basis of true introspection, as they have little or no access to higher order thinking such as causality or reasoning behind judgements and decisions. Instead individuals are more likely to use already established causal theories about the extent to which a particular stimulus is a plausible cause of a given response.

Where studies of experts and novices are concerned, experts in particular are likely to show demand effects as they are required to respond to tasks as highly skilled individuals. While in experimental situations, experts have been shown to have knowledge bases that are superior in both organisation and availability compared to novices, in real clinical settings, where there are no demand effects, such differences may be less notable. In fact, due to limited information processing capacity and the consequent use of simplifying strategies, in more complex and demanding situations, doctors may uniformly employ heuristic rather than optimal strategies. The novice expert distinction also becomes less relevant when factors which are over and above medically relevant knowledge are considered to influence decision making. More specifically, although there may be differences in the knowledge bases of experts and novices concerning medical information, these two groups may be indistinguishable in terms of

the organisation and structure of their social knowledge, including attitudes towards patients and expectations regarding certain social groups.

Hypothetico-deductive and knowledge driven models present medical decision making in terms of diagnoses that doctors are required to make regarding the presentations of their patients. This may be somewhat over simplistic when other aspects of doctors' decision making are explored. In addition to diagnosing patients, doctors are also required to make decisions about how to manage patients' complaints. In comparison to hypothetico-deductive and knowledge driven approaches, the thesis concentrates on decision making about patient management rather than diagnosis. Although management decision making is closely related to diagnoses for some complaints, it is not necessarily based on diagnostic conclusions and thus constitutes a form of decision making in its own right. This may be the case when doctors are unable to make diagnoses about presenting symptoms, or when diagnoses have been made but there are several options that could be selected.

Traditional models may also be restricted to the explanation of decision making in initial consultations, where patients are presenting symptoms for the first time, without considering ongoing visits to doctors. This is related to their concentration on diagnostic decision making. For patients with established complaints who have periodic appointments at their surgeries, doctors' decision making is more likely to be about long term management and progress rather than the presentation of symptoms to be classified under known disease categories.

MEDICAL DECISION MAKING IN CONTEXT

Traditional approaches such as the hypothetico-deductive and knowledge driven models limit understanding of the medical decision making process as they do not explore the context in which decisions are made. The majority of decisions regarding diagnosis and management are made during the interaction between doctors and patients in the context of the consultation. Therefore, the way in which doctors and patients communicate with each other is an important part of the process, with consequences for the type of information presented and the way in which it is interpreted and understood by the doctor. Furthermore, the context of the consultation is such that decisions are necessarily made in limited time periods and with some degree of uncertainty. This uncertainty may be a direct consequence of insufficient time to explore all implications of presentations, but may be more generally associated with the probabilistic relationship between symptoms and diseases.

Doctors' Attitudes Towards Patients

According to the abundance of literature which describes difficult or 'heart sink' (O'Dowd, 1988) patients, doctors' feelings towards patients can be complex and highly charged. Although this may only refer to a minority of doctors' patients, studies in this area highlight the idea that doctors' attitudes towards, or perceptions of patients, may influence significantly the decision making process, both in terms of information collection and complaint management.

Research on this subject has been almost exclusively carried out by doctors themselves, and typically identifies the characteristics of difficult patients and how they might be managed. Corney, Strathdee, Higgs, King, Williams, Sharp and Pelosi (1988) cite a classification

system developed by Groves (1951), where specific types of 'heartsink' patients are identified. The 'dependent clinger', expresses gratitude for the doctor's advice, but is desperate for reassurance and so turns up frequently with an array of symptoms. 'Entitled demanders' are patients who use intimidation and guilt induction. If their needs are not met, they hold doctors personally responsible for the consequences. Some patients may be described as 'manipulative help rejecters' as they make repeated return visits to the surgery to report failures of any treatments that have been prescribed. If symptoms are relieved, these patients are likely to present new complaints. Although potentially suffering from serious illnesses, 'destructive deniers' make no significant attempts to alter their lifestyles. Instead, the aim of these patients is to defeat any attempts to preserve life.

In Corney et al's study (1988), GPs who were taking part in a study day put forward details of their experiences with difficult patients. The majority of these cases involved women who presented with minor physical symptoms, e.g. back or abdominal pain, for which no organic causes could be found. These patients were frequent attenders, who often demanded referral to other clinical services. Although these patients were regarded as chronically depressed or anxious, doctors felt that they lacked insight into the psychological components of their complaints. In response to these experiences, GPs reported feeling frustrated about their lack of control in the consultation, because the patient tended to dictate the content and treatment options. Feelings of stalemate occurred when GPs felt that despite their efforts, no progress was made. This was particularly salient for GPs who felt that lack of progress had been compounded by patients who ignored their advice. Failure to bring about improvement in the patient's conditions also provoked feelings of

inadequacy and impotence in GPs. Similar descriptions of and reactions to difficult patients are also reported in a study by Arborelius, Bremberg and Timpka (1991) in which 12 GPs commented on video-recordings of consultations with which they had experienced difficulties.

In the face of consultations with 'heart sink' patients, decision making, may be more about management of patients themselves, rather than complaints presented. In a study by Bradley (1992), almost half the GPs in his sample reported prescribing as a means of preserving the doctor-patient relationship. This was described in terms of avoiding litigation or complaints, avoiding damage to the relationship, avoiding conflict, keeping the peace and avoiding the possibility of physical assault. Even when prescriptions were felt to be inappropriate, some GPs reported prescribing in response to feelings of needing to do something, to convey compassion, to respond to the suffering of the patient, and not to convey to the patient any feelings of rejection. GPs also mentioned using prescriptions to bargain with difficult patients or to simply get rid of them. These findings are corroborated by GPs taking part in the study day reported by Corney et al (1988).

Corney et al (1988) found that the perceived difficulty of the patient influenced both the type of information collected and the management decision made. GPs expressed a fear of 'opening Pandora's box' and consequently being overwhelmed with problems. Therefore, they tended to avoid making full psycho social assessments of difficult patients, using communication techniques such as looking down, tending to notes and asking closed and more directive questions which do not give patients opportunities to express anxieties, or using stalling or temporising management strategies like

prescribing and carrying out physical examinations which serve to terminate consultations.

The way doctors feel towards their patients, particularly when this is not positive, has been shown to have important implications for diagnostic and management decisions. Patients who are considered to be demanding may be given referrals or prescriptions as a means of avoiding threat to the doctor-patient relationship. Similarly, information gathering may be limited to physical complaints due to doctors' reluctance to explore psycho social problems that they feel that they have inadequate skills, resources and time to deal with.

Gender of Doctor and Patient

In light of the extensive research concerned with gender differences in consultation behaviour and management, gender of the patient may be considered to be an important cue employed by doctors in the decision making process. The use of this cue may in turn depend on the gender of the doctor.

Research findings reported by Weisman and Teitelbaum (1985) suggest that the aetiology of complaints is perceived to differ depending on the gender of patients. They cite a study by Lennane and Lennane (1973), which showed a tendency for doctors to attribute psychogenic causes to a number of women's complaints, e.g. morning sickness, labour pains, despite evidence of organic causes. Similarly, in a study by Bernstein and Kane (1981), doctors were required to put forward diagnoses and attributions for common complaints of men and women presented in the form of vignettes. Although male and female patients had the same presenting complaints, men's problems were perceived to be psychosomatic or organic in origin depending on the information given, women's

problems were more likely to be viewed as psychosomatic, regardless of the information given. No difference was found for male and female doctors, although this is considered to be inconclusive and due to the small number of female doctors in the study.

Weisman and Teitelbaum (1985) also discuss the work of researchers who suggest that different perceptions of men and women's complaints leads to distinct forms of treatment. These studies are particularly concerned with the higher number of psycho tropic drugs prescribed for women compared to men. This is perceived to be a consequence of the stronger association of women with psychosomatic illness. For example, Milliren (1977) found that amongst the institutionalised elderly, women received more tranquillisers than men, even after controlling for women's higher levels of anxiety. Weisman and Teitelbaum provide evidence to suggest that the prescribing of psycho tropic drugs may also be influenced by the gender of the doctor. They cite the work of Cypress (1980), who found that according to the 1977 National Ambulatory Medical Care Survey, male psychiatrists prescribed twice as many drugs during patient visits than their female counterparts.

More recently, Ashton (1991) reports cross-national surveys (e.g. Balter, Mannheimer and Mellinger, 1984), and studies carried out in the UK (e.g. Ashton and Golding, 1989), which suggest that women of all ages consume at least twice as many tranquillisers and anxiolytics as men. Ashton suggests that the tendency to prescribe psycho tropic drugs for women is compounded by medical advertising. In a study by Prather and Fiddell (1975), medical advertisements in five prestigious journals, e.g. the Journal of the American Medical Association, were examined over a four year period. While adverts for psychoactive drugs showed significantly more women, those for non-

psychoactive drugs showed significantly more men. When men did feature in adverts for psychoactive drugs, they were portrayed as being stressed due to work or physical illness in contrast to women who were shown to have more diffuse emotional symptoms.

There is some evidence to suggest that in addition to being prescribed more psychotropic drugs than men, women receive more medical services in general. Using the National Ambulatory Medical Care Survey data, Verbrugge and Steiner (1981), found that in response to a number of specific complaints, including chest pain and headache, women received more services than men, even after controlling for medically relevant factors such as age and seriousness of complaint. In addition to prescriptions, these included laboratory tests, return appointments and blood pressure checks. The authors suggest that these findings may be explained by doctors' perceptions of women as more anxious about their symptoms than men. However, the interpretation of these findings may be more complex. More services for women may not necessarily indicate overuse of procedures, but could mean that doctors take women's complaints more seriously or that men are being under serviced compared to women.

Other studies have investigated gender differences in the consultation with regard to the communication that occurs between male and female patients and their doctors. Meeuwesen, Schaap and Van der Staak (1991) coded audio-tapes of 85 consultations using Stiles verbal response mode system (1978). To a lesser extent, they also concentrated on the content of patients' complaints. Male and female patients were found to differ in the way that they elaborated on their problems as women referred more frequently than men to persons such as family, friends and colleagues. Where male doctors were concerned, consultations with female patients took significantly longer

than those with male patients. However, the largest differences were found between male and female GPs. Meeuwesen et al found that males were more presumptuous and imposing than females, indicated by significantly higher use of advisements and interpretations, e.g. 'you are not allowed to work next week', 'you are too nervous'. In contrast, females were more attentive, giving more and disclosures, e.g. 'I can imagine how you are feeling'. Female GPs also spent more time in consultation with patients than male GPs.

Wallen, Waitzkin and Stoeckle (1979) observed information-seeking behaviour of patients and the responses of doctors during 336 audio-taped consultations. Results indicated that women received more explanations than men at all levels of technicality. However, significantly more of the doctors' responses to female patients' questions were lower in technicality than the patients' questions. Doctors were significantly more likely to fit their explanations to the level of technicality employed by male patients. Even though women asked significantly more questions than men, doctors in the study did not perceive this as reflecting a greater desire for information on the part of women. When researchers asked doctors to estimate each of their patient's desire for information about their condition, they did not distinguish between male and female patients. Judging the information requirements of women to be the same as those of men, Wallen, Waitzkin and Stoeckle suggest that doctors may have perceived female patients' questioning behaviour as reflecting motives other than a desire for information. As doctors in the sample were more likely to attribute psychological causes to the illnesses of female patients than to those of men, doctors may have perceived their requests for information as expressions of psychological distress or dependency rather than expressions of informed concern.

Studies that have concentrated on gender differences in the consultation have generally reported that the causes of women's complaints are more likely to be perceived by doctors as psychological in origin compared to those presented by men. This may have implications for the way that doctors communicate with men and women, particularly how they respond to patient requests for information. The greater tendency of doctors to assign psychological diagnoses to the complaints of women may mean that they are over-serviced, especially with regard to psychotropic drugs. Research investigating the influence of doctor gender on doctor-patient communication and its outcomes is limited and inconclusive. This is mainly because female doctors are underrepresented or not even included in some studies (e.g. Wallen, Waitzkin and Stoeckle, 1979).

As women's complaints are more frequently attributed to psychological causes, there may be a tendency for women who present with physical complaints to be judged by their doctors to be somatisers. This is a term used to describe patients who present complex symptoms for which there seems to be no apparent organic explanation. This issue has particularly far reaching consequences when considering doctors' roles, particularly at primary levels, as controllers of access to more expensive highly technological medical services. Research which explores gender differences in the diagnoses and management of heart disease is well established both in the USA and more recently in the UK. An extensive American study carried out by Ayanian and Epstein (1991) showed that women were less likely to be referred for angiography, which is the most reliable test for establishing diagnoses of coronary heart disease on the basis of chest pain or angina, than men with the same diagnoses. In the UK, Sullivan, Holdright, Wright, Sparrow, Cunningham and Fox (1994) found that women comprised less than a quarter of patients with clinical

diagnoses of angina who were referred for further investigation by angiography. Sharp (1994) claims that gender differences in referral cannot be explained by the prevalence of angina, as angina rates are similar in men and women.

Gender differences have also been found in referral for treatment of coronary heart disease (Ayanian and Epstein, 1991). Using data from a multi-centre trial carried out in the USA and Canada, Steingart, Packer, Hamm (1991) found that although women had angina prior to their heart attacks as frequently as men, and reported greater disability from their symptoms, men were twice as likely as women to undergo cardiac catheterisation and bypass surgery after controlling for relevant variables. In explanation of these findings, Steingart et al cite the work of Tobin, Wassertheil-Smoller, Wexler (1987) which suggests that women receive inadequate testing and treatment because doctors are more likely to attribute chest pain experienced by women to psychiatric or other non-organic causes. This may be compounded by the male image of heart disease promoted through medical education (Sharp, 1994), and also by medical advertising. In a study of prestigious journals, e.g. *New England Journal of Medicine*, Leppard, Ogletree and Wallen (1993) found that men were up to five times more likely than women to feature in drug advertisements for angina. Steingart et al also refer to research by Loop, Golding, Macmillan, Cosgrove, Lytle and Sheldon (1983), who suggest that fewer women are referred for surgical management procedures due to concern that women have a higher operative mortality rate. However, Steingart et al suggest that according to Khan, Nessim, Gray, Czer, Chaux and Matloff (1990), this higher mortality may be the result rather than the cause of referral bias as women have more advanced disease than men at the time of referral.

Wells and Feinstein (1988) suggest that gender may be a source of 'detection bias' in the clinical diagnosis of lung cancer. They identified 385 patients who had received pap smear tests over a three year period at an American hospital. Regardless of the presence of coughs or history of smoking, men still received significantly more tests than women. Authors claim that this finding is related to the belief that men are three times as likely as women to suffer lung cancer (USA Department of Health and Human services, 1984). However, Wells and Feinstein argue that the occurrence rates of surprise cases at post-mortems are higher than the reported rates and are relatively equal for men and women.

There is some evidence that gender differences in referral for highly technological procedures are due to an interaction with age of patients. In two extensive studies carried out in the USA by Kjellstrand (1988) and Kjellstrand and Logan (1987) women were found to have 80% of the chance men have to receive dialysis and three quarters of the chance men have of receiving kidney transplants. The authors explain this discrepancy by suggesting that women develop kidney disease at a later age than men. Patients who are most likely to receive dialysis are between 15 and 24 years old, where 81% are dialysed. Those who are least likely to receive it are 74 and over, where it is only given to 6% of patients. Similarly, a 60 year old patient has less than one thirtieth the chance of receiving a kidney transplant than a 20 year old.

In addition to attitudes towards patients and patient gender, there has also been some exploration of the effects of patient age (Bradley, 1992; Wilkin and Smith, 1987), social class (Bradley, 1992; Wilkin, Metcalfe, Hallam, Cooke and Hodgkin, 1984), and ethnic origin (Bradley, 1992), although this is limited and has generally produced

inconclusive results. Some studies have related variation in decision making to individual differences between doctors. These include introversion extroversion dimensions and attitudes to risk (Holtgrave, 1990). However, as yet, the findings of such studies, are not well established.

Logistic Factors

When exploring the process of medical decision making in context, in addition to doctor-patient interaction and patient variables, it is necessary to take into account properties of the situation or the decision which are also likely to influence this process. Two of the most relevant factors are time pressure and uncertainty regarding diagnosis and management.

Time pressure could be described as subjective feelings of time constraint experienced by doctors during the course of consultations. Recognition of these feeling is important as the discomfort caused by time constraint has been found to interfere with the decision making process. In a study by Hughes (1983), the management strategies of two practices, who booked appointments at different rates, were compared over a four week period. Results showed that consultations that were booked at more frequent intervals were associated with patients receiving more prescriptions, and more return visits.

Similarly, in a study of 85 GPs in Scotland, Howie, Porter, Heaney and Hopton (1991) found that regardless of GPs' normal working rates, organisational factors such as over booking and running late reduced the number of long consultations and increased the number of short ones. This was associated with poorer quality of care in terms of attention given to long term health problems, psycho social problems and patient satisfaction. Time pressure may be particularly stressful for doctors who prefer longer consultations, using more patient-

centred approaches. Using the same sample of GPs, in another study, Howie, Hopton, Heaney and Porter (1992) found that the 20 most patient-centred doctors, according to responses to patient-centred scales, reported experiencing twice as much stress during consultations with short booking intervals than those with longer intervals.

In Morrell, Evans, Morris and Roland's study (1986) the management strategies of doctors in a group practice in London were compared across consulting sessions booked at five minute, seven and a half minute and ten minute intervals, over a period of four weeks. Although doctors carrying out five minute consultations identified fewer patient problems than those with longer booking intervals, there was no evidence to suggest that GPs working on a five minute appointment basis prescribed more drugs, carried out more investigation, referred more patients or requested more repeat visits than those working to seven and a half and ten minute ones. Although doctors complained about shortage of time more often in five minute consultations, there was no difference in reported experience of stress across the three time conditions. Morrell et al's results may be contrary to those previously discussed because the five minute consultation condition may not have been adequately reflective of time pressured consultations. In the study, time periods referred to actual face to face contact, and did not include various administrative tasks that GPs are required to carry out after each patient. It may have been more representative to have constrained consultations of three or four minutes or include administration tasks in the five minute period. In addition, the greater availability of appointments in the five minute consultation surgeries may have resulted in more patients booking with acute illnesses, which could be considered to be less likely to cause GPs to be uncertain of management.

Using the same data set, Roland, Bartholomew, Courtenay, Morris and Morrell (1986) found some evidence to suggest that communication style may be affected by time pressure. They coded 683 consultations according to Bain's coding scheme (1976). The most marked differences were found between five minute and ten minute consultations, where doctors used extra time to give explanations to patients regarding complaints and management, and also to educate patients about their health.

Inadequate time available to consult with patients is likely to cause doctors to experience feelings of time pressure, which may be particularly pronounced for those whose working style is typically patient-centred. There is limited evidence to suggest that feelings of time pressure influence the ways in which doctors communicate with patients. However, such differences in communication strategies have not yet been specifically related to the discrepancies that are evident in management outcomes.

Uncertainty regarding the diagnoses and management of symptoms may be a consequence of insufficient time available to consult with patients, but may also occur when adequate time is available, due to complexity of symptoms or difficulties in the doctor-patient relationship. Although the specific effects of uncertainty on diagnoses and management do not appear to have been addressed, it could be suggested that these may be similar to those brought about by time pressure. In a study carried out in the UK, Belgium and the Netherlands, Grol, Whitfield, De Maeseneer and Mokkink (1990) investigated doctors' attitudes towards uncertainty. Those who were described as not-risk takers, as defined by responses to their questionnaire, prescribed more anti-biotics where their use was

questionable, and also made more referrals to specialists. As with time pressure, uncertainty may also be associated with more return visits. Armstrong (1985) draws attention to the contribution of the Royal College of General Practitioners, whose report in 1972, suggested that time could be used as a therapeutic tool in order to allow diagnoses to emerge. In this way, return appointments may be given so that doctors have more time to consider patients' problems and to discuss them with colleagues.

CONCLUSIONS

The literature reviewed in this chapter aims to show that without consideration of more complex interaction and logistic factors, understanding of the process of medical decision making can only be superficial. Although the contributions of more traditional process approaches cannot be overlooked, there is a need for expansion of such theories in order to take into account inferences made from social as well as clinical knowledge bases in the diagnosis and management of patient complaints. Evidence to suggest that doctors' decisions are influenced by patient gender and their attitudes towards patients has been put forward by researchers along with recognition of logistic factors such as time pressure and uncertainty. However, although these factors have been identified, there has been little attempt to uncover the processes underlying the relationships between patient or logistic factors and specific management outcome, in terms of doctor-patient interaction during the consultation.

Chapter 3

DECISIONAL CONFLICT IN GENERAL PRACTICE : STRATEGIES OF PATIENT MANAGEMENT

INTRODUCTION

The aim of the initial interview stage of the medical decision making project was to carry out an exploration of social and psychological factors that influence the ways that GPs consult with and make decisions about their patients. It was assumed that the most important and relevant factors would emerge from GPs' responses to questions covering a wide range of possible variables. Non-clinical factors that GPs reported to have influence on their decision making about patient management were regarded as most relevant to the thesis and are therefore the focus of this chapter. Such factors were also selected for further investigation in subsequent chapters.

Decisions made in general practice can be highly consequential for both doctor and patient. Costs associated with management decisions may not necessarily refer to risk of physical harm to the health of patients. It may also refer to risks to doctors' self esteem and reputation or to the doctor-patient relationship and patient satisfaction. For example, in Bradley's study (1992), 43% of GPs reported experiencing discomfort when issuing prescriptions as a means of avoiding complaints, criticism, conflict, and damage to their relationships with patients. In addition to being consequential, decisions made in general practice may be stressful. This is because they are sometimes necessarily made under conditions of time pressure and uncertainty, which have been found to give rise to feelings of stress (Howie, Hopton, Heaney and Porter, 1992).

In order to provide a theoretical basis to explain when non-clinical variables are most likely to enter the decision making process, the utility of a decisional conflict approach was explored (Janis and Mann, 1977). According to Janis and Mann decisional conflict is likely to be experienced when individuals are required to make consequential decisions and are aware that there may be serious risks or drawbacks from whatever courses of action they select.

Consequential decisions are described by Janis and Mann as those that evoke some degree of concern in individuals about the possibilities of known costs and uncertain risks either to themselves personally or to groups with which they are associated. These may be related to money, time, effort, emotional involvement, reputation or morale. Conflict theory suggests that consequential decision making gives rise to 'hot cognitions' such as feelings of apprehension and anxiety, and also to physiological reactions such as increased heart rate (Mann, Janis and Chaplin, 1969). This is because such decisions create simultaneous opposing tendencies within individuals to accept and reject potential courses of action. Intensity of conflict depends on the perceived magnitude of risks or losses anticipated from whatever decision is made.

In order to make the most appropriate decisions, individuals must carry out thorough searches and appraisals of relevant information. Conflict theory recognises that sometimes decisions are necessarily made under various external constraints, such as time pressure and uncertainty. It predicts that individuals are likely to experience decision stress when such constraints render them unable to carry out an adequate search of alternatives. This stress puts further restrictions or load on an already limited information processing capacity (Simon, 1976). Consequently, Janis and Mann (1977) suggest that individuals are likely to resort to gross simplifications. This may

include reliance on irrelevant aspects of alternatives and faulty categories or stereotypes which serve to end decision tasks and thus relieve individuals of uncomfortable feelings of stress.

Key concepts in the decisional conflict model are derived from analysis of literature on psychological stress induced by emergency decision making in the face of oncoming disasters, such as earthquakes, air raids and serious illness (e.g. Janis, 1951; Janis and Leventhal, 1965). However, Janis and Mann (1977) suggest that decisional conflict theory is applicable to milder forms of consequential decision making. The aim of the model is to specify conditions that mediate distinctive forms of decisional coping strategies. Although Janis and Mann specify five antecedent conditions and corresponding coping patterns, discussion is restricted to the two patterns that are most relevant to medical decision making.

Sometimes individuals are unable to carry out thorough information searches as they have lost hope of arriving at better decisions than least objectionable ones. This may occur when individuals are uncertain about decision alternatives and do not expect this to subside after collecting more information. Under these circumstances *defensive avoidance* is the most likely coping strategy to be employed. This is characterised by lack of vigilant search, selective inattention, selective forgetting and rationalisations, thus avoiding cues that stimulate anxiety or other uncomfortable emotions. For example, studies of cancer patients have shown that many refrain from asking questions, and selectively misinterpret what their doctors suggest about the unpleasant and potentially dangerous consequences of opting for radiation treatment or radical surgery (Weinstein and Kahn, 1955). Defensive avoidance coping can take a number of forms. These include procrastination, bolstering and shifting responsibility.

When individuals expect no serious consequences from postponing decisions, Janis and Mann (1977) suggest that they are likely to use defensive procrastination. This involves not thinking about the decision to be made and avoiding discussions or situations where there is pressure to find a solution. If decisions must be made within specific deadlines and there are important consequences for postponement, individuals are more likely to shift responsibility for decisions to be made or bolster least objectionable decisions. When shifting responsibility, decision makers rationalise why other people rather than themselves should make decisions. Alternatively, individuals may bolster their decisions. Although this involves thinking about and discussing difficult issues, stress is warded off by selective attention and distorted information processing.

This distortion occurs when individuals exaggerate potentially favourable consequences in order to convince themselves that their decision choices are worth the costs and risks involved. Without necessarily playing up the positive consequences, individuals may de-emphasise potentially negative ones that would otherwise make them hesitant. Using bolstering strategies, conflict can be minimised by denying the aversive nature of whatever negative consequences are expected to follow from the decision to be made. For example, Janis and Mann (1977) suggest that if a man is considering accepting a job that although it is attractive, contains some elements of danger, he may convince himself that it will give him opportunity to prove himself or present a fascinating challenge for him. Another way to discount known negative consequences of a decision is to assume that once the decision has been made no further action needs to be taken for such a long time that the decision can be forgotten about. When individuals believe that the decisions they are about to make are

private, secret affairs, they may convince themselves that negative consequences do not matter as no one will know about them. Finally Janis and Mann suggest that individuals may seize upon social pressures as a basis for denying responsibility for decisions.

When individuals are unable to carry out thorough searches of alternatives because they do not have time to, *hypervigilance* is likely to be the most dominant response. Decision makers become excessively alert to all incoming information and fail to differentiate the reliable from the unreliable, and the relevant from the irrelevant. As the processing load increases, so memory span is reduced and thinking becomes simplistic. Individuals in this state engage in frantic search for solutions, thinking about only a limited number of alternatives and deciding upon action that will give them immediate relief from stress. Hypervigilance in its most extreme form has been observed in the inappropriate responses of civilians confronted by a rapidly approaching conflagration (Foreman, 1964).

The decisional conflict approach may provide a theoretical basis for predicting and explaining the ways in which GPs cope with decisional stress. Due to their association with time pressure and uncertainty, strategies corresponding to defensive avoidance and hypervigilance are most likely to be used by GPs. This may be indicated in GPs' responses to interview questions.

METHOD

Design of the Interview Protocol

A semi-structured interview protocol was designed to gather general biographical data about each doctor and information relating to consultation style and management of patients and complaints. One

question required GPs to introspect about mental processes involved in decision making. For the purposes of the medical decision making project as a whole items regarding a variety of aspects of the consultation were included in the protocol. However, items more specifically relevant to the thesis concentrated on the impact of non-clinical variables on management decisions. These are shown in Table 3.1.

Table 3.1 Items that concentrated on the impact of non-clinical variables on management decisions

1. Do you ever feel under time pressure during consultations ?
2. How might time pressure influence your decision making ?
3. In what circumstances might you feel unsure of how to manage patients ?
4. How do you deal with uncertainty ?
5. What sort of information are you aware of when a patient first walks into the consultation room ?
6. How might more social or psychological factors about the patient influence your decision making ?
7. How might the age of the patient influence the decisions you make?
8. How might the gender of the patient influence the decisions you make ?
9. How might other partners in the practice influence your decision making ?
10. How do you arrive at a management decision ?

The full interview protocol is presented in Appendix A.

A pilot study was carried out with two non-participating GPs. Questions were of an open ended nature and a series of follow up questions and probe items were used. Probe items were deliberately of a challenging nature as individuals are more likely to put forward explanations of behaviour in situations where their accountability is in question (Pomeranz 1984). The frequency with which probe items were used was naturally varied across the sample as probes were employed on a contingent basis e.g.

Interviewer : How might time pressure influence your decision making ?

GP : ...Its only when it gets quite extreme that it has a significant effect.

Interviewer : ...If it was extreme, what might happen ?

GP : ...I think it's a question of taking short cuts, not doing some of the investigations or examinations that you'd otherwise do ...

Interviewer : ...Do you feel that short cuts actually affect your management decision...?

GP : ...I can see myself perhaps giving a course of treatment as ...an easy and quick option ...to complete a consultation ...

Procedure

Thirty-four interviews were carried out at each doctor's surgery, except for two participants who requested home visits. Each interview lasted for approximately one hour, and interviews of the entire panel were carried out between March and July 1993. All interviews were audio-taped and transcribed. One interview proved impossible to transcribe due to poor recording quality, and was consequently not included in the analysis.

Subjects

Two hundred general practitioners in the South West region of Great Britain were contacted by letter and those who responded received a visit, during which they were given the opportunity to familiarise themselves with the aims and procedures of the project. Of those contacted, 34 doctors (17%) agreed to take part in the project. Thirty were male and four female, and were based in both urban and rural practices.

RESULTS

Quantitative content analysis was carried out on responses to the selected sample of questions (Table 3.1) in order to explore the range and prevalence of patient management strategies used in response to a set of common non-clinical variables. Illustrative quotations from across the whole sample were used to support the data. Full transcripts of interviews with all 33 GPs are presented in Appendix A (Section two). Doctors on the panel are identified in these quotations by a code indicating their number and whether they are male (M) or female (F).

Biographical Data

Of the doctors on the interview panel, 11 were aged between 31 and 35 years old, nine between 36 and 40 years old, five between 41 and 45, five between 46 and 50 and three between 51 and 55 years old.

Five doctors in the sample had been qualified for less than five years, 15 for between five and 10 years, seven for between 11 and 15 years, three for between 16 and 20 years, and three for over 20 years.

Thirty-six percent of the panel carried out their postgraduate training in London, the remaining sixty-four percent in Cambridge (6), Bristol (5), Birmingham (2), Nottingham (2), Edinburgh (1), Manchester (1) and Cardiff (1). Two GPs completed their training in India and another in the USSR. Female GPs were under-represented in the sample (12%), compared to figures for the region (34%) (Devon F.H.S.A 1994), and the UK (25%) (Department of Health Statistics 1992).

Time Pressure and Uncertainty

All but two doctors in the sample reported feeling under time pressure during consultations, and all but one expressed feelings of uncertainty about how to manage their patients. These two variables were reported to have a considerable bearing on the actual management decisions made. Even when surgeries were appointment based, some patients inevitably take up more than their allocated time, leaving other patients with less of the doctor's time. In addition, the doctor may be called out to deal with an emergency case, either just before or during a surgery.

When faced with time pressure, 25 doctors in the sample (80.6%) reported using management strategies that served to terminate the consultation. Such strategies were described as necessary and legitimate "shortcuts". Giving out a prescription was identified by 11

of these 25 (44%). Twelve of these 25 doctors reported that they were more likely to review or bring back patients when under time pressure. Of these 12 doctors, four (33.3%) reported reviewing patients as a safeguard after having decided to give out prescriptions under pressured circumstances:

“I can see myself perhaps giving a course of treatment, as a sort of an easy and quick option to... complete a consultation and... feel better about it by offering a sort of follow up, later on, just... [to] see how things have gone.” (M5)

In cases where time pressure causes uncertainty about management, five doctors out of the 25 (20%) reported a higher level of reviewing of patients so that decisions could be temporarily deferred. However, this may be counter productive as if a patient returns to an equally time pressured consultation, the doctor may still be unable to decide on a management plan for the particular condition.

Just as giving out a prescription may serve to bring a time-pressured consultation to a positive close, two doctors (8%, out of 25) reported using investigation to the same effect:

“I certainly tend to do more investigations than I probably need to, because it’s quite a good way of ending a consultation on a positive note...” (M28)

Alternatively, five doctors (20%, out of 25) said that they would be inclined to do less investigation themselves, but refer patients more frequently to be investigated by other agencies:

“I’m aware that sometimes if one really spent longer, one might end up not referring somebody. And then actually one’s saying ‘Alright sod it, I’ll refer you.’ You know, its easier to get them out the door and then dictate a letter over a cup of coffee.” (M31)

Another way of terminating the consultation when under time pressure was to restrict management to the presenting physical symptoms. In this way, six doctors (24%, out of 25) said that they made no attempt to try and uncover patients' hidden agendas, and used more directive and closed communication techniques in order to discourage patients from bringing up side issues. Under such circumstances, this subset of doctors expressed a preference for physical symptoms which could be dealt with relatively quickly compared to more psycho-social issues:

“...someone may come in with a couple of physical complaints and a psychological complaint and I'll think OK on another time, I might pick up on these cues and say 'Well let's talk a little more about your depression', but on a day like that I'll just ignore it.” (F9)

Nevertheless, on some occasions doctors found themselves unable to ignore more emotional concerns:

“Of course what happens is that you're on the verge of trying to [terminate the consultation] and they burst into tears, and what you thought was a four minute consultation is forty-five minutes...” (M22)

It appears that time pressure influences the general pattern of the consultation, having perhaps the most profound impact on the final management decision about which the patient may receive little or no explanation :

“...you're naturally under pressure to shut things down and become doctor-centred, to ask closed questions, to interrupt, to not explore patients' feelings and not to negotiate...” (M31)

Uncertainty

Doctors who reported feeling uncertain about how to manage patients, generally accepted this as an inevitable feature of general practice.

While uncertainty about diagnosis was associated with symptoms not fitting into recognisable patterns, uncertainty about management was related to a number of factors including social and psychological characteristics of the patient, lack of knowledge about the patient's expectations and satisfaction with the decision made and lack of trust or faith in the doctor.

When feeling uncertain about how to manage a patient, 22 doctors in the sample (66.7%) reported using "time as a diagnostic tool", also known as temporising. As previously mentioned with regard to time pressure, this involves giving the patient a follow up appointment. However, instead of using this strategy to defer the decision to a slot where the doctor is under less time constraint, in the instance of uncertainty, extra time gives the doctor an opportunity to talk the matter over with other partners, consult text books or other literature, or for the symptoms to have remitted of their own accord.

In order to temporise, eight doctors out of this 22 (36.4%) felt that it was sometimes necessary to carry out minor investigations:

"If I don't know what to do, then I'm just sort of playing for time until the patient tells me...I...can just explore symptomatology in more detail or do some blood tests, talk about their great aunt." (M26)

As in cases of time pressure, investigation was also seen as a way of reassuring patients that some action had been taken:

“I tend to ask myself if any investigations might be appropriate...not necessarily for my sake but [so that] a patient feels something is being done to try and achieve an end...” (M1)

In addition to using time, when unsure of diagnosis and management, 21 doctors (60.6%, out of 33) said that they would refer for further investigation and to confirm diagnosis. This may be the action taken when symptoms persist forcing the doctor to take further action.

Patient Characteristics

All but three doctors in the sample reported paying attention to visual or non-verbal cues to give them information about the patient's physical or mental state when first entering the consultation room, e.g. difficulty walking or sitting, appearing anxious or upset. Fourteen doctors out of this 30 also reported using cues to give them some indication of the patient's social background and lifestyle e.g. dress, accent, cleanliness. Given this information, it seems that doctors form certain opinions about their patients at an early stage in the consultation, and these may have some determining effect on its subsequent course.

When deciding how to manage a patient at the end of the consultation, doctors recognised the impact of such guiding first impressions :

“...doctors have got a more powerfully established set of preconceptions about what's appropriate for people than people have themselves because we do it every day...you're beginning to make all kinds of assumptions...Tragically at times it can take quite a long time to get unhinged from those preconceptions and you can continue to think about somebody as belonging to a particular social economic class and therefore having particular perceptions when they may not hold them at all”. (M22)

Ten doctors in the sample (30.3%) reported taking the patient's financial status into consideration. Two out of this 10 said that they would be more inclined to prescribe for patients who do not pay for their medication. Deciding on management that patients can afford was put forward by a doctor in this subset, as was writing out private prescriptions and referring patients who have private health cover.

The influence of patients' social class was mentioned by three doctors in the sample, both with regard to explaining management and actually making decisions :

"...you do tend to treat...[social classes four and five]...more. You might give them treatments with antibiotics...more than you would, because they need more bolstering, they need more help." (M8)

Age and Gender

Eleven doctors (33.3%) were able to put forward specific ways in which age influenced their management decisions. With regard to the very elderly and young children, five out of these 11 doctors felt cautious about prescribing drugs or putting patients through traumatic investigations. Concern was expressed that for the elderly, side effects of drugs may be more difficult to deal with than the illnesses themselves and that investigation may not be very fruitful. Eight out of the 11 doctors felt that they had to carry out cost effective calculations when deciding how to manage them:

"...sometimes you're thinking in hard terms, 'Will the person live long enough to get the benefit of this treatment ? or Can I ignore it because they'll be dead of some other problem before this becomes an issue?' " (F9)

One GP indicated awareness of the controversy surrounding this issue:

“I’ve been realising that things like renal failure and coronary heart disease are eminently treatable in the seventy year olds...and I think my trigger level for referral for ischaemic heart disease in the seventy year olds is actually probably lagging behind...what would now be an accepted good practice.” (M1)

In comparison, three of the 11 doctors reported having relatively low thresholds for referring children. In the case of further investigation, all three said that this was done in order to allay parents’ anxieties:

“When you refer them on for a second opinion, you know the kid’s alright, but the mother and dad are so wound up...about it that the kid’s going to suffer.” (M28)

Only six doctors in the sample (18.2%) suggested ways in which patient gender influenced their management decisions. This contrasts with 31 doctors (94.4%) who reported differences in the style of the consultation with male and female patients, including symptom presentation, style of presentation and frequency of attendance. Of these six doctors, one reported giving women more choice about treatment than men, due to the doctor’s uncertainty about what women want. Child care responsibilities were taken into account by one doctor when considering hospital admission for women and two doctors expressed caution when prescribing for women who were pregnant or taking the contraceptive pill.

Although one of the six doctors reported admitting less men to hospital due to pressure from male patients about work commitments, another doctor in this subset reported feeling under greater pressure to refer men than women. The perception that women prefer treatment to be explained in simple, non mechanical terms was also expressed by another of the six.

Partners in the Practice

All doctors in the sample said that other partners had little, if any influence on their decision making, due to most practices operating on the basis of personal lists. In the situation where patients are seen by other doctors, because their own doctors are unavailable, ten doctors in the sample (30.3%) reported complying with management unless the patient was at risk. Alternatively, three out of the 33 preferred to avoid committing themselves to any action when seeing other partners' patients.

Doctors were also given the opportunity to put forward any other factors that influence their management decision making. These included more prescribing late in the day and on Fridays (three doctors), and a lower threshold for referral when feeling tired or when having a "bad day" (one doctor).

Insight into Decision Making Processes

When asked to give information about their mental processes when making management decisions, responses tended to fall into three general categories:

(i) Four doctors in the sample (12.1%) gave clear indications that they simply did not have access to such information:

"...it all goes into a dark box and makes a decision which sometimes mystifies me..." (M12)

This finding is consistent with the theory that some high level cognitive processes appear to operate in an implicit or unconscious way and are therefore not verbalisable (Evans, 1989). If it is assumed that doctors are constantly required to decide how to manage their patients, then this task will become automated due to over learning

(Ericsson and Simon, 1984) and will no longer register in short term memory (Schneider and Schiffrin, 1977).

(ii) Alternatively, 10 doctors (30.3%) gave the same indications, but in a much more subtle way, so that they explained how they negotiated management decisions to their patients, once they themselves had already decided on courses of action.

(iii) Finally, 14 doctors (42.4%) put forward a variety of general explanations as to how they make management decisions. These included comments about tailoring management to individual patients' needs and coping with patients' expectations of management. When this subset of doctors was probed further about the subject, six offered various kinds of theories which frequently centred around medical training and experience.

However, eight doctors (21.2%), more interestingly, included scientific theorisations about their decision making. In this way, some sort of pattern recognition idea was either explicitly stated or implied and 'algorithms', 'decision trees', 'reflex arcs' and 'personal protocols' were also referred to.

DISCUSSION

Qualitative analysis of selected responses from doctors gave rise to a large pool of information concerning (1) the social and psychological factors which doctors feel have some influence on their management decisions, and (2) corresponding management strategies used to reduce decisional stress. The following discussion summarises the most salient and frequently reported of these factors and strategies, incorporating relevant psychological and medical literature.

Overwhelming reports of feeling under time pressure during the consultation and feeling uncertain about how to manage patients, makes decisional conflict, as described by Janis and Mann (1977), a highly plausible concept in the context of general practice. It therefore serves as a framework for the discussion of the results. Doctors under time pressure may be unable to consider information closely enough to discriminate between the relevant and the irrelevant, and attempt to reduce stress by making decisions which terminate the consultation, e.g. giving out a prescription. This is termed hypervigilance in decisional conflict theory.

As a non-clinical variable, time pressure has previously been found to have some impact on management decisions, (Howie, Porter, Heaney and Hopton 1991, Hughes, 1983) and has been put forward as a factor to explain why differential patterns of prescribing occur for similar patient complaints (Bradley, 1992). Hughes (1983) found that GPs who booked appointments at more frequent intervals gave out more prescriptions and requested more repeat visits. The most stress, when working under time constraint has been found to be experienced by GPs who prefer longer, patient-centred consultations (Howie, Hopton, Heaney and Porter, 1992).

Contrary to these results, the impact of time constraint was not supported in a study by Morrell, Evans, Morris and Roland (1986). They found no evidence to suggest that GPs working on a five minute appointment basis prescribed more drugs, carried out more investigation, referred more patients or requested more repeat visits than those working to seven and a half and ten minute ones. However, as previously discussed in Chapter two, the five minute consultation may not be representative of a time pressured consultation. Also

although a large number of consultations were analysed, the study involved only one practice in London.

When time pressure led to uncertainty about diagnosis and management, doctors reported deferring decisions by giving follow up appointments. Although GPs may allow time to pass, as a legitimate therapeutic strategy to allow a diagnosis to emerge (Armstrong, 1985), interview responses indicated that GPs also deferred making decisions as a means of coping with stress. In addition, GPs reported referring patients to other agencies. This type of decisional conflict is likely to arise when each possible choice of action has potential drawbacks, and the individual has little hope of finding a solution better than the least objectionable one. Under these circumstances, doctors are likely to employ defensive avoidance as a coping mechanism. An example of this is procrastination, where the doctor can temporarily stop thinking about potential choices by avoiding processing relevant information. As mentioned in the results section, some doctors reported using directive and closed communication techniques in order to discourage patients from bringing up more emotional or psychological concerns that would prove to be time consuming.

Another example of defensive avoidance is shifting responsibility for making the decision onto someone else. Again this was a strategy reportedly used by some members of our panel. Here information gathering is limited to seeking out experts who will take over the decision altogether or instruct the individual about what to do.

When doctors feel that there is little hope of arriving at a satisfactory decision, but cannot defer the decision, or pass responsibility onto higher authorities, bolstering of the least objectionable choice would

be predicted by decisional conflict theory. Although doctors may continue to think about the issue, stress is likely be warded off by exaggerating supportive information, while ignoring or minimising potentially challenging data. Evidence for the use of this strategy is difficult to identify in the data and may not be open to report due to lack of insight into potential reasoning biases (Evans, 1989).

It was clear from their responses that doctors' impressions about patients are formed early in consultations and that these influenced decisions to prescribe and refer. Qualitative typologies of patients and corresponding management techniques are well documented in medical literature (Kokko, 1990), particularly with reference to difficult or 'heartsink' patients (e.g. Corney, Strathdee, Higgs, King, Williams, Sharp, Pelosi, 1988; O'Dowd, 1988). Due to time constraints in the consultation and the strong emotions that the patients may provoke, doctors may, in a state of hypervigilance, resort to using such non-clinical patient variables, rather than more relevant information to guide their management decisions.

Management decisions were also reported to be influenced by the age and gender of the patient, e.g. less prescribing and traumatic investigation for the two age extremes. More specifically, elderly patients may be at a particular disadvantage when cost effective calculations concerning survival after certain operative procedures are involved. This has become a controversial issue in the medical literature, where it has been suggested that elderly patients, particularly women, are subject to discrimination and denied access to treatment for renal failure and coronary artery disease (e.g. Ayanian and Epstein, 1991; Dreachslin, 1992; Kjellstrand, 1988). Women may be at a particular disadvantage as they tend to develop heart and kidney disease at a later age than men (Kjellstrand, 1987). As with

other non-clinical patient variables, in the event of high emotional arousal and time pressure, age and gender of patients may be unreliably used by a hypervigilant doctor to aid decision making and decrease stress.

As most doctors on the panel had their own personal lists of patients, other partners were reported to have little, if any influence on their decision making. A general concern to protect the profession was expressed with reluctance to interfere with colleagues' decisions unless the patient was at risk.

On balance, these reports of decision stress and patient management strategies correspond closely to the theory of decisional conflict. However, although most management strategies appear to be explicit and available for report, responses to the question on insight indicated little awareness of the cognitive processes involved in decision making itself. This is consistent with psychological literature which suggests that subjects' responses to questions about their mental processes are based on already established causal theories, rather than on the basis of any true introspection (Evans, 1989; Nisbett and Wilson, 1977).

If this is the case, then the question must arise as to whether the reports given above are accurate descriptions of actual decision making in patient consultations. Equally, the interview process obviously gives rise to self-presentational concerns which create the added difficulty of distinguishing what actually occurs from what doctors are ready to admit takes place in consultations with patients.

The sample of GPs used in the study is limited. GPs studied were those who volunteered to take part in a research project. Older GPs and

female GPs were under-represented and there was a trend towards younger age groups with less than ten years since qualification. With reference to this last point, an older, more experienced sample may have been able to report a greater repertoire of coping strategies, developed over years of dealing with decisional stress.

The majority of the sample's patients are self selected groups which constitute personal lists. This means that rather than seeing other partners in the practice, the patient is managed exclusively by his or her chosen GP. Even in these circumstances, the evidence is that doctors can identify increased stress and coping strategies. GPs without personal lists, who are less familiar with their patients, can therefore be expected to exhibit higher levels of stress, and more extensive strategies for coping with it.

In this chapter, the impact of non-clinical variables on decision outcomes was explored by analysing the interview responses of a sample of GPs. In order to examine the relationship between these verbal reports and actual consultation behaviour it is necessary to refer to data drawn from a more authentic and representative source. Chapters six and seven describe the results of the analysis of a large number of audio-taped consultations and corresponding patient information collected from GPs.

Chapter 4

STEREOTYPES AS HEURISTICS : GPs' ACCOUNTS OF GENDER DIFFERENCES

INTRODUCTION

This chapter has two main functions. First it explores the cognitive miser approach to stereotyping in order to make an explicit link between decisional stress and the use of gender as a non clinical variable. In addition, it reports the results of the secondary interview analysis carried out to identify GPs' accounts of specific gender differences. These are thought to constitute collective GP stereotypes of male and female patients.

Analysis of exploratory interviews suggested that when working under conditions of time pressure and uncertainty, GPs used a number of simplifying strategies to cope with decisional stress. Due to the relative salience of some patient characteristics, under conditions of decision stress, GPs may find it easier to refer to well established knowledge regarding variables such as gender than to medical knowledge which requires attention to cues from presenting symptoms.

Knowledge pertaining to the social group to which a patient belongs, e.g. elderly male, working class female, are generally believed to be structured and organised in the form of stereotypes. These cognitive structures form crucial sources of expectations about what the group as a whole is like as well as about attributes that individual group members are likely to possess (Hamilton, Sherman and Ruvolo, 1990). Therefore, the use of stereotypic information may be a very important aspect of the decision making process, providing doctors

with relatively easily accessible information upon which to base their diagnoses and management decisions.

THE COGNITIVE MISER PERSPECTIVE

Research regarding stereotypes is both extensive and diverse, and has given rise to a number of alternative perspectives. Early theories of stereotyping, particularly regarding racial prejudice, assumed that judging individuals on the bases of their group membership was a negative practice (e.g. Katz and Braly, 1935). This view was somewhat amended by the development of social identity theory which suggests that stereotyping is a normal cognitive process that allows individuals to derive social identities on the bases of which to identify themselves (e.g. Sherif, 1967; Tajfel, 1972; 1981). Alternative approaches to stereotyping have explored implications for information processing.

One of the most influential of these approaches is the cognitive miser perspective. This is considered to be most relevant to the theoretical development of the thesis due to its recognition of limited information processing capacity and the effects of cognitive load or complexity (e.g. Fiske and Taylor, 1991). In order to reduce cognitive load, researchers argue that social expectations guide the processing of social information, so that data which is congruent with or confirming of existing expectations is preferentially encoded and retrieved from memory, compared to schema disconfirming information (Bodenhausen, 1988; Macrae, Hewstone and Griffiths, 1993; Macrae, Stangor and Milne, 1994; Macrae, Milne and Bodenhausen, 1994). This is because congruent information is easier to assimilate into existing schematic frameworks than schema inconsistent information.

Therefore, the cognitive miser perspective suggests that stereotyping operates as an information reduction mechanism. This assumption has

been criticised by Oakes, Haslam and Turner, (1994). They argue that stereotyping is employed primarily to cope with the problem of too little rather than too much information. Therefore, individuals refer to social categories as this allows them to make hypothetical inferences about the characteristics and behaviour of other people, thus going beyond raw uncategorised information. In this way, Spears and Jansen (1994) suggest that social categorisation may represent as much a gain of meaning as information loss. In addition they believe that categorisation according to individual attributes and also group membership both involve meaningful discriminations in terms of similarity and difference, and thus are equally effortful. Therefore, Spears and Jansen predict that the ability to perceive people (in terms of category membership or in terms of individual attributes) is likely to be increased under low load and decreased under high load. This is due to the impairment of meaningful categorisation.

Although the meaning model is an equally plausible explanation of why stereotyping occurs, the cognitive miser approach is more relevant to the theory of decisional conflict that has been adopted on the basis of the interview study. It also fits well with the overall concern of the thesis with the shortcomings of decision making in general practice. The most important aspects of the cognitive miser approach are explored in more detail in the following sections.

Selective Processing of Confirmatory Information

A series of studies carried out by Bodenhausen and Wyer (1985), and Bodenhausen (1988), provide convincing support for the premise that the activation of a stereotype elicits a selective strategy which favours the processing of confirmatory information. These studies are in the form of mock jury trials and work on the assumption that certain criminal offences are more readily associated with ethnic minority

groups. When a racial stereotype was activated implicitly for subjects the stereotyped target individual was seen to be more likely to be guilty than the non stereotyped one. Also, more incriminating than exculpatory evidence was recalled by these subjects when a stereotype had been activated before they read the evidence, but not when it had been activated afterwards. In explanation Bodenhausen (1988) suggests that the selective processing of presented evidence requires that the biasing concept be activated before other evidence is encountered. In this way, stereotypes act as guides for the amount of attention and rehearsal subsequent information receives (Srull and Wyer, 1989).

Subjects judged stereotypic transgressions to be more likely to recur and recommended that they should be punished more severely. Bodenhausen and Wyer (1985) suggest that this was perhaps because they were believed to have dispositional rather than situational causes. Even when subjects were given more information on which to base their judgements of parole recommendations, including background information (e.g. marital status, age), decision relevant information (e.g. previous criminal record, behaviour in prison), and life circumstances information which suggested factors in the target's life that may have led to his crime, the activation of a racial stereotype eliminated the influence of such information, as subjects relied exclusively on stereotype based explanations, making less strong recommendations for parole.

Schematic Processing Under Cognitive Load

In order to investigate how cognitive load influences perceivers' use of stereotypes conditions of cognitive complexity have been experimentally created by dual-task paradigms, such as digit rehearsal tasks (Macrae, Hewstone and Griffiths, 1993), prose

monitoring tasks (Macrae, Milne and Bodenhausen, 1994; Stangor and Duan, 1991), probe reaction tasks (Macrae and Stangor, 1994) and visual search tasks (Gilbert and Hixon, 1991). Subjects are required to perform these secondary tasks concurrently with the primary task of the experiment.

The cognitive miser approach suggests that under conditions of cognitive load, information processing is eased and cognitive processing capacity reserved by using activated stereotypes (Gilbert and Hixon, 1991). In studies by Macrae and colleagues (1994), subjects who had had their stereotypes of child abusers activated in a previous task, recalled more stereotype consistent information and performed better on a concurrent prose monitoring task than subjects who had not had their stereotypes primed. While subjects in high load conditions have been found to recall more stereotype consistent information, subjects in low load conditions tend to recall more stereotype inconsistent information (Macrae et al, 1993). This effect can be explained with reference to the 'associative network' model of social memory (Srull and Wyer, 1989), which suggests that in an attempt to reconcile discrepant behaviour, subjects process it extensively. During the process of 'inconsistency-resolution' cognitive associations are formed between incongruent behaviours and other incongruent, and congruent behaviours, resulting in incorporation into long term memory, and subsequent preferential recall.

Researchers' use of cognitive load in their experiments has been questioned by Oakes et al (1994), who argue that it is difficult to manipulate something that can be unambiguously conceptualised as an increased demand for processing capacity. In addition, the number of levels of cognitive load used have also been challenged. Spears and Jansen (1994) argue that the relationship between load and

stereotyping is more curvilinear than has been previously described in work by Macrae and colleagues (1993 ;1994), where subjects were tested under two conditions of low or high load. They suggest that under low load, individuals recall both individuating and categorical information, and therefore make few social category-based memory errors. Under high load, individuals are not be able to attend to either individuating or categorical information, and also make few category-based errors. However, under moderate load, individuals cannot remember all the individuating information perfectly, but still retain some category level information of the individuals.

Conditions of cognitive load also exist outside experimental settings. Decisional stress as a result of time constraint (Bargh and Thein, 1985) and target numbers (Stangor and Duan,1991) may serve as a cognitive load condition which has implications for the kind of information processed by GPs and the way patients are managed.

Schematic Effects on Information Seeking

Hamilton et al (1990) suggest that not only can stereotyping effects be produced by filtering or not encoding inconsistent information, but also by choosing not to seek information that is incongruent with expectations. In this way, stereotypes influence the information sought in order to test them. More specifically, the questions that an individual asks, the inferences that are drawn from answers to such questions and the point at which an individual stops seeking further information are all influenced by initial expectations.

This is explained by Skov and Sherman (1986) in terms of a hypothesis-confirming strategy, which is the tendency to seek information that is relevant only to the hypotheses under consideration. While processing information that matches the

hypothesis under consideration can be done without any transformation of the evidence or further search of memory, questions pertaining to the alternative hypothesis cannot and requires further stages of processing. In Skov and Sherman's study (1986), subjects were given the task of assigning targets to two defined groups on the basis of responses to two subject questions about the targets' features. Results indicated that subjects preferred to ask questions that would be more likely to result in an affirmative response under the given hypothesis than under the alternative. In addition, subjects were also found to prefer questions that would maximise their likelihood of getting such a response. Therefore, they tended to ask questions about features that were extremely likely under the hypothesis.

An expectancy-matching bias in information-seeking has also been reported by Johnston and Macrae (1994). When subjects could control the nature and amount of information they received about a target group (physics students) they showed a preference for stereotype-matching information which was reflected in the maintenance of their stereotype-based evaluation of the group. However, when subjects were forced to consider all the available information, their stereotypic evaluation of the group diminished. Furthermore, subjects in both conditions rated stereotype-confirming items as most useful when forming an overall impression of the target group, lending support to the meaning model of stereotype use (Spears and Jansen, 1994). Although subjects who were forced to process all the available information about physics students, modified their evaluations of them, they did not rate stereotype-disconfirming items as particularly useful.

The point at which a perceiver stops seeking information again may be dependent on initial expectancies. Hamilton et al (1990), argue that perceivers are willing to abandon their searches sooner when indications are in favour of expectancy confirmation, than when there is equivalently diagnostic information that is opposed to the expectancy. In this way, Hamilton et al suggest that with reference to work by Van Wallendael (1988), the perceiver's preference to confirm the initial expectancy, means that it may only be abandoned if additional evidence is provided.

Gender As A Social Category

Gender is a particularly salient social category because of the strong physical cues it provides. As regards the specific content of gender stereotypes, there seems to be a general consensus that instrumentality, dominance and assertiveness are traits more typically associated with men, while women are thought to have more expressive and caring traits (e.g. Williams and Best, 1982). Evidence suggests that these cultural stereotypes of male and female behaviour may be accepted and internalised by health professionals. In a study by Broverman, Broverman and Clarkson (1970) descriptions of healthy adults, either male or female, conformed more to masculine than feminine stereotypes which in contrast were associated with psychological illness. With reference to the feminist perspective, previously outlined in the Chapter one, this pathologising of women's traits and behaviour may serve to medicalise and thus control them.

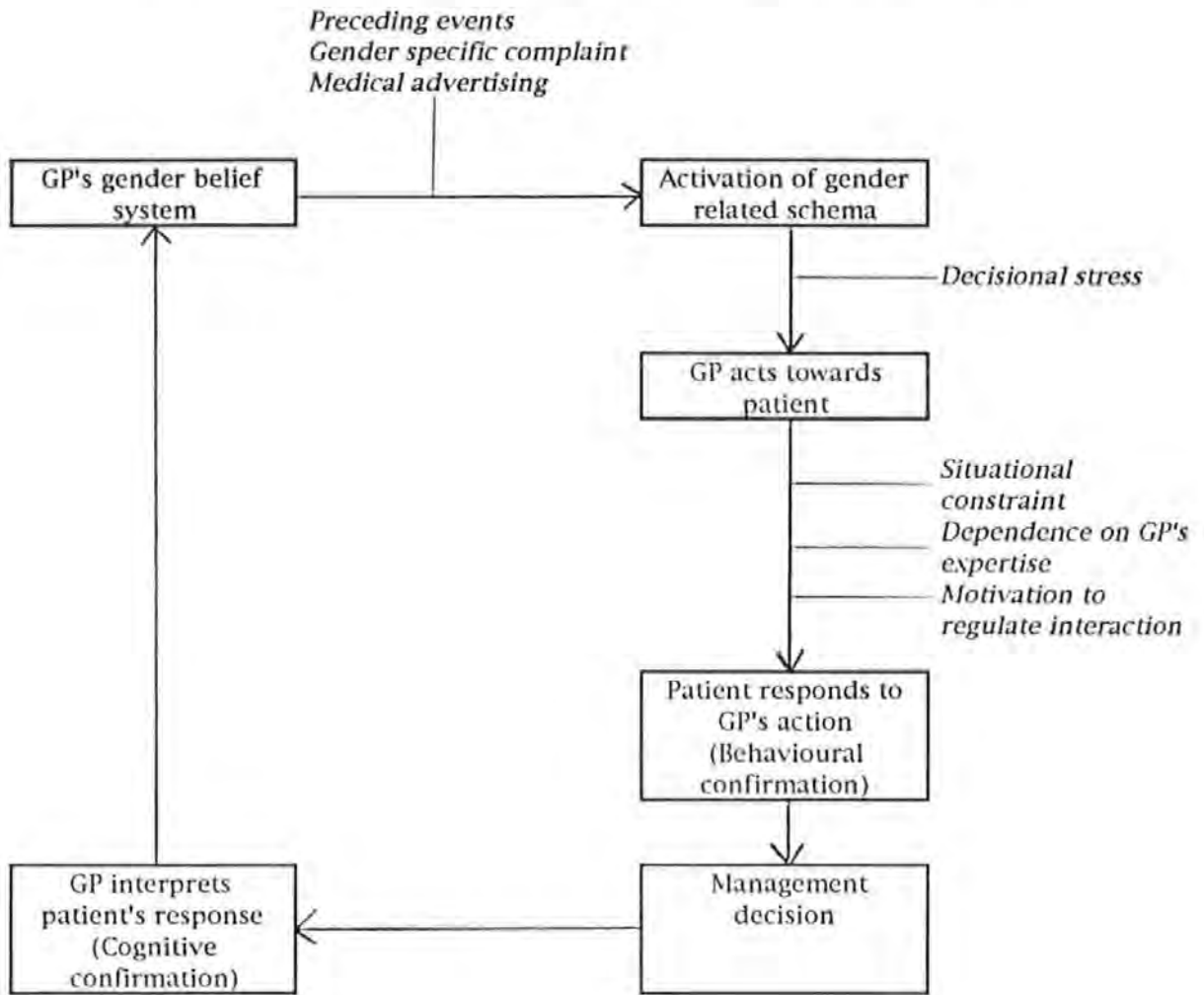
More recent research has extended the dimensions of the female stereotype to include distinctive role behaviours, e.g. tends the house, physical characteristics, e.g. soft voice and occupations, e.g. secretary (Deaux and Lewis 1983; 1984). In addition to the global beliefs about the general categories of men and women, the gender belief system

may contain more particularised beliefs or sub categories (Eckes, 1994). Although there is controversy about whether specific gender subtypes are richer and more informative than more general stereotypes of men and women (Deaux, Winton, Crowley, Lewis, 1985; Eckes, 1994), there is evidence that specific subtypes can be identified e.g. housewife, sex object, career woman (Noseworthy and Lott, 1984).

The person-in-situation work carried out by Cantor, Mischel and Schwarz (1982) showed that individuals have expectations or prototypes of commonly experienced situations, which are dominated by the attributes of people expected to be encountered in such contexts. In this way, the situation that an individual is perceived in cues specific expectations of how that person will behave. For example, a woman encountered in a night-club may be expected to be attractive, flirtatious and sexy, while a woman encountered at the office may be expected to be well-groomed, ambitious and intelligent. Although it could be suggested that these particularised descriptions are similar to gender subtypes, person-in-situation work emphasises the idea that they are governed by expectations about the given context. So the same woman may be perceived as a housewife, sex object and career woman, depending on the situation in which she is observed.

Applied to a medical context, Deaux and Major's interactive model (1987), (Figure 4.1) may give some indication of how these stereotypes enter the consultation and influence management decisions. The model has been modified to include the condition of decisional stress as a specific modifying variable.

Figure 4.1 : An example of gender-related behaviour in the consultation based on Deaux and Major's interactive model



According to Deaux and Major (1987) gender-related expectations are likely to be activated in the consultation by circumstances that make gender very salient, such as the presentation of gynaecological complaints. The extent to which these expectations are acted upon, depends on the level of decisional stress experienced by GPs. While under low levels, these expectations feature little, if at all, in the decision making process, under relatively increased levels, they are likely to form the bases upon which management decisions are made. In this way, gender-related expectations may be used to form hypotheses about the diagnoses of patients. These may be explored

through communication with the patient, which is likely to be biased towards confirmation. For example, as men are expected to present with more physical complaints, GPs may be more likely to ask men presenting with chest pain about questions relevant to the diagnosis of cardiovascular disease, rather than psychologically based problems.

Due to a number of features of the consultation, patients are likely to behaviourally confirm GPs' expectations. As a constrained or strong situation, (Mischel, 1977; Schutte, Kendrick and Sadalla, 1985) the medical context demands adherence to specific behaviours, namely to bring forth details of complaints and then comply with doctors' advice. As a result of the perceived status of GPs, and patients' dependence on them, patients are motivated to facilitate the interaction (Snyder, 1992). In this way, female patients may disclose more psychologically related symptoms than men as this is the information that is asked of them by GPs in their attempt to confirm psychological diagnoses.

On the basis of patients' perceived responses to GPs' actions, management decisions are made. When GPs observe patients' reactions they are likely to cognitively confirm their initial gender-related expectations. This is because information is selectively interpreted in a way that is consistent with their original beliefs. Even in the absence of behavioural confirmation, cognitive confirmation may occur as a result of GPs' interpretations of patients' behaviours. So even if a female patient insists that she is experiencing a physically related pain, the GP may interpret this as a physical manifestation of stress or anxiety.

GPS' ACCOUNTS OF GENDER DIFFERENCES

Secondary analysis of the interview data was carried out in order to identify GP responses concerning the behaviour of men and women during consultations. These were examined to give some indication of the collective content of GPs' stereotypes. This was assumed to contain well established and widely held references to the characteristics of men and women and to also constitute expectations that would be more specific to GPs.

METHOD

Procedure

After each interview had been transcribed and line numbered, all references to patient gender were identified. These occurred in response to the question of how patient gender influences decision making and included references to GPs' behaviours towards men and women, e.g. being more sympathetic to women taking a more practical approach with men, in addition to patient characteristics and behaviours, e.g. women being more open about their concerns, men not liking to go to the doctors.

Two GPs were omitted from this second interview analysis as they did not put forward any information concerning gender differences during interviews. The transcriptions of 31 interviews were analysed.

The following extract is an example of a GP's response to the question of *how the gender of a patient may influence management decisions*. The GP in this instance chooses to respond to the question by explaining that men and women present with different symptoms :

"I think that there are certain conditions that women will come much more readily and much more openly about....I'm really thinking

mostly about anxiety and depression and so called mental or psychological problems which I think women, even if they're not conscious that that's why they're coming, that they come more often with than men. I think men, because of the social thing and the macho bit aren't allowed to have these problems... and certainly shouldn't be coming to the doctor.. so when they come, they find it much more awkward to talk about things..." (M28)

From this response a number of specific gender differences can be identified. For example, the GP suggests that women are more open than men about psychological concerns, and are therefore more likely to present with such problems. Men present with fewer psychological problems than women because social stereotyping makes it unacceptable for men to have psychological problems or go to the doctors about them. When men approach their doctors, they are not as open about their problems as women, which reiterates one of the earlier points made.

RESULTS

Accounts of specific gender differences were identified from the responses of each individual GP. These were then pooled to form a collective set of stereotypes concerning male and female consultation behaviours. This was carried out in order to go beyond individual responses to develop a collective representation of male and female patients common to GPs. Although individual responses were perceived to reflect individual GP's experiences, it was assumed that information reported during interviews also reflected GPs' wider social knowledge of the two patient groups (Farr, 1984; Jaspers and Fraser, 1984).

GPs generated 243 specific ideas about gender differences which are presented in Appendix B. GPs' responses generally referred to differences with regard to *frequency of attendance, symptoms*

presented, style of presentation and GP communication . They corresponded to established differences, e.g. 'Female patients are responsible for the home and children' and GP specific ideas about men and women that were probably learned during medical training or as a result of experience in general practice, e.g. 'Female patients present with more than one complaint'.

(i) Differential Frequency of Attendance

According to 10 GPs (32.2% out of 31), women consult more frequently than men, e.g. 'Men don't allow themselves to go to the doctor's ' (M4), 'Women have more time to go to the doctor's ' (M4, M36). Seventy percent of these respondents reported that this was associated with gynaecological concerns, pregnancy and maternity care, and responsibility for contraception.

(ii) Differential Symptom Presentation

Ten GPs (32.2%) suggested that men and women present with different sorts of complaints, e.g. 'Men present with physical complaints' (F15, M21, M31), 'Women present with more psychological problems than men' (M17, M28, M31, M29, M11, F14, M21, M10, F15). More specifically, 90% of this group agreed that women present with more psychological problems than men.

(iii) Differential Style of Presentation

Twenty-one GPs (67.7%) reported that female patients present their symptoms in a different way than male patients, e.g. 'Men present in a more direct way than women' (M18, M6, M37, M31, M19), 'Women are more open about their concerns than men' (M17, M28, F14, M30). Compared to the previously mentioned categories, statements were more idiosyncratic.

(iv) Differential Style of GP Communication

GPs also explained gender differences in the consultation in terms of their own behaviour towards male and female patients (38.7%), e.g. 'GP is more directive with men' (M10), 'GP is more sympathetic to women' (M16). As with the above category, statements were fairly unique.

DISCUSSION

According to the cognitive miser approach stereotypical expectations can provide an efficient means of encoding, processing, recalling and seeking information. This becomes especially important under complex and demanding conditions where individuals are motivated to develop a simple rather than an accurate impression of target individuals. Although people hold a number of expectations that can be potentially activated, well learned expectations such as those about gender are more likely to show schematic effects (Stangor and Macmillan, 1992).

From the interview study described in Chapter three accounts of gender differences in the consultation were identified for all but two GPs. These accounts referred to differences in the type of symptoms presented, the way in which they were expressed and the frequency with which men and women attended surgeries. GPs also gave accounts of how their style of communication differed depending on whether patients were male or female. As expected, gender stereotypes put forward corresponded to established and GP specific ideas about men and women. These gender differences can be likened to collective GP stereotypes as it was presumed that GPs were giving account of shared ideas amongst doctors in addition to their own observations and experiences.

These collective GP stereotypes lend support to the first stage of Deaux and Major's interactive model (1987). According to the model, GPs enter into consultations with gender-related expectations about the characteristics and behaviour of patients. When these stereotypes are activated they are likely to guide the decision making process, resulting in different management decisions for men and women even though they have presented with similar complaints.

As the further stages of Deaux and Major's model (1987) require exploration of the interaction between GP and patient it is necessary to investigate the process and outcome of real consultations. Subsequent studies involve the examination of doctor-patient communication in a large sample of audio-taped consultations and the investigation of the relationship between gender, stress and management using corresponding written information about patients.

Chapter 5

CHECKLIST AND DESCRIPTIVE ANALYSIS

INTRODUCTION

Previous chapters have explored the influence of decisional stress and consequent stereotyping on the management decisions that doctors make about their patients. In this chapter, further support for the relevance of these factors is sought. While Chapters three and four reported analyses of GPs' responses to a set of interview questions, the remaining chapters of the thesis describe results gained from analyses of a series of audio-taped consultations and corresponding written checklist information put forward by each of the participating GPs. Chapters five and six focus on the analysis of checklist information and then Chapter seven concentrates on the analysis of audio-taped data.

The general aim of these analyses is to examine the interaction between patient gender and decisional stress, and its effects on consultation processes and management outcomes. It is anticipated that under conditions of decisional stress stereotypes of male and female patients are activated and used by doctors to guide their decision making. This is likely to result in significantly different management decisions being made for men and women presenting with the same kind of complaint.

The purpose of collecting written checklist data about each consultation audio-taped was to gather relevant information that was unavailable from audio-tapes. More specifically, GPs were able to indicate their subjective feelings and observations which were used as indicators of levels of decisional stress. However, although checklist

information compliments audio tapes, it was also analysed as a data source in its own right.

This chapter describes how the checklist was developed to collect the most relevant consultation information and how items were responded to by GPs. It also catalogues subsequent categorisation of GPs' responses into forms suitable for log-linear analysis. This analysis is presented in the following chapter.

METHOD

Development of the Checklist

As the checklist was developed for the purposes of the *Medical Decision Making Project* not all of the data collected was used in the analysis described in Chapter six. Checklist items were selected by team members according to requirements of the project and relevance to the thesis. They were also selected on the basis of responses from exploratory interviews (Chapter three), and existing medical and psychological literature.

An example of a checklist is shown in Appendix C. GPs were required to complete one of these at the end of each audio-taped consultation. A number of checklists were bound together to form a booklet. GPs were required to use one booklet per surgery. Checklists were designed to record relevant aspects of consultations while causing GPs minimal inconvenience during surgeries. GPs were specifically requested not to refer to patient notes when completing checklists, as their own subjective judgements, rather than objective information was required. As it was important that checklist completion used the minimal of GPs' time, except for writing down the diagnosis or patient's presenting complaint, GPs were required to either tick boxes

or indicate their responses by marking along continuous scales. A pilot study of the checklist was carried out with a non-participating GP.

The initial section of the checklist served to filter out of the study, those consultations that were unlikely to require actual medical diagnosis from GPs. Therefore, if a patient consulted in order to obtain a repeat prescription, a contraceptive prescription, a sick note or for the GP to carry out an administrative task, GPs were not required to complete the rest of the checklist. More detail about each item included on the checklist is given below.

Time of Consultation

As well as giving an indication of the time of day each particular consultation was carried out, this information was also included as an aid to matching checklist data to corresponding audio-tapes. It was not used to make inferences about the exact time spent with patients, as it was evident from the audio-recordings, that after seeing one patient, some GPs made phone calls or attended to other duties before seeing the next patient.

Gender of Patient

Variation in both diagnosis and management, on the basis of patient gender, is well documented (e.g. Bernstein and Kane, 1981; Dreachslin, 1992). Interview responses from exploratory interviews also indicated that gender is a salient attribute of patients as GPs were able to put forward differences in terms of the type of symptoms presented and style of presentation. It was assumed that this information would play a crucial role in the forthcoming analysis.

Feelings Towards the Patient

During exploratory interviews, some respondents gave indications that feelings towards patients were important aspects of the consultation process. This is supported by a large body of literature which describes patients that GPs find particularly difficult to consult with, and documents corresponding GP reactions and strategies (Arborelius, Bremberg and Timpka, 1991; Corney, Strathdee, Higgs, King, Williams, Sharp, Pelosi, 1988). It was anticipated that particularly strong feelings towards patients would influence the course of the consultation and the final management decision. Therefore the feeling towards patients variable was entered into analyses along with established stress variables of time pressure and uncertainty. GPs indicated their feelings by placing a mark along a continuous scale, ranging from strongly positive to strongly negative.

Time Spent with the Patient

Almost fifty percent of GPs in a study by Bradley (1992), reported that insufficient time spent with patients caused them to feel 'uncomfortable' when prescribing. During exploratory interviews described in Chapter three, all but two GPs said that they felt under time pressure during consultations. Strategies that served to terminate the consultation, such as prescribing drugs, were commonly put forward by this group (Di Caccavo and Reid, 1995). With reference to work carried out by Janis and Mann (1977), indications of time pressure during consultations were expected to provide some evidence of the level of decisional stress experienced by GPs in the study. Again, a continuous scale of measurement was employed, with anchors of *not enough time*, *just right* and *too much time*.

Diagnosis or Presenting Complaint

GPs were instructed to put forward patients' main presenting complaints (in order of importance in cases of more than one complaint), or diagnoses. It was recognised that these entries referred to GPs' own perceptions of what patients were presenting with, rather than objective factual observations. Although there was neither space nor time available for GPs to write down detailed descriptions, some information about diagnoses or presenting complaints was necessary so that the analysis would be able to treat complaint categories as moderating variables to the outcome of the consultation.

Certainty of Diagnosis and Certainty of Management Decision

GPs were asked to put forward percentage estimations of their levels of certainty following each diagnosis or main presenting complaint and management decision. These measures were considered to be relevant as responses to exploratory interviews showed that when GPs felt uncertain about diagnoses and management, they reported employing corresponding strategies such as temporising and referring patients (Di Caccavo and Reid, 1995). As with time pressure, uncertainty about diagnoses and management were assumed to be associated with feelings of decisional stress, as described by Janis and Mann (1977). GPs indicated their degrees of certainty of diagnoses and management on continuous scales, showing 0%, 50% and 100% anchors.

Management Decision

GPs were able to indicate their management decisions using one or more choices from seven categories, consisting of *advice given, drug prescribed, referral to consultant, referral to other, further investigation, returning after a time period, and other*. For the purposes of analyses, it was presumed that these indications would serve as dependent variables, as they provide measurable outcomes of consultations.

Age of Patient

During interviews described in Chapter three, a third of GPs put forward specific ways in which the age of a patient influenced their management decision (Di Caccavo and Reid, 1995). Patient age has also been investigated with regard to variation in specific kinds of decisions, such as referral (Wilkin and Smith, 1987).

Patient's Social Class

This variable has also received some attention from investigators trying to account for variation in GPs' decision making (Wilkin and Smith, 1987). Analysis of interview data revealed that GPs use cues such as dress and cleanliness to give them some indication of the patients' social background and lifestyle. Furthermore, some GPs reported taking social class into consideration when deciding on how to manage patients (Di Caccavo and Reid, 1995).

Patient's Weight and Smoking Behaviour

These data were collected for a related area of the decision making project and were not included in the analysis.

Patient's Attitude Towards Treatment

With reference to literature describing 'heartsink' patients, GPs have been found to feel negatively towards patients who are considered to be unco-operative and demanding (Corney et al, 1988). Therefore, this variable may be an important link to GPs' feelings towards patients, and corresponding management decisions.

Whether the Patient Pays for Prescriptions

Analysis of exploratory interviews showed that some GPs reported taking a patient's financial status into consideration when deciding on how to manage them. More specifically, GPs said that they would be more likely to prescribe for patients who did not pay for prescriptions (Di Caccavo and Reid, 1995).

When the Patient was Last Seen

GPs were asked to state approximately when they had last consulted with each patient. It was recognised that these responses would be subjective rather than objective. Consultation frequency was also seen to be important with regard to GPs' feelings towards patients, as literature on 'heartsink' patients suggests that GPs feel less positively towards 'frequent returners' because of the feelings of inadequacy that they provoke (Corney et al, 1988).

Further Comment

GPs were invited to put forward any other information that they felt had had some bearing on their decision making.

Subjects

Subjects were a subset of the original sample recruited for the *Medical Decision Making Project*. Some of these GPs had previously

taken part in the interview study. Of the 23 who agreed to participate (67.6% of the original sample), six were between 31 and 35 years old, 10 between 36 and 40, one between 41 and 45, four between 46 and 50, one between 51 and 55 and one aged over 55. Three doctors in the sample had been qualified for less than five years, 13 for between five and 10 years, three for between 11 and 15 years, two for between 16 and 20 years and two for over 20 years. Sixty percent of the panel carried out their postgraduate training in London, the remaining forty percent in Bristol (4), Birmingham (2), Nottingham (1), Cambridge (1) and the USSR (1). Nineteen GPs were male and four female, and were based in both urban and rural practices. Female GPs were under-represented in the sample (17%), compared to figures for the region (34% according to Devon F. H. S. A. 1994,) and the UK (25% according to Department of Health Statistics 1992).

PROCEDURE

Prior to the study, participating GPs received written information about the study, including confirmation of ethical clearance, patient consent forms, and information for patients to read before deciding whether to agree to being taped. Audio equipment and checklist booklets were delivered to each GP's surgery on Monday and then collected on Friday of each week. During this time, GPs were asked to record approximately six surgeries, excluding specialised clinics, such as ante-natal and health promotion. GPs were given instructions about how to complete checklists and given opportunities to ask any questions about their tasks. GPs were specifically requested not to refer to patient notes when completing checklists, as their own subjective judgements, rather than objective information was required. If they did not know the answer to any of the questions on the checklist, e.g. Does this person pay for prescriptions ?, GPs were

asked to leave those sections blank. Data were collected from all GPs between February and June 1994.

Checklist data were coded numerically, except for presenting complaints. For this section of the checklist GPs' original written descriptions were retained. In cases of missing data, e.g. gender of patient not indicated, that could be objectively deduced from the audio-tapes, corresponding recordings were listened to and appropriate sections completed. No attempt was made to make inferences about taped data that was open to subjective interpretation, e.g. patient's attitude towards treatment, age, social class. With reference to the diagnosis or presenting complaint section, illegible inputs were deciphered by a medical advisor as far as possible.

RESULTS

This section presents the results of a descriptive analysis of 1380 consultations. It includes a report of how each item on the checklist was responded to and also a description of how data relevant to the thesis were categorised for the purposes of a log-linear analysis which is described in the following chapter.

Diagnosis or Presenting Complaint

For the purposes of analysis, it was decided that the diagnoses or presenting complaints required broader categorisation. This was carried out by a medical advisor, who classified data according to British National Forum prescribing groups, giving rise to the following complaint categories : *gastro-intestinal, cardio-vascular, skin, psychological, neurological, respiratory, eye, ear, endocrine, genito-urinary (male), gynaecological, obstetrics, infectious, blood, musculo-skeletal*. A *health promotion* category was also identified, e.g. blood

pressure checks. Complaints that proved illegible or unclassifiable were organised into specific groups. Complaints were categorised as *illegible* when GPs' handwriting could not be deciphered.

Presentations were considered to be *unclassifiable* according to the medical advisor when they consisted of symptoms that could be indicative of a number of complaints, e.g. nausea, cramps. Complaints were not recorded by GPs for 33 consultations. In cases where GPs put forward more than one presenting complaint, the first complaint written down, was seen to be the main presentation and thus the one that was included in the analysis.

Categorisation of presentations resulted in 18 types of complaint. Frequencies of each complaint type are shown in Table 5.1. This shows considerable variation across categories; respiratory complaints were most commonly presented, while blood problems were the least frequent complaints. Table 5.2 shows the mean number of each type of complaint presented to the 23 GPs in the sample.

Table 5.1 : Frequencies for each type of complaint identified from checklist responses

Complaint Category	Frequency (No. Of Consultations)
Respiratory	215
Musculo-skeletal	178
Skin	131
Psychological	115
Gastro-intestinal	104
Cardiovascular	97
Gynaecological	97
Health promotion	60
Ear	58
Neurological	42
Eye	32
Obstetrics	32
Infectious	26
Endocrine	25
Genito-urinary (male)	22
Blood	7
Unclassifiable	89
Illegible	17
Total	1347

Missing Data : 33

Table 5.2 : Mean number of each type of complaint presented to the 23 GPs in the sample

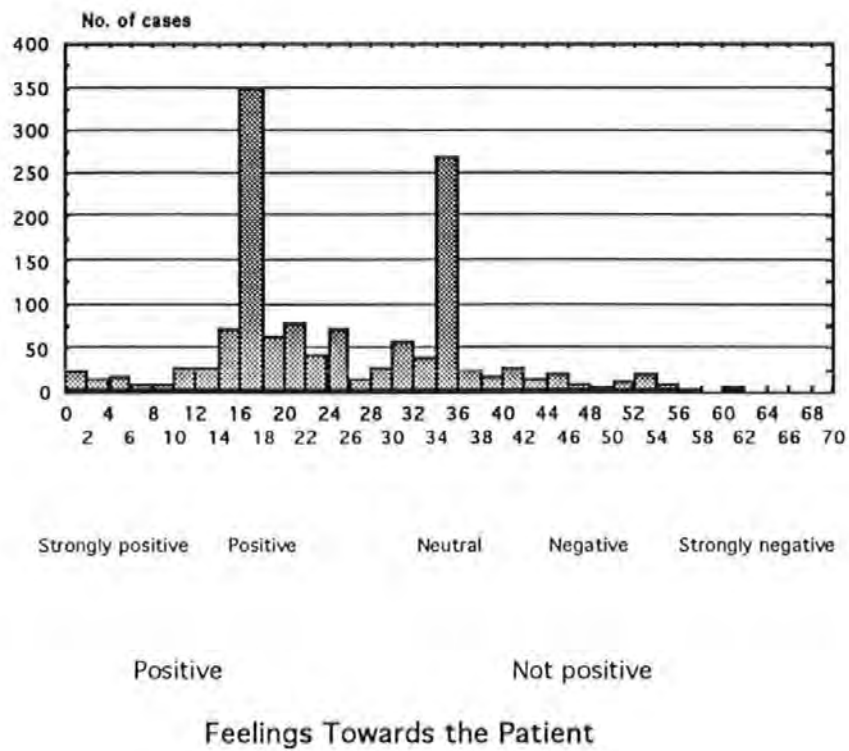
Complaints	Total In Sample	M	SD	Range
Respiratory	215	9.35	4.01	2-20
Musculo-skeletal	178	7.74	3.70	1-16
Skin	131	5.69	3.10	1-16
Psychological	115	5.00	2.00	2-11
Gastro-intestinal	104	4.52	2.11	1-9
Cardio-vascular	97	4.23	2.94	0-11
Other	507	22.04	5.83	5-35
Total	1347			

Missing Data : 33

Feelings Towards the Patient

Histograms were constructed to examine the distribution of responses along continuous scales. GPs' responses to the feeling towards patients scale (Figure 5.1) were distributed bi-modally on the positive and neutral anchors of the scale. These indications were used as separate responses and cut off points were established half way between the anchor points of positive and neutral. These responses were referred to as either *positive*, including positive and strongly positive, or *not positive*, including neutral, negative and strongly negative.

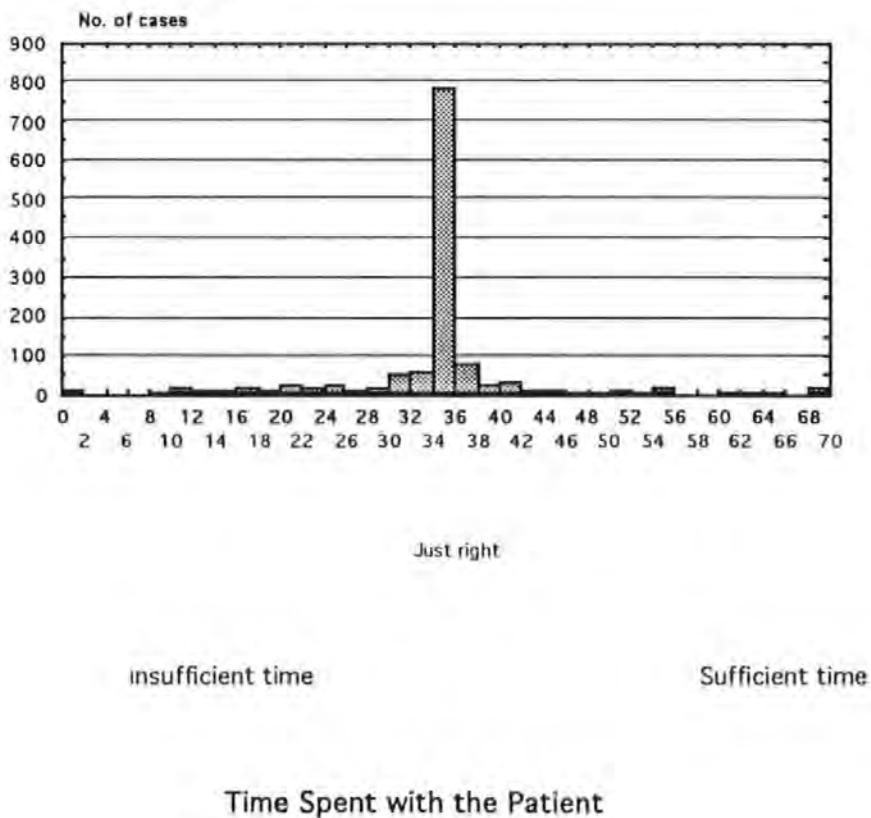
Figure 5.1 : Graph showing the distribution of GPs' responses to the feelings towards patients scale



Time Spent with the Patient

The histogram corresponding with these data (Figure 5.2) indicated a peak at the 'just right' anchor point of the scale, with minimum variation around it. At either side of the mode, scores tailed off to the extremes of the scale, including very few cases. Responses were categorised as indications of just the right amount of time if they were five values either above or below the midpoint anchor. Responses were then categorised more broadly so that those scores that did not reach the midpoint or five places below it were taken to indicate *insufficient time*, and those scores included in the 'just right' category or above it were taken to indicate *sufficient time*.

Figure 5.2 : Graph showing the distribution of GPs' responses to the time spent with patients scale



Certainty of Diagnosis and Management Decision

Histograms of the data revealed that distributions for both levels of certainty were positively skewed (Figures 5.3 and 5.4). GPs appeared to have used the midpoint anchor along with the 100% certainty indication of the scale which formed the modal scores of both distributions. For certainty of diagnosis and management decision, scores below the median value (58) were taken as indicating uncertainty, and scores above the median as indicating certainty.

Figure 5.3 : Graph showing the distribution of GPs' responses to the certainty of diagnosis scale

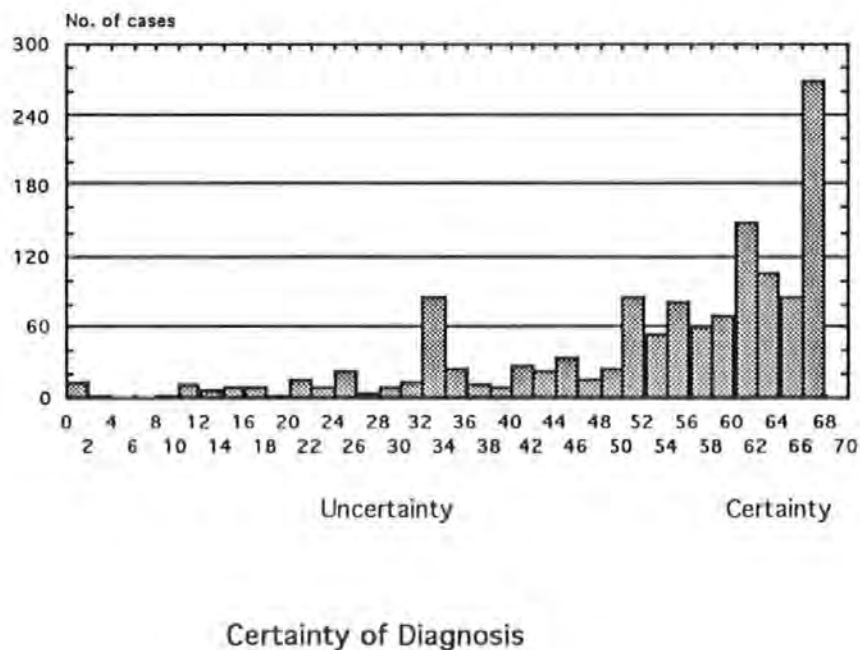


Figure 5.4 : Graph showing the distribution of GPs' responses to the certainty of management scale

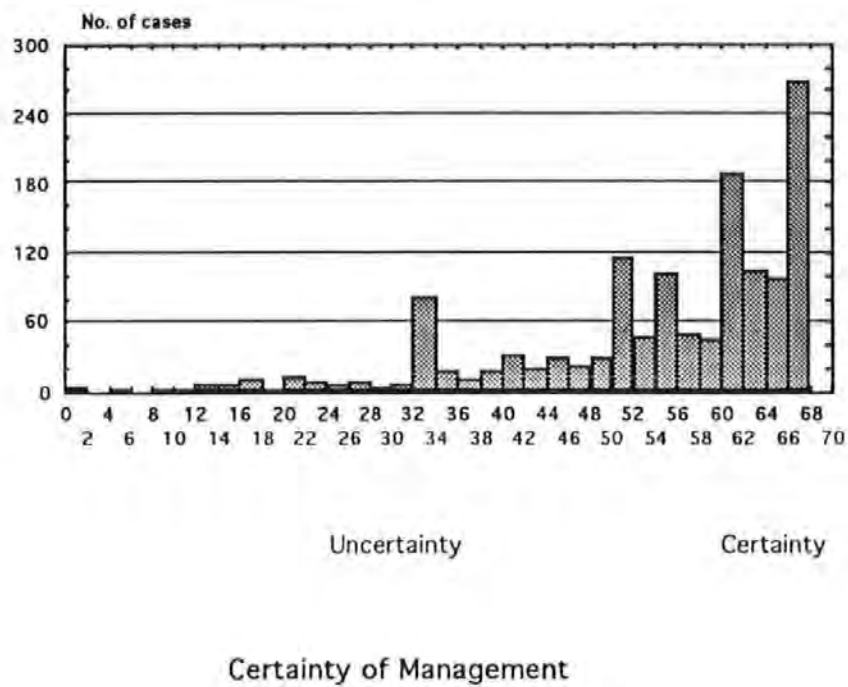


Table 5.3 shows descriptive statistics for each measure of decisional stress. On average GPs felt positive towards their patients, spent sufficient time with patients, but were uncertain about diagnoses and management.

Table 5.3 : Means and standard deviations for each measure of decisional stress

Checklist Variables	M	SD
Feelings towards patient	24.88	11.52
Time spent with patient	34.02	8.90
Certainty of diagnosis	52.19	14.96
Certainty of management	53.71	12.93

Note

Scales were measured in millimetres ; Feelings towards patient and Time spent with patient ranged from 0-70mm, Certainty of diagnosis and Certainty of management from 0-66mm

Feelings towards patient : 0 = Strongly positive, 70 = Strongly negative

Time spent with patient : 0 = Not enough time, 70 = Too much time

Certainty of diagnosis : 0 = 0%, 66 = 100%

Certainty of management : 0 = 0%, 66 = 100%

Management Decision

Management decision categories were aggregated at two levels. As categories of *referral to consultant, referral to other and further investigation*, produced very small frequencies and were considered to be interchangeable, they were combined and regarded simply as *referral* management decisions.

The design of the checklist enabled GPs to indicate more than one management decision per consultation. For the purposes of analysis, multiple decisions were combined to form one composite decision for each patient. Table 5.4 shows how these composite categories were formed. When in combination with other management, drug

prescribing and referral were given precedence. Advice and temporising were only seen to be the main strategies when they were the sole techniques applied. This was because it was recognised that when used in conjunction with either drugs or referral they are likely to serve supplementary functions. For example, when advice is used with a drug, it may include instructions about how and when to take medication, and what to do about any side effects. Management was further categorised into drug based and non drug based decisions. Drug based and drug and referral based formed one category and advice only, referral based and temporising formed the other.

Table 5.4 : Composite management decision categories and component decisions

Composite Management Categories	Component Decisions
Advice	Advice only
Drug based	Drug only Advice + a drug Drug + return Advice + drug + return
Referral based	Referral only, Advice + referral Referral + return Advice + referral + return
Temporising (allowing time to pass)	Return only Advice + return
Drug and referral based	Drug + referral Advice + drug + referral Drug+ referral + return Advice + drug + referral + return

Frequencies of drug based and non-drug based management decisions for each complaint category are shown in Table 5.5. Drug based management was the most common decision made for the majority of

complaints presented. The most frequent non-drug based management decision was advice only.

Table 5.5 : Frequencies of drug based and non-drug based management decisions for each complaint category

Complaint Categories	Management Decisions					Total
	Drug Based		Non-drug Based			
	Drug based	Drug & referral based	Advice only	Referral based	Temporising	
Respiratory	135 (65.85%)	8 (3.90%)	54 (26.34%)	7 (3.41%)	1 (0.48%)	205
Musculo-skeletal	59 (34.50%)	14 (8.19%)	54 (31.58%)	35 (20.47%)	9 (5.26%)	171
Skin	85 (65.89%)	7 (5.43%)	21 (16.28%)	10 (7.75%)	6 (4.65%)	129
Psychological	48 (43.24%)	8 (7.21%)	30 (27.03%)	20 (18.02%)	5 (4.50%)	111
Gastro-intestinal	61 (61.62%)	5 (5.05%)	17 (17.17%)	15 (15.15%)	1 (1.01%)	99
Cardiovascular	46 (47.91%)	7 (7.29%)	23 (23.96%)	10 (10.42%)	10 (10.42%)	96
Gynaecological	47 (50.00%)	8 (8.51%)	18 (19.15%)	18 (19.51%)	3 (3.19%)	94
Health promotion	19 (35.19%)	2 (3.70%)	20 (37.04%)	9 (16.67%)	4 (7.41%)	54
Ear	32 (56.14%)	7 (12.28%)	10 (17.54%)	8 (14.04%)	0 (0.00%)	57
Neurological	18 (42.86%)	3 (7.14%)	16 (38.09%)	4 (9.52%)	1 (2.38%)	42
Eye	17 (54.84%)	0 (0.00%)	6 (19.35%)	8 (25.81%)	0 (0.00%)	31
Obstetrics	7 (21.88%)	3 (9.38%)	9 (28.13%)	5 (15.63%)	8 (25.00%)	32
Infectious	13 (53.00%)	2 (8.00%)	4 (16.00%)	4 (16.00%)	2 (2.00%)	25
Endocrine	13 (52.00%)	1 (4.00%)	5 (20.00%)	3 (12.00%)	3 (12.00%)	25
Genito-urinary	5 (27.73%)	0 (0.00%)	9 (40.91%)	8 (36.36%)	0 (0.00%)	22
Blood	1 (14.29%)	2 (28.57%)	2 (28.57%)	2 (28.57%)	0 (0.00%)	7
Total	606 (50.50%)	77 (6.42%)	298 (24.83%)	166 (13.83%)	53 (4.42%)	1200

Unclassifiable and illegible presentations : 106

Missing data : 41

Patient Characteristics

Age

Patient ages were categorised so that under fives and those between five and 15 were designated 'children', patients between 16 and 40 as 'adults', those between 41 and 65 as 'middle aged' and those 66 plus as 'elderly'.

Attitude towards Treatment

The checklist provided GPs with four possible means of describing a patient's attitude towards management. GPs could also use more than one option. If a patient's attitude was described as either 'opposed', 'cautious' or both, then the patient was classified as 'uncooperative'. Alternatively, if they were 'open to advice', 'requesting' or both then they were classified as 'co-operative'. As it was felt that elements of perceived negativity from the patient would be more likely to have an important effect on the consultation, combinations of descriptions including 'opposed' or 'cautious' with 'open' and or 'requesting' were classified as 'unco-operative'.

Social Class

Although on the checklist class three (non-manual) and class three (manual) were two distinct options, in categorising data, these two groups were combined to form a composite group. GP feedback indicated that the manual non-manual distinction was unnecessarily specific, and had probably not been consistently adhered to.

Weight, Smoking Behaviour, Payment for Prescriptions, Last Visit to Surgery

Patient weight, smoking behaviour, payment for prescriptions and when the GP had last seen the patient, were not re-categorised prior to analysis.

Frequency distributions are shown for patient age, attitude towards treatment, social class, last visit to surgery and payment for prescriptions in Tables 5.6 to 5.10. The majority of GPs' patients were classified as *adults* (Table 5.6). Patients were largely seen to be *co operative* (Table 5.7) and were most likely to be described by GPs as belonging to social class three (Table 5.8). Most patients had consulted with their GPs over the last two to six months (Table 5.9). The majority of patients consulted with did not pay for their prescriptions (Table 5.10).

Table 5.6 : Frequencies of patient ages

Patient Age	Frequency
Elderly	277 (20.07%)
Middle	382 (27.68%)
Adult	473 (34.28%)
Child	248 (17.97%)
Total	1380

Table 5.7 : Frequencies of patients' attitudes towards treatments

Attitude Towards Treatment	Frequency
Co-operative	1243 (91.8%)
Unco-operative	111 (8.20%)
Total	1354

Missing Data : 26

Table 5.8 : Frequencies of patient social class

Social Class	Frequency
I or II	357 (27.02%)
III	720 (54.5%)
IV or V	244 (18.47%)
Total	1321

Missing Data : 59

Table 5.9 : Frequencies of patients' last visits to surgeries

Last Seen	Frequency
Week	119 (9.03%)
Month	292 (22.15%)
1-2 months	283 (21.47%)
2-6 months	327 (24.81%)
Over 6 months	223 (16.92%)
Never	74 (5.61%)
Total	1318

Missing Data : 62

Table 5.10 : Frequencies of patients who pay and who do not pay for their prescriptions

Payment for Prescriptions	Frequency
Patients who do not pay	844 (67.95%)
Patients who do pay	398 (32.05%)
Total	1242

Missing Data : 138

Relationships between Measures of Decisional Stress and other Checklist Variables

A series of chi-square tests were carried out to assess the relationships between the three measures of decisional stress and also between measures of decisional stress and other variables included on the checklist. The feeling towards patients variable was also included in these analyses because of the anticipated effects of emotion on information processing.

Table 5.11 indicates five significant associations between measures of decisional stress. Tables 5.12 to 5.16 indicate the nature of these significant associations. Certainty of diagnosis and certainty of management were significantly related to feelings towards patients ($p < 0.01$, $df = 1$, $p < 0.001$, $df = 1$ respectively). Whether feeling certain or uncertain, GPs felt more frequently positive than not positive towards patients. However feeling certain was much more frequently related to feeling positive than not positive (Tables 5.12 and 5.13). Certainty of diagnosis and management were also significantly related to time spent with patients ($p < 0.05$, $df = 1$, $p < 0.01$, $df = 1$ respectively). Uncertainty about both aspects of the consultation was more frequently associated with insufficient than sufficient time (Tables

5.14 and 5.15). Significant relationships were found between certainty of management and certainty of diagnosis ($p < 0.001$, $df=1$). Uncertainty of management was more frequently associated with uncertainty of diagnosis than certainty of diagnosis (Table 5.16).

Table 5.11 : Results of chi-squared tests of independence of measures of decisional stress

Measures of Decisional Stress	1	2	3	4
		(χ^2)	(χ^2)	(χ^2)
1 Feeling		0.86	10.03**	27.75***
2 Time spent			4.14*	17.75**
3 Certainty of diagnosis				391.13***
4 Certainty of management				

$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $df=1$

Table 5.12 : Relationship between feelings towards patients and certainty of diagnosis

Certainty of Diagnosis	Feelings Towards Patients		
	Positive	Not positive	Total
Uncertain	389 (55.18%)	316 (44.82%)	705 (100%)
Certain	429 (63.56%)	246 (36.44%)	675 (100%)
Total	818	562	1380

Table 5.13 : Relationship between feelings towards patients and certainty of management

Certainty of Management	Feelings Towards Patients		
	Positive	Not positive	Total
Uncertain	355 (52.21%)	325 (47.79%)	680 (100%)
Certain	463 (66.14%)	237 (33.86%)	700 (100%)
Total	818	562	1380

Table 5.14 : Relationship between time spent and certainty of diagnosis

Certainty of Diagnosis	Time Spent		
	Insufficient	Sufficient	Total
Uncertain	138 (19.57%)	567 (49.82%)	705 (100%)
Certain	104 (15.41%)	571 (84.59%)	675 (100%)
Total	242	1138	1380

Table 5.15 : Relationship between time spent and certainty of management

Certainty of Management	Time Spent		
	Insufficient	Sufficient	Total
Uncertain	149 (21.91%)	531 (78.09%)	680 (100%)
Certain	93 (13.29%)	607 (86.71%)	700 (100%)
Total	242	1138	1380

Table 5.16 : Relationship between certainty of diagnosis and certainty of management

Certainty of Management	Certainty of Diagnosis		
	Uncertain	Certain	Total
Uncertain	531 (78.09%)	149 (21.91%)	680 (100%)
Certain	174 (24.86%)	526 (75.14%)	700 (100%)
Total	705	675	1380

Except for *Time Spent* each of the measures of decisional stress were associated with other measures on the checklist (Table 5.17). Feeling towards patients was significantly related to social class ($p < 0.001$, $df=1$), attitude towards treatment ($p < 0.01$, $df=1$), payment for prescriptions ($p < 0.05$, $df=1$) and last seen ($p < 0.01$, $df=1$). Certainty of diagnosis was significantly related to social class ($p < 0.05$, $df=1$) and certainty of management was related to age ($p < 0.001$, $df=1$), social class ($p < 0.001$, $df=1$), attitude towards treatment ($p < 0.001$, $df=1$) and last seen ($p < 0.05$, $df=1$). Tables 5.18 to 5.26 indicate the nature of these significant associations.

Where feelings towards patients was concerned, GPs felt more frequently positive than not positive towards social classes one, two and three, but more frequently not positive than positive towards those in classes four and five (Table 5.18). Co-operative attitudes towards treatment were more often associated with feeling positive towards patients than feeling not positive (Table 5.19). When patients paid for prescriptions, GPs felt more frequently positive than not positive towards them (Table 5.20). Consultations with patients who paid for prescriptions were more frequently associated with positive than not positive feelings. Consultations with patients who GPs had not seen for over six months or with new patients that GPs had never met before were more often associated with not feeling positive than feeling positive (Table 5.21).

Certainty of diagnosis was significantly related to social class. GPs felt more frequently certain than uncertain about the diagnoses of patients in class three but more uncertain than certain of those in classes one, two, four and five (Table 5.22). GPs were more certain than uncertain about the management of adults and children and more uncertain than certain about the management of middle aged and elderly patients (Table 5.23). They were also more certain than uncertain about the management of patients in class three and more uncertain than certain about that of patients in classes one, two, four and five (Table 5.24). Unco-operative attitudes towards treatment were more frequently associated with uncertainty (Table 5.25) as were patients who had consulted in the last week, month, one to two months and over six months (Table 5.26). GPs were more certain than uncertain about the management of patients they had never seen before and those that had consulted two to six months ago.

Table 5.17 : Results of chi-square tests of independence of measures of decisional stress and other checklist variables

Measures Of Decisional Stress	Age	Social Class	Attitude	Prescription	Last seen
	(χ^2)	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Feeling	6.56	32.27***	26.20***	4.62*	49.07***
Time spent	4.76	1.67	2.85	0.00	3.22
Certainty of diagnosis	2.67	8.71*	0.08	2.91	3.80
Certainty of management	19.88***	18.45***	11.78***	0.03	10.81*

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $df=1$

Table 5.18 : Relationship between feeling towards patients and social class

Social Class	Feeling Towards Patients		
	Positive	Not positive	Total
I or II	219 (61.34%)	138 (38.66%)	357 (100%)
III	459 (63.75%)	261 (36.25%)	720 (100%)
IV or V	112 (45.90%)	132 (51.10%)	244 (100%)
Total	790	531	1321

Missing data : 59

Table 5.19 : Relationship between feeling towards patients and attitude towards treatment

Attitude Towards Treatment	Feeling Towards Patients		
	Positive	Not positive	Total
Co-operative	758 (60.98%)	485 (39.02%)	1243 (100%)
Unco-operative	40 (36.04%)	71 (63.96%)	111 (100%)
Total	798	556	1354

Missing data : 26

Table 5.20 : Relationship between feeling towards patients and payment for prescriptions

Payment for Prescriptions	Feeling Towards Patients		
	Positive	Not positive	Total
Patients who do not pay	491 (58.18%)	353 (41.82%)	844 (100%)
Patients who pay	257 (64.57%)	141 (35.43%)	398 (100%)
Total	748	494	1242

Missing data : 138

Table 5.21 : Relationship between feeling towards patients and last seen

Last Seen	Feeling Towards Patients		
	Positive	Not positive	Total
Week	68 (57.14%)	51 (42.86%)	119 (100%)
Month	182 (62.33%)	110 (37.67%)	292 (100%)
1-2 months	207 (73.14%)	76 (26.86%)	283 (100%)
2-6 months	195 (59.63%)	132 (40.37%)	327 (100%)
Over 6 months	103 (46.19%)	120 (53.81%)	223 (100%)
Never	31 (41.89%)	43 (58.11%)	74 (100%)
Total	786	532	1318

Missing data : 62

Table 5.22 : Relationship between certainty of diagnosis and social class

Social Class	Certainty of Diagnosis		
	Uncertain	Certain	Total
I or II	192 (53.78%)	165 (46.22%)	357 (100%)
III	353 (49.03%)	367 (50.97%)	720 (100%)
IV or V	142 (58.20%)	102 (41.80%)	244 (100%)
Total	687	634	1321

Missing data : 59

Table 5.23 : Relationship between certainty of management and age

Age	Certainty of Management		
	Uncertain	Certain	Total
Elderly	155 (55.96%)	122 (44.04%)	277 (100%)
Adult	216 (45.67%)	257 (54.33%)	473 (100%)
Child	100 (40.32%)	148 (59.68%)	248 (100%)
Middle	209 (54.71%)	173 (45.29%)	382 (100%)
Total	680	700	1380

Table 5.24 : Relationship between certainty of management and social class

Social Class	Certainty of Management		
	Uncertain	Certain	Total
I or II	180 (50.42%)	177 (49.58%)	357 (100%)
III	338 (46.94%)	382 (53.05%)	720 (100%)
IV or V	148 (60.66%)	96 (39.34%)	244 (100%)
Total	666	655	1321

Missing data : 59

Table 5.25 : Relationship between certainty of management and attitude towards treatment

Attitude Towards Treatment			
	Certainty of Management		
	Uncertain	Certain	Total
Co operative	595 (47.87%)	648 (52.13%)	1243 (100%)
Unco operative	72 (64.86%)	39 (35.14%)	111 (100%)
Total	667	687	1354

Missing data : 26

Table 5.26 : Relationship between certainty of management and last seen

Last Seen			
	Certainty of Management		
	Uncertain	Certain	Total
Week	62 (52.15%)	57 (47.90%)	119 (100%)
Month	152 (52.05%)	140 (47.95%)	292 (100%)
1-2 months	150 (53.00%)	133 (47.00%)	283 (100%)
2-6 months	143 (43.73%)	184 (56.27%)	327 (100%)
Over 6 months	112 (50.22%)	111 (49.78%)	223 (100%)
Never	28 (37.84%)	46 (62.16%)	74 (100%)
Total	647	671	1318

Missing data : 62

DISCUSSION

Following each audio-taped consultation, GPs completed patient checklists which were used to record subjective perceptions that could not be gained from audio-tapes. These included GPs' observations of patient characteristics and feelings about various aspects of the consultation and interaction. Checklist data were collected for the purposes of log-linear analysis which is described in the following chapter. This was carried out in order to examine the interaction between decisional stress and patient gender, and its effects on management outcomes.

Measures of decisional stress were identified as time pressure, certainty of diagnosis and certainty of management. Feelings of uncertainty and time pressure were reportedly experienced by the majority of the panel of GPs during interviews. In Chapter three, these feelings were discussed in the context of Janis and Mann's decisional conflict model (1977). Here, it was argued that uncertainty and time pressure interfere with information processing, both in terms of search and appraisal, resulting in hypervigilance and defensive avoidance (Di Caccavo and Reid, 1994). The stressful effects of insufficient time in the consultation have been reported in the medical literature by Howie, Hopton, Heaney and Porter, (1992), who found that these were particularly experienced by GPs who preferred a more patient-centred rather than doctor-centred approach.

Although not explicitly referred to by Janis and Mann, the feeling towards patients scale was included in analyses along with measures of decisional stress. The interaction between cognition and affect is recognised by Simon (1967) who suggests that the arousal of emotions can interrupt information processing such that individuals'

attention is restricted to factors which are likely to terminate the uncomfortable affect they experience. GPs' feelings of discomfort towards difficult or 'heartsink' patients are well documented in medical literature (Corney, Strathdee, Higgs, King, Williams, Sharp and Pelosi, 1988; O'Dowd, 1988). In Corney et al's study, (1988), GPs reported using management strategies, such as prescribing medication and performing physical examinations which fulfilled patient expectations and served to terminate consultations.

As checklists were completed at the end of each consultation, feelings towards patients may indicate GPs' feelings about the consultation as a whole, in addition to more personal feelings. In support of this idea, results indicated an association between certainty of diagnosis and management and GPs' feelings towards their patients. Not feeling positive towards patients was more frequently associated with uncertainty, while positive feelings were more often associated with certainty. This has two possible implications. Uncertainty may cause GPs to not feel positively towards patients. For example, they may feel that the patient is withholding relevant diagnostic or management relevant information or presenting symptoms and circumstances in a confusing or inconsistent way. Alternatively, GPs may not feel positively towards patients and this may cause them to feel uncertain. In line with Simon's argument, unpleasant emotions may interrupt the GP's information search and processing necessary to make satisfactory decisions.

In addition feelings towards patients were also associated with patient characteristics including attitude towards treatment, social class, age, payment for prescriptions and last seen. Patient co operation was more frequently associated with positive feelings towards patients than not positive. Patients belonging to social class

three, who pay for their prescriptions and who had consulted a week, a month, one to two months and two to six months ago were also more frequently associated with positive than not positive feelings. Patients belonging to class four or five, those who do not pay for prescriptions and those who consulted a week ago, over six months ago or had never consulted before were more frequently associated with not feeling positive than feeling positive. In addition to more explicit associations, the feeling towards patients measure may also reflect implicit feelings of uncertainty and time pressure that GPs were unable to express on corresponding scales.

As with feelings towards patients, indications of time spent and certainty of diagnosis and management may also provide information concerning GPs' feelings about how the consultation went as a whole. Checklists were completed during surgery, after seeing each patient, therefore in a very limited time period. Under these circumstances, GPs may have only been able to indicate general reactions to consultations rather than specific considered responses. Insufficient time spent with patients was more frequently associated with uncertainty than certainty about both diagnosis and management. Feelings of uncertainty may be due to insufficient time or GPs may have spent insufficient time with patients *because* they were uncertain about how to diagnose and manage their complaints.

Significant relationships between certainty of diagnosis and management and uncertainty of diagnosis and management suggest that confidence about the causes of complaints leads to confidence about how they are dealt with. Time spent with patients was not significantly related to any of the patient variables included on the checklist. However, GPs were more often certain about the diagnoses of patients in class three but uncertain of those in classes one, two,

four and five. GPs were more frequently certain of the management of adults and children, patients who belonged to class one, two and three and had either never consulted before or consulted two to six months ago. Uncertainty was more frequently expressed about middle aged and elderly patients, those belonging to classes four and five, unco-operative attitudes towards treatment and having consulted in the last week, month, one to two months and over six months ago.

Management decisions were classified according to whether they were drug or non drug based. The majority of complaints were more frequently managed by drug based strategies. Less than half of all respiratory and skin complaints were managed by non-drug treatments. Drug prescribing has been the focus of a number of studies carried out by medics and psychologists. More specifically, there has been some concern about the variation in prescribing amongst GPs and about factors which influence decisions to prescribe (Bradley, 1992). Differential frequencies of prescribing for men and women has also received attention, with the majority of researchers reporting more drugs prescribed for women (Verbrugge and Steiner, 1981), especially with regard to complaints of a psychological nature (Ashton, 1991). Due to the cost implications of prescribing drugs, GPs' prescribing habits have been put under close scrutiny, and guidelines for more 'rational' prescribing have been introduced (Audit Commission, 1994). Finally, responses to exploratory interviews (Chapter three) revealed the multiple role of prescriptions, as GPs reported using them to terminate the consultation when feeling under time pressure (Di Caccavo and Reid, 1995).

This chapter puts forward a descriptive account of GPs' responses to patient checklists completed after audio taping samples of their consultations. Measures of decisional stress are identified as feelings

towards patients, time spent with patients and certainty about diagnosis and management. The relationships between these variables and also between measures of stress and patient characteristics are explored. Management decisions are defined as drug or non-drug based which is the distinction most relevant to reported differences in the treatment of men and women. The chapter also describes the way that data generated were categorised for the purposes of log-linear analysis. Methodology and results of this analysis are the focus of Chapter six.

Chapter 6

LOG-LINEAR MODELLING

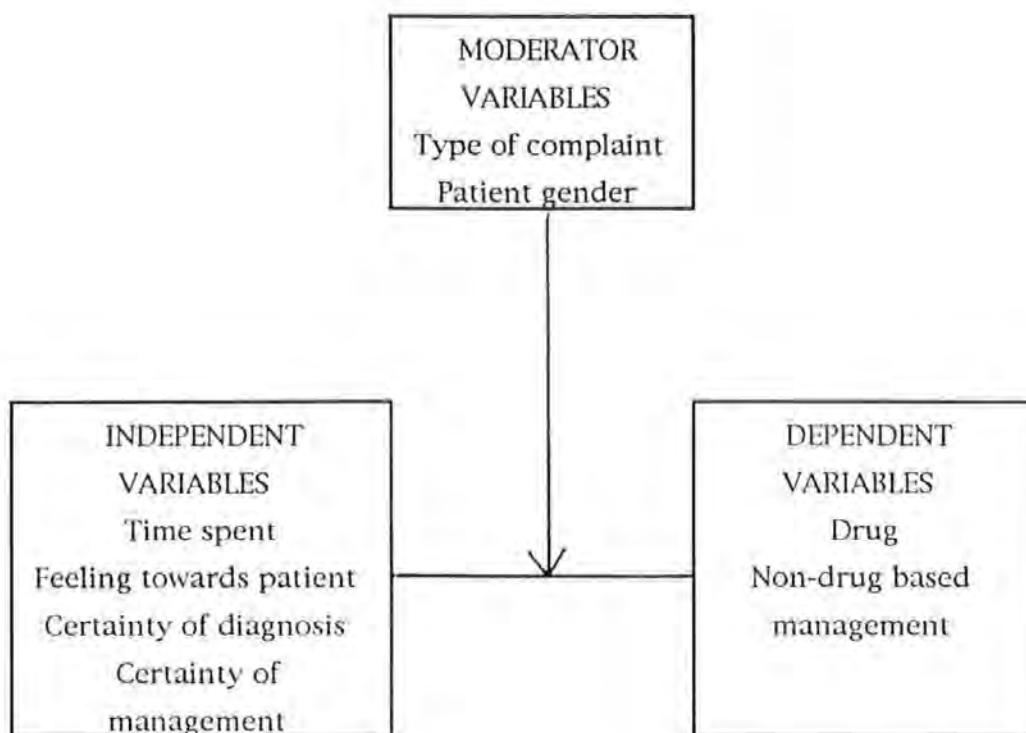
INTRODUCTION

Checklist data were analysed to test the hypothesis that under conditions of decisional stress GPs are likely to arrive at different management decisions for men and women who present with similar complaints. In the previous chapter such conditions were identified as feeling that insufficient time has been spent with patients and feeling uncertain about how to diagnose and manage patients' complaints. It was also anticipated that the way GPs felt towards patients would influence the way GPs managed their patients. When not experiencing stress, it was anticipated that GPs would be less likely to be influenced by gender-related expectations and would therefore decide on similar treatments for men and women.

Although 18 types of complaints were identified from checklist responses, only the six most common problems were included in the analysis. These were presumed to be gender neutral and therefore equally likely to be experienced by men and women. The aim of the analysis was to examine the evidence for gender differences in the treatment of complaints with no underlying specific biological significance for men or women. In this way, discrepancies in management are most likely to be due to gender biased information search and processing rather than authentic differences in disease prevalence and treatment needs.

Log-linear modelling was used to assess the interaction between gender, decisional stress (including feelings towards patients) and management for respiratory, musculo-skeletal, skin, psychological, gastro-intestinal and cardio-vascular complaints. This interaction is shown in Figure 6.1.

Figure 6.1 : Model showing the interaction between measures of decisional stress, gender and management decision to be assessed using log-linear modelling



Patient gender was included in the analysis as a moderator rather than an independent variable (Baron and Kenny, 1986). This is because the analysis was carried out to investigate the influence of gender on the relationship between decisional stress and management outcomes rather than to examine simple gender effects. Types of complaint presented were also treated as moderator variables. It was expected that the relationship between stress and management would not only be influenced by the gender of the patient, but also by the kind of problem presented.

METHOD

Log-linear analysis was used to test selected hypotheses concerning the relationship between gender, decisional stress (three alternative measures and feeling towards patients), and management decision. This method allows frequency data from two or more independent groups to be analysed across two or more discrete categorical variables, therefore incorporating interaction effects.

Log-linear modelling allows for the assessment of interactions between more than two variables by generating expected frequencies based on several models, which include models based on a number of possible main effects and interactions between different variables. As with the chi-squared test, log-linear modelling does not distinguish between independent and dependent variables, the distinction between them is made when interpreting the analysis. In order to use log-linear analysis, expected frequencies have to be large enough to allow the assumption that frequencies in each cell would be normally distributed over repeated samplings. Therefore, it is a prerequisite that all cells have expected frequencies greater than one and that no more than 20% of the cells have expected frequencies less than five (Howell, 1992).

RESULTS

Log-linear modelling was carried out on consultation data for psychological, musculo-skeletal, respiratory, cardio-vascular, gastrointestinal and skin complaints. Each of the four models tested separately for the effects of three measures of decisional stress : time spent with patients, certainty of diagnosis and certainty of management and feeling towards patients.

Analyses were carried out on the basis of contingency tables such as the one shown in Table 6.1. By referring to the marginal totals of these tables, expected cell frequencies were calculated and compared to observed frequencies. A large discrepancy between these frequencies indicated a significant test statistic and the subsequent rejection of the null hypothesis of independence.

Table 6.1 : Example of a contingency table used to analyse frequency data from three independent groups (patient gender, management decision, certainty) across two levels (male : female, drug based : non-drug based, certain : uncertain)

	Drug	Drug	No drug	No drug	
	Male	Female	Male	Female	Marginal Totals
Certain	x	x	x	x	xx
Uncertain	x	x	x	x	xx
Marginal Totals	xx	xx	xx	xx	xxx

Expected frequencies were generated on the basis of four models. Each of these models corresponded to a hypothesis concerning the specific relationship between decisional stress, gender and management. All the models chosen for test controlled for main effects and also two-way interaction effects as these were not relevant to the analysis. The aim of the analysis was not to investigate whether more males than females attended surgery, whether more females than males were prescribed drugs or whether more stress

was experienced with males or females. Instead the rationale for analysis was to test whether gender interacts with stress and management variables in order to detect whether a gender difference exists across these variables.

The sequence of model tests used and their meaning is shown in Table 6.2, in which G signifies the gender variable, D one of the three measures of decisional stress or the feeling towards patients variable, and M the management decision variable.

Table 6.2 : Sequence of model tests and their meaning

Model Definition (Effects Controlled For)	Effects Under Test
G,D,M,DM	GD,GM,GDM
G,D,M,DM,GM	GD,GDM
G,D,M,DM,GD	GM,GDM
G, D, M, DM, GD, GM	GDM

Note

G - Gender, D - Decisional stress, M - Management

Effects controlled for are best understood as null hypotheses, effects under test as experimental hypotheses. The null hypothesis in model one states that differences between expected and observed frequencies are due to main effects of gender, decisional stress or management or two way effects of decisional stress x management. Alternatively, the experimental hypothesis states that differences are due to two way interactions of gender x decisional stress or gender x management or the three way interaction of gender, decisional stress x management. A non-significant test statistic for this model indicated

that a series of main effects or two way effects best describe the observed data. Although a significant effect resulted in rejection of the null hypothesis, it did not indicate which of the interactions contained in the experimental hypothesis best explained the observed data.

Therefore in model two one of these interactions, (gender x management) was added to the null hypothesis. A non-significant chi-squared statistic for this model indicated that differences between observed and expected frequencies were best explained by a gender x management interaction. A significant test statistic suggested that differences were most likely due to an interaction between gender and decisional stress or gender x decisional stress x management.

In model three the gender x management interaction was put back into the experimental hypothesis and the gender x decisional stress interaction was added to the null hypothesis. A non-significant test statistic for this model indicated that differences between observed and expected frequencies were best explained by a gender x decisional stress interaction. A significant test statistic indicated that differences were most likely due to a three way interaction between gender x decisional stress x management.

Although by process of elimination, observed data for psychological and musculo-skeletal complaints appeared to be best explained by a three way effect, this hypothesis was specifically tested in model four. A significant test statistic confirmed that differences between expected and observed frequencies were due to a three way interaction between gender, decisional stress and management.

The pattern of deviations between observed and expected frequencies are known as standardised residuals. These were inspected to examine the exact nature of the interactions that best described the relationship between gender, decisional stress and management for each type of complaint.

For cardio-vascular and skin complaints, significant interactions were found between gender and certainty of diagnosis. For musculo-skeletal and psychological complaints, significant three way interactions were found between gender, feeling towards patients and management decision. As advised by Howell (1992), Bonferroni correction tests for multiple comparisons were carried out on the standardised residuals of the best fitting models for each complaint. Although none of the residuals exceeded the critical value set by the test ($p > 0.05$, infinite df), findings were still considered worthy of exploration. No significant differences in management were found for patients presenting with respiratory or gastro-intestinal problems.

Table 6.3 shows test statistics (χ^2) for each of the models tested for cardio-vascular, skin, musculo-skeletal and psychological complaints. Significant interactions were associated with specific forms of decisional stress. Although tests were carried out for all of the decisional stress measures in model one, in models two, three and four, only those that had indicated significant interactions were subject to further testing. Further details of the log-linear analysis are presented in Appendix D.

Table 6.3 : Test statistics for each of the models tested for cardio-vascular, skin, musculo-skeletal and psychological complaints

Complaint Categories				
	Cardio-vascular	Skin	Musculo-skeletal	Psychological
Model 1.	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Feeling	1.85	3.95	9.45*	12.65**
Time spent	1.95	4.67	2.54	3.74
Certainty of diagnosis	7.98*	9.38*	5.68	6.79
Certainty of management	5.84	3.81	2.96	2.26
df=3				
Model 2.				
Feeling			7.61*	9.36**
Time spent				
Certainty of diagnosis	6.31*	6.67*		
Certainty of management				
df=2				
Model 3.				
Feeling			7.5*	11.75**
Time spent				
Certainty of diagnosis	2.61	4.47		
Certainty of management				
df=2				
Model 4.				
Feeling			5.72**	8.62**
Time spent				
Certainty of diagnosis	0.34	1.47		
Certainty of management				
df=1				

*p< 0.05, **p< 0.01, ***p< 0.001

Cardio-vascular Complaints

For cardio-vascular complaints, a significant interaction between gender, management and certainty of diagnosis was found using the initial model specification ($p < 0.05$, $df = 3$). However, when gender x certainty of diagnosis was added into the null hypothesis for model three, results were no longer significant, indicating that differences were due to GPs feeling more uncertain about the diagnoses of cardio-vascular complaints in women than men.

Skin Complaints

A similar pattern of results was found for skin complaints as significant interaction was again associated with certainty of diagnosis ($p < 0.05$, $df = 3$). The third model specification identified gender and certainty of diagnosis as the variables responsible for this significance, suggesting that GPs are more uncertain about the diagnosis of women than men, with skin complaints.

Musculo-skeletal Complaints

A significant interaction between gender, management and feeling towards patients was found for musculo-skeletal complaints ($p < 0.01$, $df = 1$). Separate effects of gender x management and gender x feeling towards patients were calculated by subtracting the chi-square value for model two from model one and subtracting the chi-square value of model three from model one. Neither of these effects were significant ($p > 0.05$, $df = 1$) Examination of standardised residuals (Table 6.4) suggested that when GPs did not feel positive about women they prescribed drugs, whereas when they did not feel positive about men they decided on non drug alternatives. When GPs felt positively towards patients, this interaction was reversed so that men were prescribed drugs while women were more likely to be managed by

advice, referral or temporising, (Figures 6.2 and 6.3). For musculo-skeletal complaints, the amount of advice given was the best distinguishing factor between the management of men and women (35.37% and 26.44% respectively). Although men were given similar rates of referrals (29.27% and 28.74% respectively), men were referred without prescribing drugs slightly more frequently than women (21.95% and 19.54% respectively), (Table 6.5).

Table 6.4 : Standardised residuals for the interaction between gender, feeling towards patients and management decision for patients presenting with musculo-skeletal complaints

	Drug		No drug		Total
	Male	Female	Male	Female	
Not Feel Positive	-0.99 (10)	0.98 (18)	0.77 (27)	-0.93 (12)	-0.17 (67)
Feel Positive	0.89 (21)	-0.7 (24)	-0.7 (24)	0.69 (33)	0.18 (102)
Total	-0.1 (31)	0.28 (42)	0.07 (51)	-0.24 (45)	0.01 (169)

Note

Figures in brackets indicate the number of subjects in each case

Missing data : 9

Figure 6.2 : Graph showing the interaction between gender, management and feeling positive towards patients who presented with musculo-skeletal complaints

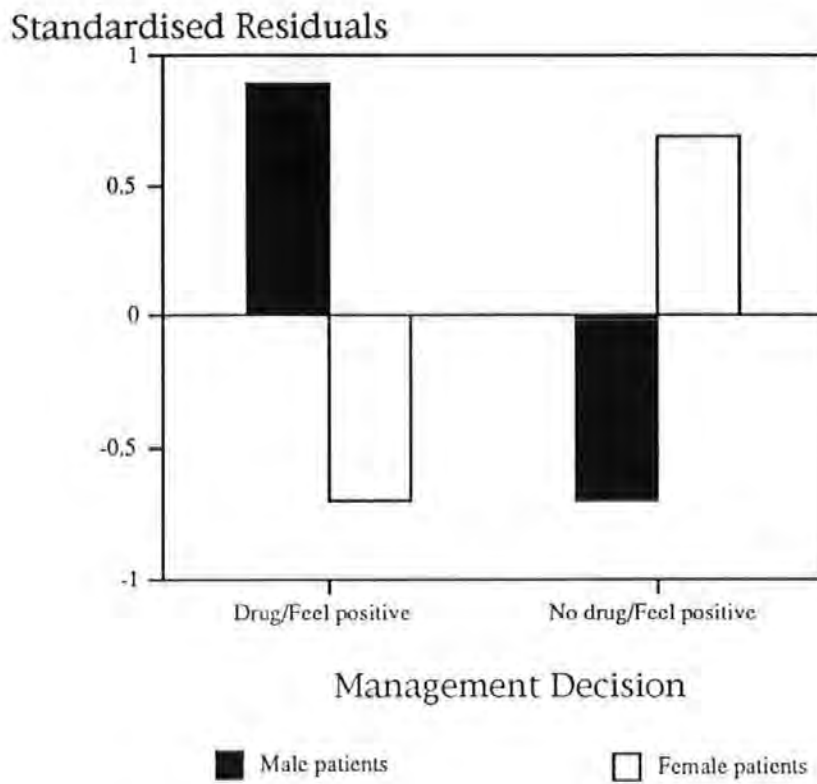


Figure 6.3 : Graph showing the interaction between gender, management and not feeling positive towards patients presenting with musculo-skeletal complaints

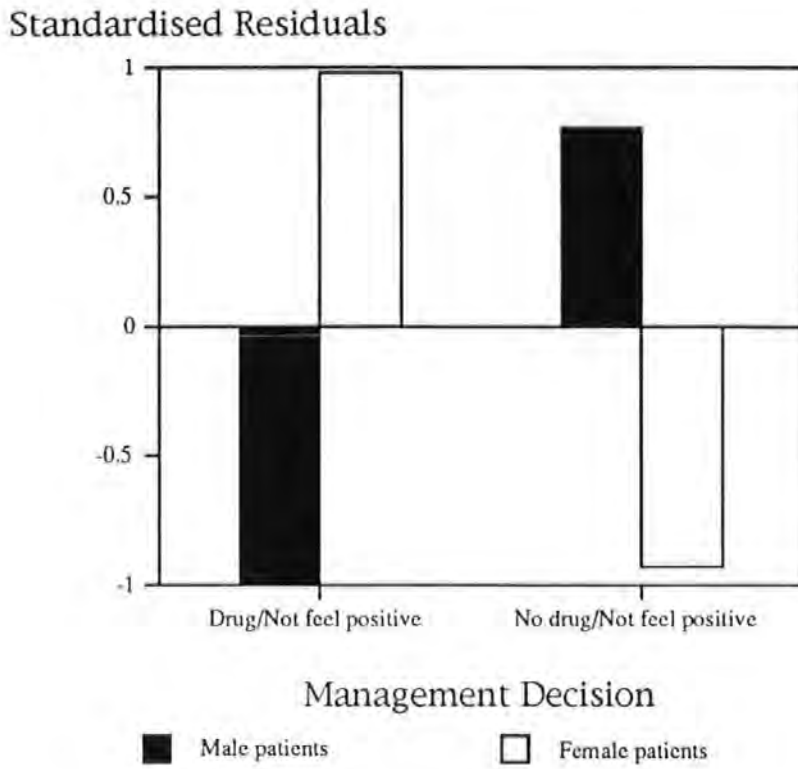


Table 6.5 : Frequencies of management decisions for men and women presenting with musculo-skeletal complaints

Management	Frequencies		
	Male Patient	Female Patient	Total
Drug	25 (30.49%)	34 (39.08%)	59
Temporising	4 (4.88%)	5 (5.75%)	9
Advice	29 (35.37%)	23 (26.44%)	52
Referral	18 (21.95%)	17 (19.54%)	35
Drug&Referral	6 (7.32%)	8 (9.2%)	14
Total	82 (100%)	87 (100%)	169

Missing Data : 9

Psychological Complaints

As with musculo-skeletal complaints a significant interaction was found between gender, feeling towards patient and management decision ($p < 0.01$, $df=1$). Separate effects of gender x management and gender x feeling towards patients were calculated by subtracting the chi-square value for model two from model one and subtracting the chi-square value of model three from model one. Neither of these effects were significant ($p > 0.05$, $df = 1$). The pattern of standardised residuals (Table 6.6) indicated that GPs prescribed drugs for women while deciding on non drug treatments for men when they did not feel positively towards patients. When feeling positive towards patients, men were more likely to receive drugs, while women were given non drug alternatives, (Figures 6.4 and 6.5). A more detailed investigation of the management strategies decided for men and women, using categories of advice only, referral, drug based, temporising and combined drug and referral, showed that men were more than twice as likely as women to be referred, without being

prescribed drugs (29.41% and 13.33% respectively) when presenting with psychological complaints. Even when women who were referred and also prescribed drugs were taken into account, they were still less likely to be referred. Men were also given more advice than women, although this differential was smaller (29.41% and 24% respectively) (Table 6.7).

Table 6.6 : Standardised residuals for the interaction between gender, feeling towards patients and management decision for patients presenting with psychological complaints

	Drug		No drug		Total
	Male	Female	Male	Female	
Not Feel Positive	-1.47 (1)	0.95 (14)	1.11 (11)	-1.02 (6)	-0.43 (32)
Feel Positive	1.05 (12)	-0.55 (29)	-0.86 (10)	0.66 (26)	0.30 (77)
Total	-0.43 (13)	0.40 (43)	0.25 (21)	-0.36 (32)	-0.14 (109)

Note

Figures in brackets indicate the number of subjects in each case

Missing data : 6

Figure 6.4 : Graph showing the interaction between gender, management and feeling positive towards patients presenting with psychological complaints

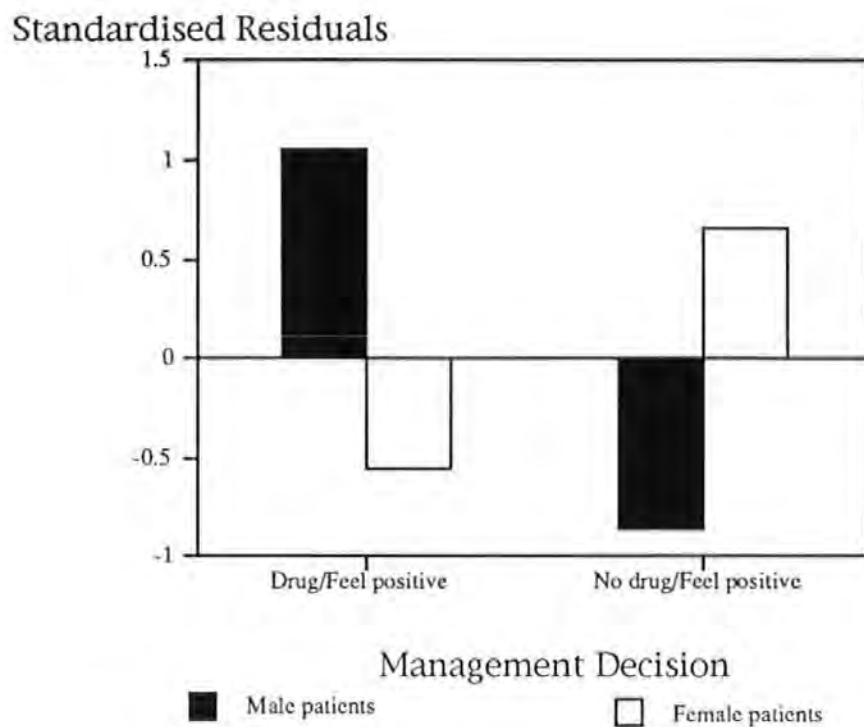


Figure 6.5 : Graph showing the interaction between gender, management and not feeling positive towards patients presenting with psychological complaints

Standardised Residuals

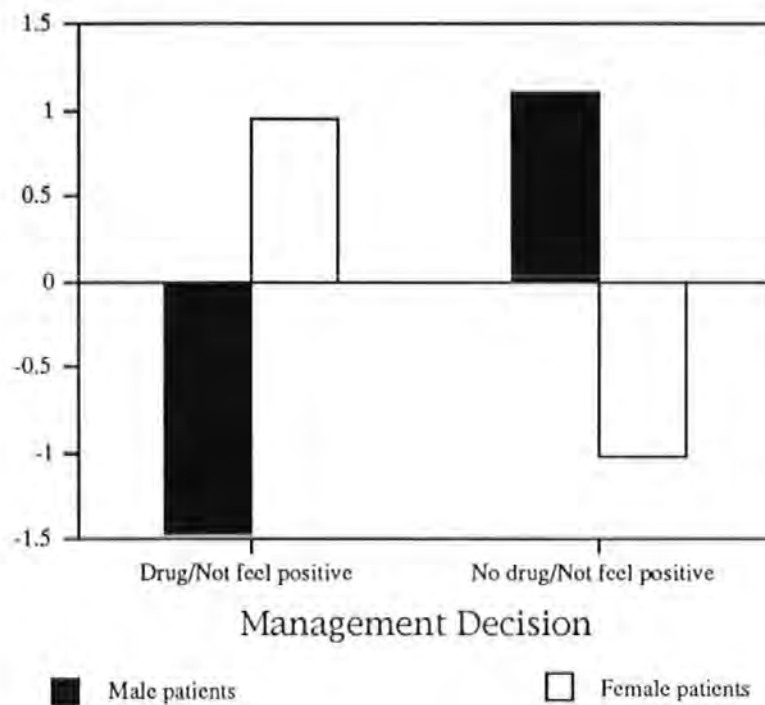


Table 6.7 : Frequencies of management decisions for men and women presenting with psychological complaints

Management	Frequencies		
	Male Patient	Female Patient	Total
Drug	13 (38.24%)	35 (46.67%)	48
Temporising	1 (2.94%)	4 (5.33%)	5
Advice	10 (29.41%)	18 (24.00%)	28
Referral	10 (29.41%)	10 (13.33%)	20
Drug&Referral	0 (0.00%)	8 (10.67%)	8
Total	34 (100%)	75 (100%)	109

Missing Data : 6

Analysis of Decisional Stress Measures

Feeling towards patients was the only measure to show significant interaction effects with patient gender and management decision. In order to understand more about this measure a series of chi-square tests were carried out on measures of decisional stress taken during consultations involving psychological and musculo-skeletal complaints. Table 6.8 indicates a significant relationship between the feeling towards patient measure and the time spent with patients measure for consultations in which psychological complaints were presented ($p < 0.05$, $df = 1$). Table 6.9 expands on this result and shows that feeling positive towards patients is more than three times likely to be associated with sufficient time than insufficient time spent with patients. For musculo-skeletal problems the feeling towards patients variable was not related significantly with any of the other measures of decisional stress (Table 6.10). Significant relationships were found between certainty of diagnosis and certainty of management for both psychological and musculo-skeletal complaints ($p < 0.001$, $df = 1$).

Table 6.8 : Results of chi-square tests of independence of measures of decisional stress taken during consultations involving psychological complaints

Measures of Decisional Stress	1	2	3	4
		(χ^2)	(χ^2)	(χ^2)
1 Feeling		3.69*	0.004	1.91
2 Time Spent			0.23	1.42
3 Certainty of Diagnosis				22.11***
4 Certainty of Management				

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $df=1$

Table 6.9 : Relationship between feeling towards patients and time spent with patients presenting with psychological complaints

Feeling Towards Patients	Time Spent With Patients		
	Insufficient	Sufficient	Total
Positive	17 (20.99%)	64 (79.01%)	81 (100%)
Not Positive	13 (38.23%)	21 (61.76%)	34 (100%)
Total	30	85	115

Table 6.10 : Results of chi-square tests of independence of measures of decisional stress taken during consultations involving musculo-skeletal complaints

Measures of Decisional Stress	1	2	3	4
		(χ^2)	(χ^2)	(χ^2)
1 Feeling		2.21	2.37	0.21
2 Time Spent			0.67	0.04
3 Certainty of Diagnosis				53.73***
4 Certainty of Management				

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $df=1$

Relationship of Patient Gender to Other Variables

Patient gender was found to interact significantly with decisional stress and management decision for psychological and musculo-skeletal complaints. In order to check for the influences of other patient characteristics on this gender effect, the relationship between gender and age, class, attitude towards treatment, last seen and payment for prescriptions was explored. Table 6.11 shows a significant relationship between gender and attitude towards treatment in consultations involving psychological presentations. This is explained in Table 6.12 which shows that women are more frequently unco-operative than men. When psychological presentations were divided into those in which GPs felt positive towards patients and those in which they did not feel positive, the interaction was only present under the former conditions (Tables 6.13 to 6.16). For musculo-skeletal complaints there were no significant relationships between patient gender and other patient characteristics (Tables 6.17 to 6.19)

Table 6.11 : Results of chi-square tests of independence of gender and other patient characteristics for all consultations involving psychological complaints

Patient Characteristics					
	Age	Class	Attitude	Payment for Prescriptions	Last Seen
	(χ^2)	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Patient Gender	2.15	9.75	5.93*	0.82	9.03

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $df=1$

Table 6.12 : Relationship between patient gender and attitudes towards treatment in psychological consultations

Patient Gender	Attitude Towards Treatment		
	Co-operative	Unco-operative	Total
Male Patient	34 (94.44%)	2 (5.56%)	36 (100%)
Female Patient	58 (75.32%)	19 (24.68%)	77 (100%)
Total	92	21	113

Missing data : 2

Table 6.13 : Results of chi-square tests of independence of gender and other patient characteristics for consultations involving psychological complaints in which GPs did not feel positive towards patients

Patient Characteristics					
	Age	Class	Attitude	Payment for Prescriptions	Last Seen
	(χ^2)	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Patient	1.68	6.13	1.45	1.25	5.25
Gender					

All non-significant, df=1

Table 6.14 : Results of chi-square analysis of independence of gender and other patient for consultations involving psychological complaints in which GPs felt positive towards patients

Patient Characteristics					
	Age	Class	Attitude	Payment for Prescriptions	Last Seen
	(χ^2)	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Patient	2.15	6.77	5.58*	0.38	7.62
Gender					

*p < 0.05, **p < 0.01, ***p < 0.001, df=1

Table 6.15 : Relationship between patient gender and attitudes towards treatment in psychological consultations in which GPs felt positive towards patients

Patient Gender	Attitude Towards Treatment		
	Co-operative	Unco-operative	Total
Male Patient	24 (100%)	0 (0.00%)	24 (100%)
Female Patient	44 (80.00%)	11 (20.00%)	55 (100%)
Total	68	11	79

Table 6.16 : Relationship between patient gender and attitude towards treatment in psychological consultations in which GPs did not feel positive towards patients

Patient Gender	Attitude Towards Treatment		
	Co-operative	Unco-operative	Total
Male Patient	10 (41.67%)	2 (16.67%)	12 (100%)
Female Patient	14 (58.33%)	8 (36.36%)	22 (100%)
Total	24	10	34

Table 6.17 : Results of chi-square analysis of independence of gender and other patient characteristics for all consultations involving musculo-skeletal complaints

Patient Characteristics					
	Age	Class	Attitude	Payment for Prescriptions	Last Seen
	(χ^2)	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Patient Gender	3.64	5.22	0.33	0.002	7.47

All non-significant, df=1

Table 6.18 : Results of chi-square tests of independence of gender and other patient for consultations involving musculo-skeletal complaints in which GPs did not feel positive towards patients

Patient Characteristics					
	Age	Class	Attitude	Payment for Prescriptions	Last Seen
	(χ^2)	(χ^2)	(χ^2)	(χ^2)	(χ^2)
Patient Gender	3.09	2.41	1.18	1.02	5.87

All non-significant, df=1

Table 6.19 : Chi-square results of tests of independence of gender and other patient for consultations involving musculo-skeletal complaints in which GPs felt positive towards patients

	Patient Characteristics				
	Age	Class	Attitude	Payment for Prescriptions	Last Seen
	(χ^2)	(χ^2)	(χ^2)(χ^2)	(χ^2)	(χ^2)
Patient Gender	1.73	2.31	0.04	0.48	3.12

All non-significant, $df=1$

Individual Differences Amongst GPs

In order to test for the influence of individual differences on the gender, decisional stress and management interaction the number of consultations contributed by each GP was recorded. Frequencies for consultations involving psychological and musculo-skeletal presentations are shown in Table 6.20. Although there was some variation in the number of consultations included in the analysis, every GP contributed at least one consultation.

Table 6.21 and 6.22 show how these consultations contributed more specifically by indicating which GPs' consultations featured in each of the cells of the contingency tables on which the log-linear analysis was based. In general, GPs tended to feature in more than one cell of the table. For example, taking GPs who contributed the highest numbers of consultations involving psychological complaints, GP 14's consultations feature in five of the cells, GP 21's in six cells.

Table 6.20 : Number of psychological and musculo-skeletal consultations contributed by each GP

GP	Number Of Consultations	
	Psychological	Musculo-skeletal
1	8	16
2	5	15
3	4	10
4	5	8
5	2	13
6	4	8
7	2	3
9	4	11
11	7	8
12	3	4
14	11	3
15	3	2
20	3	10
21	9	6
22	9	13
23	6	6
24	6	3
28	6	6
29	5	6
30	6	10
31	2	2
32	2	1
37	3	13
Total	115	178

Table 6.21 : How GPs' consultations featured in the log-linear analysis involving psychological complaints

Feeling Towards Patients	Management Decision			
	Drug		No drug	
	Male	Female	Male	Female
Positive	GP: 4 (1)	GP: 1 (1)	GP: 1 (1)	GP: 1 (4)
	14 (1)	2 (2)	6 (1)	2 (2)
	20 (1)	3 (1)	9 (1)	4 (1)
	21 (1)	4 (2)	20 (1)	5 (2)
	22 (3)	6 (2)	22 (1)	9 (2)
	23 (1)	7 (1)	23 (2)	12 (1)
	24 (2)	9 (1)	24 (1)	14 (5)
	29 (1)	14 (3)	28 (1)	21 (2)
	30 (1)	20 (1)	37 (2)	22 (2)
	31 (1)	21 (2)		23 (2)
		22 (3)		24 (1)
		23 (1)		28 (3)
		24 (2)		30 (1)
		29 (4)		
		30 (3)		
		31 (1)		
		37 (1)		
Not Positive	GP: 11(1)	GP: 1 (1)	GP: 1 (1)	GP: 3 (1)
		3 (1)	2 (1)	11 (3)
		4 (1)	3 (1)	14 (1)
		6 (1)	11 (3)	15 (1)
		7 (1)	12 (1)	21 (1)
		14 (2)	21 (1)	
		15 (2)	28 (2)	
		21 (2)	32 (1)	
		30 (1)		
		32 (1)		

Note

GP numbers indicate GP identity

Figures in brackets indicate the number of consultations contributed to the cell by each GP

Table 6.22 : How GPs' consultations featured in the log-linear analysis involving musculo-skeletal complaints

Feeling Towards Patients	Management Decision			
	Drug		No drug	
	Male	Female	Male	Female
Positive	GP: 1 (2)	GP: 5 (2)	GP: 2 (1)	GP: 1 (2)
	3 (4)	6 (4)	4 (1)	2 (3)
	5 (2)	7 (1)	5 (2)	3 (2)
	6 (2)	9 (1)	12 (1)	4 (1)
	7 (1)	11 (1)	20 (4)	5 (6)
	11 (1)	12 (1)	21 (2)	9 (1)
	20 (2)	14 (1)	22 (2)	12 (2)
	24 (1)	20 (2)	23 (2)	15 (1)
	28 (1)	21 (1)	28 (2)	21 (2)
	29 (1)	22 (3)	29 (1)	23 (3)
	30 (3)	23 (1)	30 (2)	24 (1)
	31 (1)	28 (1)	37 (2)	22 (1)
	37 (2)	29 (3)		28 (2)
		30 (3)		37 (9)
	31 (1)			
Not Positive	GP: 1 (5)	GP: 2 (2)	GP: 1 (6)	GP: 1 (1)
	2 (1)	4 (1)	2 (5)	2 (2)
	3 (1)	6 (1)	3 (3)	9 (1)
	9 (1)	7 (1)	5 (1)	11 (2)
	20 (1)	9 (3)	5 (1)	21 (1)
	22 (1)	11 (2)	6 (1)	22 (2)
		14 (2)	9 (1)	29 (1)
		22 (2)	11 (2)	32 (1)
		24 (1)	12 (1)	
		30 (2)	20 (1)	
			22 (2)	

Note

GP numbers indicate GP identity

Figures in brackets indicate the number of consultations contributed to the cell by each GP

DISCUSSION

Gender differences in the decision making process were found with regard to certainty of diagnosis and management of complaints. More specifically, GPs felt more uncertain about diagnosing women who presented with cardiovascular or skin problems, than men. When presenting with psychological or musculo-skeletal complaints, under conditions of decisional stress, GPs made different management decisions depending on whether the patient was a man or a woman.

The issue of GPs' greater uncertainty about women presenting with cardiovascular problems may be addressed in a number of ways. One of the potential bases for this uncertainty is the finding that women are less likely than men to be referred for major diagnostic interventions including cardiac catheterisation and coronary angiography (e.g. Ayanian and Epstein, 1991) after controlling for relevant variables. In attempting to address these findings, differences in disease prevalence between men and women do not adequately explain such disparities. While the difference in disease prevalence between men and women is 3 : 1, the difference in catheterisation rates was found to be almost 7 : 1, for clinically comparable patients (Tobin, Wassertheil-Smoller, Wexler, 1987; 1988). Less diagnostic testing for women may be the result of the way women's complaints are perceived by doctors. Research indicates that they are more likely to be attributed to emotional rather than physical causes (Bernstein and Kane, 1981). This finding appears to be relevant to cardiovascular presentations as Tobin et al (1987) found that doctors were more likely to attribute chest pain experienced by women to psychiatric or other non organic causes. Women may receive such diagnoses as a result of the perception of coronary artery

disease as a complaint predominantly experienced by men. This male image of the disease is promoted to the general public through health education (Health Education, 1992) and to doctors via medical advertisements. Analysis of popular and widely circulated journals such as *The New England Journal of Medicine* and *The Journal of the American Medical Association* found that men consistently featured in drug advertisements for complaints like angina and hyperlipidemia, up to five times more frequently than women (e.g. Leppard, Ogletree and Wallen, 1993).

Even when diagnostic tests are carried out for women presenting with cardiovascular complaints, GPs may still feel more uncertain about diagnoses as tests traditionally used to detect cardiovascular disease are not as sensitive or specific for detecting cardiovascular disease in women. This has found to be the case for inexpensive, non invasive diagnostic tests such as exercise or treadmill testing (e.g. Steingart, Packer, Hamm, 1991; Sullivan, Holdright and Wright, 1994).

Unreliability of such tests may be the consequence of research that has concentrated almost exclusively on men (Cotton, 1990). Research indicates that cardiovascular disease in women differs from the disease in men, in significant ways. For example, Lerner and Kannel (1986) found that diabetes was a greater risk factor in women than in men, and that the level of high density lipoprotein cholesterol is a stronger predictor of heart disease in women than men. In combination, less referral for invasive diagnostic testing and unreliability of non invasive testing could mean that women are not diagnosed or treated early enough. Studies show that women have a higher operative mortality rate for coronary bypass surgery (Khan, Nessim, Gray, Czer, Chaux and Matloff 1990, Wenger, 1990). This may reflect the finding that cardiovascular disease is further advanced in

women than men at both the time of surgery and of the initial heart attack (Wenger, 1985).

GPs' greater uncertainty about skin complaints presented by women proved difficult to address. Our medical advisor was unable to put forward any explanation for these findings.

For psychological and musculo-skeletal complaints, feelings towards patients were associated with different management decisions for men and women. More specifically, when GPs did not feel positive towards patients (including neutral, negative and strongly negative), women tended to be prescribed drugs, while men tended to be given advice and referrals. When GPs felt positive towards patients, the interaction was reversed so that men were more likely to be prescribed drugs and women were more likely to be given non drug alternatives. Feeling towards patients was the only measure to interact with gender and management. Limited consultation time may be such an established feature of general practice that GPs may have only been aware of and able to report extreme cases. This could also be true for uncertainty about diagnosis and management. Time spent with the patient may not be an accurate indication of time pressure. In this way GPs may have felt that they did not spend sufficient time with a patient, without feeling that they were under time pressure. Alternatively, they may have felt that they had spent sufficient time with patients even though they were under time pressure.

Across all patient complaints identified from checklists, certainty of diagnosis and certainty of management was significantly related to positive feelings towards patients (Chapter five). Feeling certain was more frequently associated with feeling positive. For psychological complaints only, feeling towards patients was significantly related to

time spent with patients. Although insufficient time was about equally related to positive and not positive feelings, sufficient time was more than three times more frequently related to positive than not positive feelings. This could indicate that GPs feel more positive about patients they spent sufficient time with or that they spend sufficient time with patients they feel positive towards.

It is not surprising that feeling towards patients was associated with time spent rather than certainty of diagnosis and management when psychological complaints are considered as a specific category. Unlike most other complaints presented in general practice, psychological problems do not usually have physical bases upon which GPs can make specific diagnostic and management decisions. Also, many GPs may lack the expertise to deal with psychological problems as they have received no formal training for these types of complaint. Therefore uncertainty about these problems may be such an established part of general practice that only extreme cases are reported. Levels of certainty about psychological problems may be more likely to be reflected in the time spent measure. Insufficient time spent with patients may result in feeling not positive towards patients if GPs feel that they have been unable to collect enough relevant information to diagnose and manage patients' complaints adequately.

Feeling towards patients was not significantly related to any of the measures of decisional stress for musculo-skeletal complaints. This may indicate that for patients presenting with musculo-skeletal complaints, GPs' feelings may relate less to global feelings about the consultation as a whole. They may be more accurately described by personal feelings about patients. For example, musculo-skeletal complaints, such as back pain, do not always have visible or

detectable manifestations. GPs may not feel positive towards patients whose complaints are not perceived to be genuine physical problems.

The influences of individual differences and extraneous patient characteristics on the gender, feelings towards patients and management interaction were explored in order to discount their effects on the log-linear results. Although there was some variation in the number of consultations contributed by GPs, at least one consultation was included for each GP for both psychological and musculo-skeletal complaints. Furthermore, GPs generally featured in more than one cell of the contingency tables upon which log-linear analyses were based. This indicates that results were not due to the idiosyncrasies of a few individuals but reflective of a general tendency amongst GPs. Patient characteristics were only relevant to psychological complaints where attitude towards treatment was significantly related to patient gender. Female patients were considered by GPs to be more frequently unco-operative than their male counterparts. However, as this result was obtained on the basis of a very small number of patients (two males and nineteen females) it was assumed to have contributed little to the gender x feelings towards patients effect.

The gender x feeling x management decision interaction requires careful consideration and is open to a number of alternative explanations. In line with a decisional conflict approach it could be suggested that not feeling positive towards patients creates a cognitive load condition which subsequently gives rise to stereotyping. Although GPs were not required to write down the names of drugs they prescribed, as it was felt that this would be too time consuming, it is presumed that following psychological presentations, they were most likely to have been psycho tropics,

such as tranquillisers, anxiolytics or anti-depressants. The association between psycho tropic drugs and treatment of women is well documented (e.g. Ashton, 1991; Verbrugge and Steiner, 1980). Research also indicates that medical advertisements reinforce this association by showing significantly more women than men to promote psychoactive drugs (Prather and Fidell, 1975). Some studies have shown a link between drug advertising and doctors' prescribing behaviour (Linn and Davis, 1972; Walton, 1980). It could therefore be suggested that when experiencing decisional stress, GPs draw on this well known management association in order to arrive at decisions.

The tendency to perceive women's complaints as psychological in origin and men's as more physically based may also explain why according to a decisional stress approach women who present with musculo-skeletal problems are prescribed drugs and men presenting with the same problems are given advice or referral. Drugs prescribed may have been pain killers, or alternatively psycho tropics. When not feeling positive towards patients, GPs may have interpreted and managed the presentations of women as psychological rather than physical in origin, resulting in psycho tropic prescriptions.

Alternatively, women may have received more pain killers if GPs assume that women are less able to tolerate physical discomfort than men. This belief may correspond to established stereotypes of women as less physically strong (Deaux and Lewis, 1983) and emotionally weaker (Bem, 1974). As men are expected by GPs to present with physical complaints (Chapter 4), men's presentations are more likely to be diagnosed and managed as genuine cases of musculo-skeletal problems rather than psychological ones. Therefore, male patients are less likely to receive psycho tropic drugs and more likely to be given advice about their conditions and referrals to specialists. As GPs may

feel that men are more able to tolerate physical pain, they may feel that it is unnecessary to prescribe pain killers.

Trying to account for differences in the treatment of men and women that occur in the absence of decisional stress is more difficult.

According to the cognitive miser perspective which has been adopted in the thesis (Chapter four), when individuals are not experiencing stress, they are less likely to draw on stereotypes and more likely to attend to individuating information when making judgements about others. Therefore, when feeling positive towards patients, GPs are able to carry out more thorough information search and appraisal of relevant information as there is less demand on information processing capacity. The results of more appropriate information search and processing may in fact contradict stereotypes.

Psychological and musculo-skeletal complaints may be more susceptible to the influence of GPs' feelings towards patients than complaints such as respiratory tract diseases. With reference to literature concerning 'heartsink' patients, those patients who present with depression and anxiety constitute a high proportion of what GPs consider to be difficult patients. GPs in Corney, Strathdee, Higgs, King, Williams, Sharp and Pelosi's study (1988) expressed a fear of being overwhelmed by a range of psycho social problems that they did not have the time, expertise or resources to tackle. Other sources of frustration mentioned could also be more applicable to psychological complaints than to other more organic problems. GPs reported feelings of inadequacy and impotence when complaints appeared to be insoluble and also when patients made little progress whatever treatment was decided upon. They also stated a dispreference for frequent attenders, who asked for referrals or other courses of treatment.

Patients presenting with disorders such as anxiety and depression may not respond to more traditional methods that GPs employ and may require a more prolonged and dynamic course of management. Also, unless they have access to adequate support systems elsewhere, they may attend surgeries on a regular basis in order to gain support from their GPs. As GPs receive little, if any formal training in how to deal with psychological complaints, they may feel more uncertain about how to both diagnose and manage them. As expressed in Corney et al's study (1988), GPs may feel that they have insufficient time to cope with these complaints. A full psycho social assessment is difficult, if not impossible to achieve in the average seven and a half minute consultation.

GPs may not feel positively towards patients during cases of musculo-skeletal complaints for a number of reasons. GPs may feel that they are unable to carry out full assessments of such conditions without referral for x-ray and opinions from consultants. Even after referral, a specific organic cause of the complaint may not be discovered. This has been put forward by GPs in Corney et al's study (1988) as a characteristic of consultations with 'heartsink' patients. It could also be possible for musculo-skeletal pain or discomfort, such as back pain, to be manifestations of psychological complaints such as stress and anxiety. In this case, GPs may feel uncomfortable about redefining patients' complaints and deciding on more appropriate psychological management. Finally, because musculo-skeletal complaints do not always have visible or detectable manifestations, they may be presented to GPs as a means of acquiring a sick note or relief from other duties or responsibilities.

Although it is plausible that not feeling positively towards patients can act as a condition of cognitive load in a similar way to time pressure and uncertainty, some caveats to this interpretation need to be pointed out. The *not positive* category not only includes, *negative* and *strongly negative* feelings but also *neutral* feelings towards patients. It could be argued that although not feeling positive, neutral feelings are the professional ideal for consultations. Moreover, feeling positive, especially strongly positive could also constitute a cognitive load condition when GPs are feeling too emotionally involved with patients. There was no evidence to suggest that stereotypes were used under more established conditions of decision stress such as time pressure and uncertainty. For less established forms of cognitive load, such as not feeling positive towards patients suggestions of stereotype use can only be tentative.

As the not feeling positive response is an unreliable indicator of negative feelings towards patients (due to its inclusion of the neutral category) it may be more profitable to investigate the relationship between feeling positive towards patients (including strongly positive) and the management of men and women. Although the confounding effects of factors such as age and class on the gender x feeling x management interaction have already been discounted, it is possible that the effects of feelings towards patients is an epiphenomenon. In Chapter eight audio-tapes will be selectively analysed in order to investigate this alternative explanation of results.

Depending on their feelings towards patients GPs decided to manage men and women differently, even though they presented with similar complaints. This effect was significant for psychological and musculo-skeletal problems. When not feeling positive towards patients, women received prescriptions more frequently than men. When feeling

positive towards patients men received more prescriptions than women. Disparity in treatment when not feeling positive towards patients may be due to the activation and employment of stereotypes in order to cope with cognitive load. In the following chapter, this proposal is explored in more detail through analyses of audio-tapes that correspond to the checklist data used in this study. Alternatively, feelings towards patients may be indicative of more subtle patient characteristics or aspects of the consultation. This explanation is investigated in Chapter eight.

Chapter 7

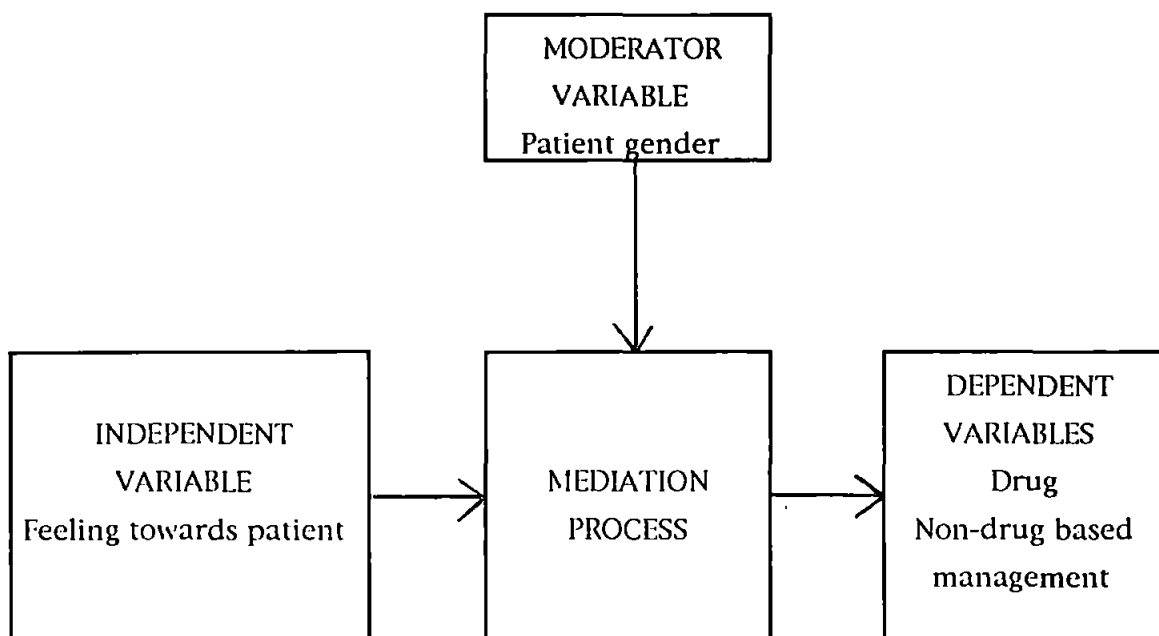
MEDIATION OF GENDER DIFFERENCES IN THE CONSULTATION

INTRODUCTION

Previous analysis of checklist data revealed an interaction between patient gender, feelings towards patients and management outcomes for psychological and musculo-skeletal complaints. More specifically, GPs' feelings towards patients had different management consequences for men and women. This chapter describes how audio-taped consultations that correspond to checklist data were analysed according to type of communication used and content of communication in an attempt to identify the consultation process by which gender differences were mediated. Similar to decision stress variables, not feeling positive towards patients is assumed to create a cognitive load condition, giving rise to a preference for stereotypes over more individualised information.

The concept of mediation is described by Baron and Kenny (1986) as the process that accounts for the relationship between the independent and dependent variable. While moderator variables specify *when* effects will occur, mediators specify *how* effects occur. In this way, mediation is the process that explains how gender influences the relationship between feelings towards patients and management outcome (Figure 7.1).

Figure 7.1 : Model showing the mediation of gender effects on the relationship between feelings towards patients and management outcome



Analyses concentrated specifically on consultations involving psychological presentations. Compared to musculo-skeletal complaints, gender differences in the frequency and management of psychological problems are well documented (Ashton, 1991; Perkins and Rowland, 1991). In addition the psychological category of complaints may be more strongly sex typed than the musculo-skeletal one. Research indicates that the attributes believed to characterise men and women relate differently to psychological illness. The attributes of women rather than men have been found to be characteristic of this type of complaint (Broverman, Broverman, Clarkson, Rosenkrantz and Vogel, 1970; Barnes and Maple, 1992). These beliefs may have important implications for the way men and women who present with psychological problems are managed.

Identifying Verbal Exchanges

The type of communication used was classified according to Stiles' Medical Interview Verbal Exchange categories (Putnam and Stiles, 1993; Stiles and Putnam, 1992). Unlike other coding schemes, e.g. Bales' Interaction Process Analysis (1951) Stiles' classifications are specially designed to code communication that occurs in general practice consultations. Although Byrne and Long's coding system (1976) was also developed to classify communication in general practice, this has been criticised for being unable to discriminate between doctor-centred and patient-centred communication (Buijs, Sluijs and Verhaak, 1984).

A further drawback of this coding system is that it only classifies doctor behaviour, compared to Stiles' system that is used to code the verbal interaction between doctor and patient. This is important for the thesis as according to Deaux and Major's model (1987), previously described in Chapter four, the consultation process was defined as a dynamic, two way interaction between doctor and patient. It was assumed that interaction rather than simply the behaviour of doctors influences communication and management outcome. Using this system, communication is classified according to doctors' and patients' goals for consultations. It was expected that these would differ depending on patient gender.

In Chapter six, patient gender was described as a moderating variable that influenced the relationship between decisional stress or feelings towards patients and management outcome in a way that resulted in different decisions for men and women. In this chapter it is suggested that when feeling positive or not feeling positive towards patients, communication between doctor and patient mediates gender differences in management. It is anticipated that when not feeling

positive towards patients the type and or content of verbal interaction between doctor and patient differs according to patient gender. Such differences may be indicative of distinctive goals for men and women, which in turn may relate to expectations about the behaviour and attributes of men and women.

More specifically, when not feeling positive towards patients it is predicted that consultations with women will contain more closed questions and less expositions than those with men. As the characteristics of women are more readily associated with psychological illness, GPs are likely to use closed questions to search for information that confirms these expectations. They are less likely to give women the opportunity to present information that disconfirms expectations. In contrast the attributes of men are perceived to be less characteristic of psychological complaints. Consequently, GPs are more likely to give men the opportunity to present a wider range of symptoms and concerns.

Coding The Content Of Verbal Exchanges

Gender differences in the content of communication were also explored. Discrepancies in the treatment of men and women may be mediated by the content as well as the type of communication used or alternatively, it may be the content rather than the style of interaction used that differentiates the treatment of men and women. For example, both men and women may be asked the same number of direct questions. However, those addressed to men may require responses about the physical nature of complaints, while women may be more likely to be asked about emotional symptoms. By carrying out two relevant investigations of verbal interaction, a dynamic view of consultation process was explored.

Patients themselves may have gender-related expectations concerning the type of information they should report to their GPs. Studies indicate that women are more likely than men to disclose psychiatric symptoms to their doctors (Clancey and Gove, 1974; Tueting, Koslow and Hirschfield, 1981). Men on the other hand may feel that it is less acceptable to discuss psychological aspects of their problems and prefer to concentrate on physical symptoms. These gender differences in symptom reporting were observed by GPs during interviews (Chapter four). They are likely to reflect widely held stereotypes of women as emotional and prone to psychological complaints and men as more stable and psychologically healthy (e.g. Deaux and Lewis, 1983; Barnes and Maple, 1992).

Results reported in Chapter six indicated that when not feeling positive towards patients presenting with psychological complaints, GPs prescribed significantly more drug based treatments for women than men. It is assumed that the large majority of drugs prescribed following the presentation of psychological symptoms are likely to be psychotropics, such as tranquillisers, anxiolytics and anti-depressants. It was assumed that more frequent non-drug based management of men's complaints was facilitated by the focus of communication on circumstantial or physical symptoms which are less likely to require management with psychotropic drugs. As men are perceived to present with psychological problems much less frequently than women (Chapter four), when they do consult their doctors about such problems, GPs may take their symptoms more seriously, therefore warranting more frequent referral to specialists. As men are expected to be more psychologically stable, GPs may perceive them to be able to cope with symptoms without the need for drugs.

In contrast, it was assumed that more frequent drug based management of women's complaints was facilitated by concentration on feelings and emotional symptoms which are more likely to require management with psycho tropic drugs. In comparison to non-drug based treatments such as referral and advice, more drug based management may indicate GPs' lower expectations of women's abilities to cope with symptoms or less serious perceptions of complaints. Therefore, it is predicted that when not feeling positive towards patients, more consultation time will be spent discussing feelings and emotions (psychological symptoms) during consultations with women than with men. During consultations with men, more time will be spent discussing physical and circumstantial aspects of complaints than during consultations with women.

When feeling positive towards patients it is assumed that stereotypes are less likely to feature in the decision making process. Differences in communication that do occur are likely to reflect genuine distinctions in the presentation and requirements of psychological complaints presented by men and women.

Researchers concerned with the influence of patient gender have reported differences in the way doctors communicate with men and women (e.g. Meeuwesen et al, 1991) and manage men and women's complaints (e.g. Verbrugge and Steiner, 1981). Rather than investigating these *two* aspects of the consultation in isolation, the aim of this study is to relate specific management outcomes to particular processes of verbal interaction between doctor and patient.

METHOD AND PROCEDURE

Coding of GP and Patient Goals : Stiles' Verbal Exchange Classifications

Stiles' verbal exchange classifications were specifically developed to investigate verbal interaction during medical interviews or consultations. Stiles (1992) defines a verbal exchange as an interaction consisting of specific types of speech acts by doctor and patient, that tend to occur together in complementary ways. For example, the *exposition* exchange consists of patients' descriptions of their illnesses and circumstances and doctors' acknowledgements and attentiveness, e.g. 'yes', 'mm-hm'. It was considered to be an important requirement for the coding scheme to identify the functions of patients' communication as well as doctors'. When applying the exchange classifications, Stiles suggests that it is not necessary to analyse verbal interaction at an utterance by utterance level, as it is possible for the exchange concept to comprise many utterances within a segment of the interview. For example, the closed question exchange may consist of a number of sub-questions and responses that are not coded at an individual level.

The aim of the classification system is *to identify the ways in which doctors and patients accomplish their goals during consultations* . Using this methodology, consultations are coded without respect to speech *content* as exchanges reflect what individuals *do* when they say something rather than *what* they say.

Medical interview exchanges and their probable functions, identified by Stiles and Putnam (1992), are summarised in Table 7.1, and are described in more detail below.

Table 7.1 : Medical interview exchanges and their probable functions

Verbal Exchange	Description	Function
Exposition	<p>Patients: Describe illnesses in their own words</p> <p>Doctors: Show attentiveness</p>	<p>Identify problems</p> <p>Gather background information</p> <p>Patient catharsis</p>
Closed Question	<p>Doctors: Ask specific questions</p> <p>Patients: Give brief answers</p>	<p>Gather data for diagnosis and treatment</p> <p>Test hypotheses</p>
Checking	<p>Doctor: Repeat information given by patients</p> <p>Patients: Confirm/disconfirm doctors' understanding</p>	<p>Check accuracy of communication</p>
Direction	<p>Doctors: Direct patients through examinations</p> <p>Patients: Comply</p>	<p>Inform patients how to co operate during examination</p>
Inquiry	<p>Doctors: Ask about subjective reactions</p> <p>Patients: Reveal reactions</p>	<p>Gather subjective data to complement objective examination</p>
Explanation	<p>Doctors: Give objective information about illness and treatment</p> <p>Patients: Show attentiveness</p>	<p>Educate patients about illness</p> <p>Explain and justify treatment</p> <p>Relieve patient worry</p>
Instruction	<p>Doctors: Prescribe treatments</p> <p>Patients: Agree/comply</p>	<p>Instruct patients in treatment regimen</p>

Verbal Exchanges and their Probable Functions

Exposition Exchanges

These are identified when patients describe their illnesses and circumstances around them in their own words, and doctors show attentiveness by acknowledging what is being said. For the doctor, the purpose of exposition is to gather background information, identify patient problems, and to give patients confidence that they have provided adequate descriptions of their illnesses. For patients, these exchanges serve to express their concerns and emotional aspects of their illnesses.

Closed Question Exchanges

Here, doctors ask patients specific questions, e.g. 'Any pain in your face at all?' which allow patients to give brief replies, such as 'yes' or 'no', but do not allow them to elaborate on their complaints. These exchanges give doctors control of consultations by allowing them to dictate the form of patients' answers. Once doctors have ascertained potential hypotheses about the nature of problems, via exposition exchanges, closed questions may be implemented in order to seek confirmation or disconfirmation regarding diagnoses and management. Although asking closed questions can limit information overload, and narrow the field of alternative hypotheses, this strategy can limit patients' abilities to express their complete list of concerns. This may be likely when patients are interrupted by questions, before feeling that they have established enough rapport with doctors to disclose more sensitive and personal concerns.

Checking Exchanges

These consist of doctors' repetitions or summaries of what they have been told by patients during the consultation, in order to check their accuracy and their understanding of this information. In response, patients either confirm or disconfirm doctors' understanding.

Direction and Inquiry Exchanges

Both exchanges are usually identified during physical examinations. Direction exchanges are used to direct patients through required actions, e.g. 'Take a deep breath', thus telling them how to co-operate during physical examination. Patients may often comply with these directions non-verbally and in turn, doctors may acknowledge compliance using evaluative words, e.g. 'Fine', 'okay'. Direction may also involve doctors announcing what they are about to do, e.g. 'Now I'm going to examine your throat'.

In inquiry exchanges, doctors ask patients about subjective reactions, such as sensations and perceptions, e.g. 'Is that sore when I push on it?', so that they can gather information to complement more objective examination. Inquiry exchanges can be distinguished from closed questions as they concentrate on physical sensations during the examination, and not on details that occur outside the consultation. This distinction highlights the importance of the context of exchanges. For example, if the illustration ; 'Any pain in your face at all ?' that was used above to describe closed questions occurred during a physical examination of the patient's face, the exchange would be more accurately described as inquiry rather than an instance of closed questioning. In the context of examination it would require the patient to give a response to the sensation experienced when the face was physically examined in the here and now.

Explanation Exchanges

These exchanges are characterised by doctors giving patients objective information about their illnesses and treatments, while patients listen and sometimes ask questions. In this way, patients may be given some indication of the seriousness and implications of their complaints. With regard to management, doctors may inform patients about treatment options and side effects of drugs. The purpose of these types of exchanges is both to educate patients and to relieve their anxieties, giving them opportunity to make informed decisions regarding their health. Explanation exchanges may be particularly important for patients who are considered to be unnecessarily fearful about their symptoms or are likely to encounter problems during the course of their illnesses or treatments.

Instruction or Contract Exchanges

As these exchanges consist of doctors' prescriptions of tests, treatments and return appointments, instructions or contracts are usually found at the end of consultations. In response, patients listen and agree to comply. Doctors may also use these exchanges to instruct patients about *how* to comply with specific treatments, especially regarding taking prescribed drugs.

Procedure

Stiles' coding categories were applied to consultations involving psychological presentations. Prior to this, familiarity with the coding system was gained by practising on consultations that were not included in the analysis (i.e., non psychological presentations). This practice period was used to identify any potential problems employing the classification system and also to formulate objective criteria for the identification of each type of verbal exchange,

particularly with regard to distinction between similar exchanges. This was necessary to gain experience of applying the classification scheme and also to check the appropriateness of using the scheme on the particular data set.

Distinguishing between Closed Questions, Checking and Inquiry

Although checking may be in the form of closed questions, it refers to information that has already been put forward by the patient, e.g. 'Its not like a usual sore throat then'. In contrast, closed questions require new information from the patient that has not already been referred to, e.g. 'Any pain in your face at all?'

Inquiry is usually confined to physical examination sections of the consultation and requires patients to put forward subjective feelings or sensations that they experience in the here and now, e.g. 'Is that sore when I push on it ?' Closed questions tend to refer to circumstances leading up to the complaint and experiences that the patient has had, e.g. 'Had any visual problems in the last month ?'

Distinguishing between Explanation and Instruction

Although GPs inform patients about treatments during explanation and instruction exchanges, the type of information and the purposes for which they are given varies across these two exchanges. In explanation, the doctor gives patients information about their illnesses as well as treatment, putting forward potential treatment options, and information regarding side effects, e.g. 'Our usual approach is to find out why you keep getting it '. In contrast, during instruction, the doctor tells the patient what he/she should do in practical terms. With regard to drug treatments, this may involve instructions about how many tablets to take, when to take them and how long for, e.g. 'You'll

probably need to take it for two or three weeks to get this to subside'. Patient questions or checking regarding objective information they have been given about their illnesses, e.g. 'Are my symptoms likely to get any worse ?' or about prescribed treatments, e.g. 'Should I take the tablets before I go to bed ?' were coded as explanation and instruction exchanges respectively.

Distinguishing between Closed Questions and Exposition

After responding to closed questions, a tendency for patients to bring forth new information that had not been asked for was noticed. For example, a patient may answer a question regarding her sleep pattern, but then go on to describe other symptoms that she has also been experiencing, e.g. 'No I'm not sleeping very well, and I get these terrible headaches all around the back of my head, I feel like I can't go on'. Unless interrupted by the GP, these elaborations of symptoms and accounts of related incidents or occurrences were coded as exposition.

Coding Interruptions

During some consultations GP and patient were talking at the same time as one another. Under these circumstances, the utterances of the most dominant party were coded. For example, exposition was only identified when doctors allowed patients to express their feelings or describe circumstances without interruption. When GPs interrupted patients, giving explanation, direction or checking, then exposition was not coded. Instead the mode of communication indicated by GPs' utterances was coded.

Unrelated Information, Chat and Non-speech

As consultations were selected on the basis of psychological complaints being the *main* presentations, some of the sample also

included interactions in which unrelated complaints were discussed, e.g. musculo-skeletal, respiratory. When such presentations could be clearly identified, by either GP or patient referring to them distinctly as separate issues, these were regarded as *unrelated information* and were not coded using Stiles' classifications. Similarly, when GP and patient engaged in conversation which was unrelated to any medical condition, e.g. talking about holidays or members of the family, this was coded as *unrelated chat*. Non speaking sections of the consultation which may occur during examination, while the doctor reads patient notes, leaves the room, or writes out a prescription were coded as *non-speech*.

Eighty-six audio-taped interactions were coded. These consultations and corresponding classifications are presented in Appendix E (Section one). Although checklist data were obtained for 115 consultations, there were no corresponding audio-recordings for 21 consultations due to GP recording errors and omissions. These included all the consultations provided by two GPs (GP 5, GP 32). A further eight consultations were excluded from the analysis as they were considered to be unrepresentative, e.g. patients with learning difficulties, third party consultations without the actual patient present.

With the aid of corresponding checklist information (previously discussed in Chapter five), relevant consultations were identified from the audio-tapes. Coding commenced after the initial greeting between doctor and patient, and ended when the patient left the consultation room. In addition to identifying exchanges, the investigator measured the duration of each exchange according to units of time on the counter facility of the cassette recorder used to listen to the audio-

tapes. In this way, verbal exchanges were recorded with regard to duration of time.

During coding the investigator noted a further use of the explanation exchange. According to Stiles (1992), explanation functions to educate patients about their illnesses and treatment procedures. It also serves to reassure and support patients by relieving their worry. As the study focuses on psychological presentations, these may include exchanges which involve comforting or empathising with the patient, e.g. 'This must be a very difficult time for you, especially now that your daughter has moved away'. The explanation exchange was also used to code the relaying of written information from consultants or hospital investigations, from doctor to patient.

Hypothesis

It is anticipated that investigation of the verbal interaction between doctor and patient will enable the process that mediates gender differences in management outcome to be identified. More specifically, it is predicted that during consultations with women more time will be spent on closed question exchanges and less time on exposition exchanges compared to consultations involving men.

Reliability Tests

In order to test the reliability of Stiles' classification system, a randomly selected sample of eight consultations were coded for a second time. Due to practical reasons, it was not possible for this to be carried out by a second coder. Therefore, they were coded by the author of the thesis approximately four months after the original coding. Kappa statistics and percentage agreements between coded consultations are presented in Table 7.2. Results show a high level of reliability, indicating that classifications were applied consistently

across the two coding sessions. Further detail of the reliability tests that were carried out are presented in Appendix E (Section two and three).

Table 7.2 : Kappa statistics and percentage agreements between coded consultations

Consultation	Kappa	Percentage Agreement
1 (GP 28, Patient 5)	0.74	80.00
2 (GP 29, Patient 5)	0.75	81.13
3 (GP 21, Patient 1)	0.80	73.81
4 (GP 1, Patient 4)	0.76	80.95
5 (GP 20, Patient 3)	0.91	92.86
6 (GP 1, Patient 7)	0.81	83.33
7 (GP 9, Patient 4)	1.00	100.00
8 (GP 30, Patient 4)	1.00	100.00

Coding The Content Of Verbal Exchanges

Three of the consultations included in the previous analysis were not content coded. These consultations involved patients talking to GPs about the complaints of members of their families. In these circumstances content of exchanges was relevant more to absent patients (for whom there was no checklist data) than to those who were present in consultations. As the Stiles classification system does not require attention to the content of consultations, these three consultations were not detected and were included in the analysis. It was assumed that they had a negligible impact on results. Eighty-three consultations involving psychological presentations were

content coded. These consultations and their corresponding classifications are presented in Appendix E (Section one).

The content of consultations was coded according to whether exchanges referred to *physical, psychological or circumstantial* aspects of patients' complaints. These three global categories were used to identify differences in the general type of information discussed by men and women and their GPs during consultations. Exchanges were classified as physical when they referred directly to physical aches and pains or disruption of biological functions such as sleeping, eating and bowel habits. Psychological exchanges were those that concentrated on patients' feelings, moods and emotions. Exchanges were classified as circumstantial when they dealt with neither physical or emotional aspects of complaints, but focused on the context or events in patients' lives that were related to their illnesses, e.g. work or marital problems. Table 7.3 shows examples for each possible classification using illustrations from the audio-taped data source.

Table 7.3 : Illustrations of each of the classifications used to code the content of consultations

Exposition
Physical : 'Since yesterday....I've had trouble breathing....its as if there's something there....some sort of restriction...'
Psychological : 'Its just this fear....and then these irrational thoughts like is life worth living.'
Circumstantial : 'I've been going through a bit of a rough patch with my son.'

Closed Questions
Physical : 'Do you get any pins and needles or numbness in your fingers ?'
Psychological : 'Do you find yourself tearful a lot of the time ?'
Circumstantial : 'How long have you been out of prison now ?'

Explanation
Physical : 'The symptoms that you've got....[are due to] a discharge of your autonomic nervous system.'
Psychological : '...It sounds very much as though what's happened to you is a psychological event rather than a physical illness'.
Circumstantial : 'The major problem in your life is your son.'

Checking
Physical : 'So you get off to sleep alright ?'
Psychological : 'But you get panic attacks you mentioned ?'
Circumstantial : 'But there's no new major problems with your wife ?'

Categories were considered to be broad enough to encompass more idiosyncratic elements of content but distinct enough to differentiate one type of content from another. Each consultation retained its profile according to Stiles' classifications, so that the content of closed questions, exposition, checking, and explanation exchanges was coded.

For example, each instance of a closed question was coded as closed question physical, psychological or circumstantial.

Exchanges that referred to management decisions were coded as *treatment*. Consequently, instruction was subsumed by this category, as these exchanges deal exclusively with telling patients how to manage their complaints. Similarly, instances of closed questions, exposition, checking, and explanation that involved communication about patient management were also reclassified as treatment exchanges. Treatment was distinguished from other kinds of exchanges as it was the process leading up to management rather than discussion of management itself that was most relevant to the study. By the time GPs give patients information about how to take medication, decisions about diagnoses and management have already taken place. Similarly, when consulting with patients with ongoing problems, references to treatment say little about the initial process that led to the patient receiving the particular management.

It was considered unnecessary to code the content of direction and inquiry classifications. As these exchanges occur exclusively in association with physical examinations and tests, content is always physical. However, for the purposes of this stage of the study, direction and inquiry exchanges were merged to form an *examination* exchange. They were not simply coded as physical content because the kind of information that can be gained from physical examination of patients was considered to be qualitatively different to that which can be obtained by asking patients questions, or giving patients opportunity to describe physical symptoms. For example, in contrast to verbal communication about symptoms, examinations usually involve physical exploration or interventions, sometimes with the aid of medical instruments. Sometimes the content of exchanges involved

the discussion of more than one topic. For these instances, the topic that featured most in the exchange was coded.

The total amount of time spent communicating about psychological and physical symptoms, circumstances relating to complaints, physical examination and treatment was calculated for each consultation using the tape counter facility. Each unit is equivalent to four seconds of actual time. Composite categories were formed by totalling all instances of communication about physical symptoms, psychological symptoms and circumstances, regardless of their Stiles classification. In this way each consultation could be described in terms of total number of physical, psychological and circumstantial communications irrespective of the fact that they were made up from different types of communication.

Hypothesis

It was anticipated that when not feeling positive towards patients, more time would be spent discussing feelings and emotional aspects of psychological complaints during consultations with women, while more time would be spent discussing physical and circumstantial aspects of psychological complaints with men. It was also expected that content differences that occurred with specific verbal exchanges would have implications for the roles of GPs and patients in the consultation process. For example content differences that occurred in exposition exchanges would imply that male and female patients presented different information about their complaints. Alternatively, content differences that occurred in closed questions or explanation exchanges, where GPs are more dominant, would indicate that GPs asked different questions and gave different explanations to men and women.

The characteristics of women tend to be more readily associated with psychological illnesses. Therefore, it is expected that when not feeling positive towards patients verbal communication between female patients and their GPs is likely to focus upon psychological symptoms to a significantly greater degree than for male patients. The content of exchanges between men and their GPs is expected to be focused more on physical or circumstantial aspects of psychological complaints.

Reliability Test

In order to test the reliability of the content classifications, the same sample of eight consultations that were randomly selected to test the reliability of using Stiles' coding scheme were coded for a second time using the content classifications. Again these were coded by the author of the thesis approximately four months after the original coding. Kappa statistics and percentage agreements between coded consultations are presented in Table 7.4. Results show a very high level of reliability, indicating that classifications were applied consistently across the two coding sessions. Further detail of the reliability tests that were carried out are presented in Appendix F (Sections one and two).

Table 7.4 : Kappa statistics and percentage agreements between coded consultations

Consultation	Kappa	Percentage Agreement
1 (GP 28, Patient 5)	1.00	100.00
2 (GP 29, Patient 5)	0.95	0.96
3 (GP 21, Patient 1)	1.00	100.00
4 (GP 1, Patient 4)	1.00	100.00
5 (GP 20, Patient 3)	0.94	0.96
6 (GP 1, Patient 7)	1.00	100.00
7 (GP 9, Patient 4)	1.00	100.00
8 (GP 30, Patient 4)	1.00	100.00

RESULTS

Identifying Verbal Exchanges

The amount of time spent on each verbal exchange was calculated for each consultation according to the counter facility on the cassette recorder. Each unit measured by the counter facility was equivalent to four seconds of actual time. Total time durations of consultations were also recorded. Table 7.5 shows mean durations and standard deviations, according to the counter facility, for each type of verbal exchange and total consultation. On average, most of the consultation time was taken up with exposition and explanation exchanges. The least time was spent on direction and inquiry.

Table 7.5 : Mean time spent on each type of verbal exchange

Verbal Exchanges	Mean Time Spent (Units)	SD	Approximate Mean Time Equivalents
Exposition	53.71	55.11	3 mins. 35.0 secs.
Closed Questions	21.06	21.73	1 min. 24.0 secs.
Checking	3.73	6.06	0 min. 15.0 secs.
Directions	1.00	2.23	0 min. 4.0 secs.
Inquiry	0.13	0.72	0 min. 0.5 secs.
Explanation	42.49	37.78	2 mins. 50.0 secs.
Instructions	3.45	4.53	0 min. 14.0 secs.
Total Consultation	145.98	93.87	9 mins. 45.0 secs.

Spearman's correlations were carried out to assess the relationships between verbal exchanges. Results are shown in Table 7.6. These indicate exchanges that are likely to occur with each other. Significant correlations were found between checking and closed questions, inquiry and directions, explanation and exposition, explanation and closed questions and instructions and directions.

Table 7.6 : Results of Spearman's correlations of verbal exchanges

Verbal Exchanges	1	2	3	4	5	6	7
	(r)	(r)	(r)	(r)	(r)	(r)	(r)
1 Exposition		0.09	0.07	-0.11	-0.07	0.45***	-0.04
2 Closed Questions			0.58***	-0.04	-0.09	0.26**	0.17
3 Checking				-0.09	-0.01	0.16	-0.1
4 Direction					0.28**	-0.01	0.35**
5 Inquiry						-0.03	-0.03
6 Explanation							0.09
7 Instruction							

*p < 0.05, **p < 0.01, ***p < 0.001, df = 84

Very few instances of inquiry exchanges were identified (Table 7.5). These exchanges were found to be significantly correlated with direction exchanges ($p < 0.009$, $df = 84$), (Table 7.6). This is because both are specifically associated with physical examination and testing procedures and are likely to occur alongside each other. Inquiry exchanges were added to direction exchanges to form a composite variable. As both exchanges occur during examination sections of consultations, adding them together means that the function of these exchanges is retained. Use of direction and inquiry exchanges indicates attention to physical symptoms of presentations and perhaps the pursuit of physical diagnoses of complaints.

Analysis Of Data

A two (gender : male or female) by two (feeling towards patients : feeling positive towards patient or not positive towards patient) analysis of variance was carried out on the data for each of the dependent variables (time spent on closed questions, exposition,

checking, explanation, direction and inquiry, instructions and total consultation).

Full output of analyses of variance are presented in Appendix E (Section four).

Analyses of variance failed to identify any significant interaction effects (Table 7.7). Main effects were found for gender (checking: $p < 0.05$, instructions: $p < 0.05$, df). Table 7.8 shows mean times spent on exchange categories for each of the interaction conditions. For each of the exchange categories, mean duration times were not significantly different enough across interaction conditions to indicate any gender x feeling towards patients effects. Table 7.9 shows mean duration times for significant gender effects. On average GPs spent more time checking what men told them during consultations than what women told them. However, they spent more time giving instructions to women than men.

Table 7.7 : Main effects and interaction effects for time spent on each of the verbal exchange categories

Verbal Exchanges	Main effect:	Main effect:	Interaction:
	Gender	Feeling	Gender x Feeling
	(F)	(F)	(F)
Closed questions	0.7	0.29	0.00
Exposition	0.47	0.60	0.25
Checking	5.98*	2.55	0.29
Direction & Inquiry	0.00	4.10	0.00
Explanation	1.86	0.40	0.20
Instructions	5.38*	0.04	0.22
Total consultation	0.01	0.00	0.73

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, df = 1

Table 7.8 : Mean times spent on verbal exchange categories for each of the interaction conditions

Verbal Exchanges	Interaction Conditions								
	Male: <u>SD</u> Feel positive n=17	Female: <u>SD</u> Feel positive n=45	Male: <u>SD</u> Not feel positive n=11	Female: <u>SD</u> Not feel positive n=13					
Closed questions	23.35	35.95	21.18	16.63	20.36	22.64	18.23	12.76	
Exposition	67.65	72.01	51.20	54.53	49.90	36.21	47.38	47.37	
Checking	4.47	7.75	2.47	3.17	8.36	10.76	3.23	4.47	
Direction & inquiry	0.76	2.02	0.78	1.87	2.00	3.77	2.08	3.59	
Explanation	39.59	22.04	40.15	34.82	35.36	29.29	60.38	62.23	
Instruction	2.12	2.57	4.18	4.91	1.36	2.54	4.46	5.77	
Total consultation	141.23	97.45	124.71	87.28	123.36	74.15	145.54	103.83	

Table 7.9 : Mean duration times for significant gender effects

Patient Gender	Verbal Exchanges	
	Checking	Instructions
Male	6.42	1.74
Female	2.85	4.32

Coding The Content Of Verbal Exchanges

Table 7.10 shows the mean time spent, (using the tape counter facility), and standard deviations for each of the verbal exchanges. For each type of verbal exchange, on average, most time was spent on discussion of patients' circumstances. Least time was taken by discussion of patients' feelings and emotions (psychological content).

Table 7.10 : Mean time spent on each of the verbal exchanges

Verbal Exchanges	Mean Time Spent (Units)	SD	Approximate Mean Time Equivalent
Closed Question (Ph)	4.40	6.25	0 min. 18 secs.
Closed Question (Ps)	3.05	5.39	0 min. 18 secs.
Closed Question (C)	11.36	20.89	0 min. 45 secs.
Exposition (Ph)	7.37	8.90	0 min. 29 secs.
Exposition (Ps)	6.41	12.05	0 min. 26 secs.
Exposition (C)	29.44	41.42	2 mins. 0 secs.
Explanation (Ph)	5.11	9.46	0 min. 20 secs.
Explanation (Ps)	4.66	8.70	0 min. 19 secs.
Explanation (C)	14.20	26.30	0 min. 57 secs.
Checking (Ph)	0.96	2.47	0 min. 4 secs.
Checking (Ps)	0.52	2.51	0 min. 2 secs.
Checking (C)	2.24	5.50	0 min. 9 secs.
Examination	1.04	2.43	0 min. 4 secs.
Treatment	30.60	30.72	2 mins. 2 secs.
Total Physical	17.84	20.14	1 min. 11 secs.
Total Psychological	14.64	22.72	0 min. 58 secs.
Total Circumstantial	57.25	69.53	3 mins. 48 secs.
Total Consultation	121.37	85.36	8 mins. 5 secs.

Note

Ph - Physical, Ps - Psychological, C - Circumstantial

Analysis Of Data

A two (gender : male or female) by two (Feeling towards patients : feeling positive towards patient or not feeling positive towards patient) analysis of variance was carried out on the data for each of the dependent variables (time spent on closed questions; physical, psychological, circumstantial, exposition; physical, psychological, circumstantial checking; physical, psychological, circumstantial, explanation; physical, psychological, circumstantial, direction and inquiry; physical, psychological, circumstantial, instructions; physical, psychological, circumstantial and total consultation; physical, psychological, circumstantial). Full output of analyses of variance are presented in Appendix F (Section three).

Analyses of variance failed to find any significant main or interaction effects (Table 7.11). Table 7.12 shows mean duration times spent on exchange categories for each of the interaction conditions. For each of the exchange categories, mean duration times were not significantly different across interaction conditions to indicate any gender x feeling effects.

Table 7.11 : Main effects and interaction effects for time spent on each of the exchange categories

Verbal Exchanges			
	Main effect: Gender	Main effect: Feeling	Interaction effect: Gender x Feeling
	(F)	(F)	(F)
Closed questions: Physical	2.02	1.23	0.53
Closed questions: Psychological	0.38	0.26	0.97
Closed questions: Circumstantial	1.58	0.86	0.02
Exposition: Physical	0.46	0.15	0.43
Exposition: Psychological	1.55	0.27	0.24
Exposition: Circumstantial	0.00	0.81	0.18
Checking: Physical	0.02	0.36	0.23
Checking: Psychological	2.39	2.83	2.71
Checking: Circumstantial	1.41	0.39	0.38
Explanation: Physical	0.25	1.81	0.26
Explanation: Psychological	2.82	0.06	0.1
Explanation: Circumstantial	1.86	0.49	1.72
Examination	0.21	3.5	0.01
Treatment	0.46	0.11	0.47
Total physical	0.15	1.48	0.42
Total psychological	1.67	0.46	0.25
Total circumstantial	0.00	0.25	0.42
Total consultation	0.54	0.00	0.24

All non-significant, df=1

Table 7.12 : Mean times spent on exchange categories for each of the interaction conditions

Verbal Exchanges	Male:	SD	Female:	SD	Male:	SD	Female:	SD
	Feel positive n=18		Feel positive n=42		Not feel positive n=10		Not feel positive n=13	
Closed questions (Ph)	1.72	2.37	5.09	6.10	4.60	5.21	5.69	7.56
Closed questions (Ps)	1.44	2.99	3.64	4.55	3.50	10.04	3.00	5.84
Closed questions (C)	16.67	36.39	10.76	14.05	12.50	19.03	5.08	8.49
Exposition (Ph)	7.22	8.11	7.17	8.19	9.60	12.00	6.54	10.29
Exposition (Ps)	2.5	4.34	7.81	14.40	5.60	11.28	7.92	11.54
Exposition (Ps)	34.72	48.05	30.52	41.94	20.60	23.87	25.46	43.42
Checking (Ph)	0.61	1.50	1.00	3.11	1.30	2.00	1.08	1.44
Checking (Ps)	0.22	0.55	0.28	0.92	2.30	6.93	0.31	0.85
Checking (C)	2.55	5.68	1.76	4.50	4.30	8.92	1.77	5.21
Explanation (Ph)	3.17	8.43	4.76	9.54	6.80	11.73	7.61	9.02
Explanation (Ps)	2.67	5.83	5.40	9.22	2.20	5.03	6.92	12.20
Explanation (C)	12.39	17.76	12.71	18.51	8.30	14.35	26.08	52.54
Examination	0.5	1.65	0.83	1.92	1.70	3.46	1.92	3.59
Treatment	31.17	21.22	31.14	34.34	23.10	24.84	33.85	35.51
Total physical	12.72	15.93	18.02	19.27	22.30	25.28	20.92	24.45
Total psychological	6.83	10.17	17.14	24.89	13.60	20.07	18.15	22.43
Total circumstantial	66.33	81.26	55.76	60.38	45.70	50.59	58.38	95.19
Total consultation	117.55	80.23	122.9	89.78	106.40	60.34	133.23	100.21

Note

Ph - Physical, Ps - Psychological, C - Circumstantial

DISCUSSION

Analysis of checklist data indicated that depending on whether GPs feel positive or not positive towards patients men and women presenting with psychological problems receive significantly different management. Using corresponding audio-taped data, the aim of this chapter was to identify the consultation process that mediated this disparity. This was addressed by looking for gender differences in communication under stressful (not feeling positive) and non stressful (feeling positive) conditions. A well established classification system specifically developed to investigate communication in general practice consultations was used to code exchanges according to their functions for doctor and patient.

On average, exposition and explanation exchanges occupied most consultation time, while direction and inquiry featured very little. This kind of exchange profile may be specific to psychological presentations, where emphasis is more likely to be on discussion of feelings and emotions rather than on physical investigation of organic symptoms.

Some exchanges were found to occur significantly with each other. The relationship between checking and closed questions suggests that once patients have responded to closed questions, GPs are likely to check that they have understood the information given. Alternatively, after establishing understanding of patients' complaints via checking exchanges, GPs may question patients directly about aspects that they feel to be most relevant to diagnoses and management. Direction and inquiry exchanges are likely to occur together because of their specific association with physical examination. Instructions were also found to occur with directions. After physically examining patients, guiding

them through the procedure using directions, GPs are likely to have gained some idea of patients' problems and are thus in a position to give instructions about management.

Results indicated that explanation exchanges were significantly likely to occur with exposition and closed questions. The relationship between explanation and exposition could be explained in a number of ways. After giving patients opportunity to talk freely about their problems, GPs may gain enough information about symptoms to explain the nature of problems to their patients. Alternatively, the explanation exchange may serve the function of reassuring and comforting patients who have disclosed emotions or difficult feelings to their doctors. This explanation may be particularly relevant to psychological presentations. Where closed questions are concerned, explanation may occur again as a result of gathering sufficient information in order to relay the nature of the problems to patients.

There were no significant gender differences in the type of communication used when feeling positive or not positive towards patients. Main gender effects were found for time spent on checking and instruction exchanges. Men received more of the former while women were given more of the latter. The tendency for GPs to spend more time checking what men have told them has at least two implications. Firstly, it could indicate that GPs pay more attention to the psychological presentations of men and carry out more thorough examinations of their problems. Alternatively, GPs may need to spend more time checking as men are unable to express their symptoms as clearly as women. Female patients may receive more instruction than men because GPs believe that they need more guidance on how to comply with management. On the other hand it could be that the type

and dosage of drugs prescribed to women are more complex and therefore require more instruction.

As with the type of communication used, there were no significant gender differences in the content of verbal exchanges when feeling positive or not positive towards patients. In addition there were no main effects found for either gender or decisional stress. Results indicate that irrespective of the type of verbal exchange, most consultation time was spent on discussion of circumstantial aspects of patients' problems rather than psychological or physical aspects. Physical aches and pains may be considered to be less relevant to the diagnoses and management of psychological complaints as they may be perceived by GPs to have psychological rather than genuine organic bases. Compared to circumstances, relatively little time was spent discussing patients' feelings and emotions. This finding may have at least two implications. Due to the organisation of general practice, GPs may not have time to probe, listen to and discuss emotional and personal bases of patients' problems. Consequently, patients may be discouraged or not given opportunity to dwell on these aspects. Alternatively, GPs may lack the skills necessary to gain information about the psychological dispositions of their patients or to discuss relevant feelings and emotions.

Failure to identify process differences may have been the result of a number of factors. On a practical level, coding systems used may have been problematic. Stiles' methodology for the identification of consultations goals may not have been sensitive enough to capture the multifunctionality of more complex verbal exchanges. It has already been noted that the explanation exchange was used by GPs to reassure and empathise with patients. In this way, explanation may serve to encourage patient exposition rather than to inform them of

their condition, e.g. 'I'm sure you're under a lot of stress and I'm sure more than you're telling me. I think you try to bottle it up sometimes...'. Also there may be individual differences both with regard to GPs and types of complaint in the way exchanges are used. Having developed their own styles of consulting, GPs may be inclined to use some exchanges more than others, regardless of liking for or gender of patients.

Although content coding allowed exchanges to be explored at two different levels, the categories employed may have been too simplistic. Broad categories were used to classify a wide range of subjects. For example, it may have been more appropriate to make some distinction between the different types of circumstances presented, such as those surrounding personal relationships, and those associated with work conditions. As coding was carried out on audio-taped consultations, it was only possible to examine verbal aspects of the interaction process. Analysis of non-verbal communication may have given rise to a more dynamic representation of consultation behaviour.

Alternatively, it may not be possible to identify process differences that explain why when not feeling positive towards patients women are prescribed drugs and men are given advice or referred because these differences are not *available* for identification. Instead of being observable disparities that can be coded with the use of classification tools, they may be implicit processes that cannot be detected. Some support for this idea can be seen in the work of researchers interested in the policies that decision makers use (Einhorn, 1979). Under conditions of cognitive demand such as time pressure and information load, it is generally accepted that individuals use non-compensatory rather than compensatory policies. Compensatory policies are

preferred to non-compensatory policies as they involve search for and use of a constant number of cues for each decision alternative. In this way, the effects of one cue are not dependent on the levels of others. In contrast, individuals using non-compensatory strategies use variable amounts of information for each decision alternative. The effects of one cue changes as levels of other cues change.

Results of a study carried out by Billings and Marcus (1983) suggest that although individuals may request the same amount of information prior to making decisions, decision outcomes may differ depending on how this information is weighted and combined. It could be suggested that when not feeling positive towards patients, although GPs use the same style of communication and discuss similar aspects of patients' complaints, they weigh and combine information differently for male and female patients.

Billings and Marcus (1983) have put forward a number of examples of non-compensatory strategies. They suggest that an initial piece of information may only be considered if a second piece of information is present. Applied to general practice decision making, tiredness may only be considered to be an indication of a psychological problem for a male patient if it is followed by an indication of tearfulness. For female patients GPs may not require this second indication. This leads to a second strategy in which the presence of one piece of information guides decision making. In this way, tiredness or tearfulness alone would provide enough information for GPs to decide that a female patient had a psychological complaint.

Therefore, consultations may include a similar type and content of verbal communication, but when not feeling positive towards patients

information collected is likely to be assigned different weightings or levels of importance depending on the gender of patients.

Chapter 8

PRELIMINARY EXAMINATION OF PSYCHOLOGICAL COMPLAINTS AND THE FEELING TOWARDS PATIENT VARIABLE : ALTERNATIVE EXPLANATIONS

INTRODUCTION

As discussed in Chapter six one way to interpret the feeling towards patients variable is to see it as feeling positive or not positive, which in turn relates to conditions of non-stress or stress. Due to the thesis' emphasis on the cognitive miser perspective, it was expected that in the not positive or cognitive load condition stereotyping of patients' complaints led to different management outcomes for men and women. However the not feeling positive response may be an unreliable indicator of negative feelings towards patients (due to its inclusion of the neutral category). In this chapter alternative interpretations of the feeling towards patients variable are explored by interrogating a selected sample of audio-taped psychological consultations that were included in the log-linear analysis (Chapter 6).

It was already established in Chapter six that for psychological complaints the feeling towards patients variable was related to time spent with patients. Although across all complaint categories, feelings towards patients were related to patients' social class, attitude towards treatment and whether they paid for prescriptions, for psychological complaints attitude towards treatment was the only relationship retained. However, while this finding minimises the possibility that feeling towards patients is indicative of an epiphenomenon such as social class or age, it does not rule out more subtle and complex phenomenon.

The examination of audio-taped consultations described in this chapter is by no means extensive. Due to the constraints of the thesis

it was only possible to explore a small number of consultations. The examination is restricted to the four cells most relevant to the log-linear findings (feel positive : male - drug, female - no drug; not feel positive : male - no drug, female - drug). Consultations were not analysed according to an established scheme as the aim of the study was to explore ideas for future research rather than to give a comprehensive account of the data.

METHOD

A sample of audio-taped consultations involving psychological complaints were selected from the four most relevant cells that featured in the log-linear analysis (Chapter 6). These are shown in Table 8.1. Consultations were matched across individual GPs as far as possible. This was carried out to discount variation in GP style of consulting from explaining differences across consultations. In this way, for the feel positive condition the consultations of GPs four, fourteen and twenty-one were compared for male and female patients. This was not possible for the not feel positive condition where only one GP had consultations in both cells. Two other GPs (GP 32, GP 3) had contributed checklist information that fell into both cells but had no corresponding audio-tapes for these consultations.

Table 8.1 : Audio-taped consultations selected for further analysis

Feeling Towards Patients	Management Decision	
	Drug	No drug
	Male	Female
Positive	GP: 4 (Patient 5, anxiety) 14 (Patient 4, depression) 21 (Patient 4, stress)	GP: 4 (Patient 4, depression) 14 (Patient 2, marriage problems) 21 (Patient 1, depression)
	No Drug	Drug
Not Positive	GP: 1 (Patient 3, anxiety) 21 (Patient 5, bereavement) 28 (Patient 1, stress)	GP: 1 (Patient 2, anxiety) 21 (Patient 6, depression) 30 (Patient 1, depression)

Note : Specific patients and their presenting complaints/diagnoses are shown in brackets

Procedure

Audio-taped consultations were not transcribed. Selected consultations were listened to and detailed notes about the interactions were made. Direct comparisons between consultations carried out with male and female patients were made in the feel positive condition in order to identify any aspects of consultations that could possibly account for differences in management outcome. Similar comparisons were made in the not feel positive condition. In addition consultations during which GPs reported feeling positive towards patients were compared to those in which GPs felt not positive, irrespective of patient gender, in order to establish any distinguishing features between the two sorts of consultations.

RESULTS AND DISCUSSION

Examination of the audio-taped consultations gave rise to a number of preliminary observations that contribute to understanding of the log-linear results.

Influence Of Random Factors

Before turning to more interesting and complex explanations of the data it is necessary to consider the influence of random factors on the results of the log-linear analysis. First it could be suggested that in the feel positive condition men had problems that required prescriptions while women had problems that did not. Similarly, in the not feel positive condition women could have had complaints that warranted prescriptions compared to complaints presented by men.

In order to address this issue it is necessary to look at the specific complaints presented and recorded under the psychological complaints category, these are show in Table 8.2.

Table 8.2 : Frequencies of specific presentations included in the psychological complaints category

Presentation	No. of Women	No. of Men	Total
Depression	25 (83.33%)	5 (16.67%)	30 (100%)
Anxiety	14 (82.35%)	3 (17.65%)	17 (100%)
Bereavement	5 (83.33%)	1 (16.67%)	6 (100%)
Addiction	2 (33.33%)	4 (66.67%)	6 (100%)
Stress	1 (20.00%)	4 (80.00%)	5 (100%)
Marital problems	3 (100.00%)	0 (0.00%)	3 (100%)
Anxiety re physical complaints	1 (33.33%)	2 (66.67%)	3 (100%)
Insomnia	3 (100.00%)	0 (0.00%)	3 (100%)
Unclassified	1 (33.33%)	2 (66.67%)	3 (100%)
Phobia	0 (0.00%)	2 (100.00%)	2 (100%)
Eating Disorder	2 (100.00%)	0 (0.00%)	2 (100%)
Mania	0 (0.00%)	1 (100.00%)	1 (100%)
Hypochondria	0 (0.00%)	1 (100.00%)	1 (100%)
Tiredness	0 (0.00%)	1 (100.00%)	1 (100%)
Exposure	0 (0.00%)	1 (100.00%)	1 (100%)
Family crisis	0 (0.00%)	1 (100.00%)	1 (100%)
Harassment	1 (100.00%)	0 (0.00%)	1 (100%)
Total	58	28	86

Note : Unclassified category includes : anxiety re wife, worries re autistic son, concern re wife. Although these consultations were included in the log-linear analysis, they were not content coded (Chapter 7) as they involved members of the patient's family rather than the patient him/herself

Table 8.2 indicates that depression and anxiety were the most frequently presented psychological complaints and that these were more often presented by women than men. Men featured more frequently in consultations involving stress, addiction (including drugs, alcohol and tranquillisers) and anxiety about physical complaints such as dyspepsia and bowel disorders. It could be suggested that this difference in the specific kind of problems presented explains why women in the not feel positive condition are prescribed more drugs than men. It might be assumed that

depression may require prescription more often than a problem such as addiction. However, such an assumption is misleading as patients who have problems with addiction are likely to need prescriptions of alternative drugs, e.g. methadone in the case of heroin addiction or sleeping pills in the case of alcoholism.

On examination of the audio-taped consultations it was noted that the decision to prescribe drugs was dependent on the stage of the patient's illness. This observation sheds some light on the suggestion made earlier so that in the feel positive condition men's problems require drug prescriptions because they are presenting at the *initial* stages of their complaints. In contrast the women who were audio-taped may have been at *later* stages of their complaints where they had already stopped taking medication but still visited the doctor for follow up care. This was found to be the case with GP four's patients in the feel positive condition and GP one and GP twenty-one's patients in the not feel positive condition.

Comparison Between Consultations In Which GPs Reported Feeling Positive And Not Positive Towards Patients

In order to try to establish what constitutes feeling positive and not positive towards patients consultations in which GPs reported feeling positive and not positive towards patients were compared. The most notable difference between the two sorts of consultation was that patients were more passive and unassertive in the feel positive condition than in the not feel positive. In the feel positive condition none of the patients asked for a specific treatment. Only one patient (GP 4, patient 5) made some attempt to challenge the GP's opinion that the patient was of a 'nervous' disposition, but followed this by saying that the GP knew best. Consultations in the not feel positive condition appeared to run less smoothly than those in the feel positive

condition. This was attributed to the observation that four out of the six patients in this condition either requested a specific treatment (GP 21, patient 5; GP 28, patient 1) or were reluctant to accept the GP's management decision (GP 21, patient six; GP 30, patient one).

Gender Differences In The Not Feel Positive Condition

The specific requests were made for psychotherapy and counselling and came from male patients. GP 21's patient five was discouraged from having psychotherapy as the GP felt this to be unsuitable. GP 28's patient one was put on the waiting list for counselling at the GP's surgery and also given additional advice about where to go if he needed to see someone sooner. Reluctance to accept the GP's management decision was expressed by two female patients in response to anti-depressants. GP 21's patient six was reluctant as she had previously been on tranquillisers and found this very difficult to get off. She was reassured by the GP that although they did have side effects, the anti-depressants that he was going to prescribe would not be addictive. GP 30's patient one was reluctant to take anti-depressants as although she was having difficulty sleeping she was worried that the tablets would 'knock her out' and she would not be able to hear her young baby if it woke up during the night. The GP suggested that even though this was a risk that if she did not take the tablets she may become more depressed and tired.

Gender Differences In The Feel Positive Condition

In the feel positive condition, GPs were noticed to have a different approach to the psychological complaints of men and women. More specifically the complaints of men were somatised or discussed in terms of their physical manifestations rather than underlying emotions. Although patient five in GP four's consultation attempted to elaborate on his panic attacks, the GP dominated the consultation

referring to the patient's problem as an unsettled or 'nervous' stomach. The patient took this to mean that he had a stomach 'bug' and expressed surprise that it could make him feel so ill. In GP 21's consultation with patient four there was no discussion of the stressful factors in the patient's life or the patient's feelings. Instead the consultation centred around the patient's breathing. In contrast the complaints of women were very much emotionalised even though there was a physical element to them. Here there was much more emphasis on the patient's feelings and psychological state. GP four's patient four presented with irritable bowel syndrome and GP 21's patient one presented with depression and diabetes. There was less of a distinction between GP 14's male and female patients. This somatising and emotionalising distinction was not observed in the not feel positive conditions described above. Another interesting observation was that all three female patients in this condition were given advice about non drug approaches to their complaints in contrast to male patients who were not offered information. GP four's patient was given an exercise sheet, GP 14's patient was told about marriage guidance counselling and GP 21's patient was advised about joining local women's groups. This information giving was unique to women in the feel positive condition, it did not occur in the not feel positive condition for male or female patients.

Implications Of Results

The aim of this chapter was to explore alternative explanations of the feeling towards patients variable and its effects on the management of male and female patients. From this preliminary analysis it could be suggested that GP's feelings are dependent on their control over the consultation. Where GPs indicated positive feelings towards patients, there were no direct requests for specific treatments or challenges to the GPs' treatment decisions. In contrast, where GPs

indicated feeling not positive towards patients (including the neutral response) there were specific requests and also incidences of reluctance to accept the GPs' management decisions.

If feeling positive or not positive are interpreted as non-stress or stress/load conditions then the cognitive miser approach predicts that stereotypes are more likely to be used in the not feel positive condition. However, observations made in this chapter indicate that stereotyping of male and female patients occurs when GPs feel positive towards patients. In this condition women's complaints were emotionalised as the GP concentrated on patients' feelings and emotions even though the two patients concerned presented with physical aspects of their complaints. The complaints of men on the other hand were somatised, including little or no reference to psychological state even though anxiety and stress were diagnosed.

Observations made in the not feel positive condition are more difficult to interpret. It could be suggested that all three women were prescribed anti-depressants on the basis of a stereotypic association of women with psychological instability and need for drugs. Although it could be argued that men did not receive drugs because they had specifically requested non drug treatments, it must be remembered that women were reluctant to take medication for their complaints. Therefore the difference in treatment cannot be explained away in terms of differential patient needs. At the same time it was noted earlier that GPs did not differ significantly in their approach to consultations with men and women in the not feel positive condition. In this way it could be suggested that when GPs feel neutral or not positive towards patients men and women are dealt with in a similar way and treatment differences can be accounted for by random factors, such as men being at later stages of their illnesses.

This chapter gives a brief and tentative view of a small selection of data that featured in the log-linear analysis in order to explore alternative interpretations of the feeling towards patients variable and its implications for the management of men and women presenting with psychological complaints. In order to gain clarification and support for some of the issues raised it is necessary to examine a larger selection of audio-taped consultations across all eight of the cells that featured in the log-linear analysis. This would also enable a better assessment of the influence of random factors to be made. Although at this stage observations do not strongly dispute the cognitive miser approach, they raise interesting questions and establish new directions for future qualitative research in this area.

The aim of this final chapter of the thesis is twofold. Its initial function is to give a summary of the theoretical development of the thesis and to highlight the main findings from the series of studies carried out. Secondly, the chapter addresses a number of issues arising from these findings and gives some attention to theoretical questions raised by the research.

Theoretical Development Of The Thesis

Decisional Stress

The thesis set out to identify non-clinical variables employed in medical decision making and to explore their implications for patient management. It was anticipated that the decisional conflict approach would provide a theoretical basis for predicting when non-clinical variables were most likely to enter in to the decision making process. According to Janis and Mann (1977) decisional conflict is likely to be experienced when individuals have to make consequential decisions and are aware that there may be serious consequences from whatever courses of action they take.

Although Janis and Mann suggest that the most appropriate way to deal with these decisions is to make thorough searches and appraisals of relevant information, they recognise that under conditions of constraint, such as time pressure and uncertainty, this may not be possible. Consequently conflict theory predicts that individuals are likely to experience feelings of decisional stress. This places considerable cognitive demand or load on already restricted information processing capacity. As a result of the physical and psychological discomfort associated with decisional stress, conflict

theory suggests that individuals are motivated to simplify decision tasks. This can be achieved by relying on stereotypes which lead individuals to selectively attend to information that confirms their expectations.

Stereotyping and the Cognitive Miser Approach

A cognitive miser approach to stereotyping was adopted to make an explicit link between decisional stress and the influence of non-clinical variables. This approach suggests that individuals have limited information processing capacities. It therefore predicts that under conditions of cognitive demand individuals preferentially encode information that confirms their expectations as this is easier to assimilate into existing schematic frameworks than schema inconsistent information.

It was recognised that GPs may refer to a number of non-clinical variables, including social class, age or attitude towards treatment when deciding how to manage patients. However, the focus of the thesis was on the gender of the patient and the use of gender stereotypes in management decision making. Patient gender was chosen on the basis of an established body of literature which shows that men and women are diagnosed and managed differently when presenting with similar complaints (e.g. Verbrugge and Steiner 1981). It was also chosen on the basis of interview responses of GPs who were able to put forward specific ways in which male and female patients consulted with them, in terms of frequency of attendance, type of symptoms presented and style of presentations (Chapter four)

Deaux and Major's Interactional Model

Deaux and Major's model (1987) was adopted in order to explain the context in which gender differences in management occur. The

authors suggest that gender stereotypes are translated into differential management for men and women through an interactive process between doctor and patient. Once GPs' stereotypes have been activated they are likely to be communicated to patients via the doctor-patient interaction. The model predicts that due to the behavioural constraint imposed by the consultation setting and also the status of doctors, men and women are likely to behaviourally confirm GPs' expectations. Deaux and Major suggest that behavioural confirmation feeds back to GPs, reinforcing their initial expectations and thus maintaining gender stereotypes.

Therefore, three main theoretical approaches to medical decision making were adopted in the thesis. The decisional conflict model established decisional stress as a cognitive load condition which motivated GPs to simplify their decision making. The cognitive miser approach explained how decisions were simplified by selectively seeking and appraising information consistent with stereotypic expectations. Finally, Deaux and major's model (1987) placed this cognitive account of decision making in an interactional context which recognised the role of patient as well as doctor.

Studies and their aim

Interview Studies

A semi-structured interview protocol was designed to identify and explore non-clinical variables which may influence decision making in general practice. GPs were asked about the influence of a number of patient characteristics, including patient gender and also about the impact of stressful conditions such as time pressure and uncertainty. Content analysis was carried out on interview responses in order to explore the range and prevalence of management strategies used in response to a common set of patient and logistic variables. The second

analysis of interview data explored responses to the question of how patient gender influenced decision making in order to establish a set of collective GP stereotypes.

Log-Linear Analysis of Checklist Data

Log-linear analysis was carried out on checklist data in order to investigate the interaction between patient gender, management decision, three measures of decisional stress and a measure of feelings towards patients. These measures included time spent with patients, feelings towards patients, certainty of diagnosis and certainty of management. The effects of time pressure and uncertainty on management decisions are well established in medical literature and are generally associated with lower standards of care and more frequent prescribing. The influence of doctors' feelings towards patients on the way patients are managed is less explicit. However doctors have written about their feelings of dislike towards certain types of patient who provoke feelings of frustration and irritation.

Drawing on Simon's predictions about the influence of emotion on cognition (1967), it was suggested that uncomfortable feelings towards patients prevented GPs from carrying out thorough search and appraisal of relevant information. As with time pressure and uncertainty it was presumed that the arousal of negative emotions acted as load or demand on processing capacity. This was expected to create feelings of stress or anxiety in GPs who were aware that important decisions had to be made but were also aware that they could not carry out the thorough information searches necessary to arrive at the most appropriate management decisions. Simon (1976) suggests that under such stressful conditions, individuals act adaptively by responding in ways that terminate stress. It was expected that GPs, would rely on gender stereotypes in order to arrive

at management decisions and thereby end consultations and feelings of stress.

Coding Communication from Audio-taped Consultations

In addition to completing checklists for each patient seen across approximately six surgeries, GPs provided audio-tapes of these consultations. Audio-taped data were analysed in order to explain findings from log-linear analysis of checklist data. Verbal communication between doctor and patient was coded at two levels. The functional style of communication was classified according to Stiles' verbal exchanges. It was expected that GPs would spend more time on closed questions with women than with men as this allows them to collect hypothesis confirming information. The content of communication was also coded as it was recognised that GPs may use the same style of communication with men and women but discuss different aspects of their complaints. Due to the more frequent association of women with psychological illness, it was expected that more consultation time would be spent discussing feelings and emotions (psychological symptoms) during consultations with women than with men. During consultations with men, it was expected that more time would be spent discussing physical and circumstantial aspects of complaints than during consultations with women.

Examination of the Feeling Towards Patients Variable

This was a preliminary study that was carried out to examine alternative interpretations of the feeling towards patients variable and its influence on the management of men and women. A selection of audio-taped psychological consultations that corresponded to consultation data included in the log-linear analysis was investigated and key observations put forward.

Summary of Major Findings

Interview Studies

Responses obtained during exploratory interviews with GPs supported the relevance of decisional conflict theory to decisions made in general practice. The majority of GPs reported feeling under time pressure and feeling uncertain about how to manage patients' complaints during their consultations. Under these conditions, GPs reported using simplifying strategies in order to arrive at management decisions. Some GPs referred to the influence of patient characteristics such as age and social class on decision making. These simplifying strategies were likened to the coping responses of defensive avoidance and hypervigilance. In the second interview study GP stereotypes about the behaviour of male and female patients were identified. These generally referred to gender differences in frequency of attendance, type of symptoms presented and style of presentation. Some GPs also suggested ways in which their own behaviour differed depending on whether patients were male or female.

Log-linear Analysis of Checklist Data

Significant interactions between patient gender, feeling towards patients and management were found for psychological and musculo-skeletal complaints. When not feeling positive towards patients, women were prescribed drugs while men were more likely to be given advice or referral. When feeling positive towards patients this pattern was reversed. GPs were more likely to prescribe drugs for men and give non-drug treatments to women. These results were explained with reference to gender stereotypes. It was suggested that when not feeling positive towards patients GPs referred to the well known management association of women with psycho tropic drugs in order to arrive at management decisions. When managing musculo-

skeletal complaints it was suggested that under conditions of decisional stress women were more frequently prescribed drugs as GPs interpreted their symptoms as psychological in origin. Alternatively it was suggested that GPs prescribed pain killers more frequently for women as they assumed that were less able than men to tolerate physical discomfort.

Coding Communication from Audio-taped Consultation

Contrary to expectations, analyses of audio-taped consultations were unable to identify consultation processes to explain differences in management outcome when not feeling positive towards patients. There were no significant differences in the amount of time spent on exchanges such as exposition or closed questions, or on the amount of time spent on discussing physical, psychological or circumstantial aspects of complaints.

Examination of Selected Audio-taped Psychological Consultations

Comparison of consultations in which GPs reported feeling positive or not positive towards patients indicated that feelings may be related to the GP's control over the consultation particularly in terms of the management decision made. Feeling positive was associated with patients who accepted their decisions while not feeling positive was related to patients who made requests for specific treatment or were reluctant to accept the GP's suggested form of management. In the feel positive condition there was a tendency for GPs to somatise men's complaints, but to emphasis the emotional aspects of women's problems, suggesting reference to stereotypes. This was not found in the not feel positive condition.

Issues Arising From Studies

Measurement of Decisional Stress

The application of decisional conflict theory to decision making in general practice was not without problems. One of the main difficulties was deciding upon how to measure decisional stress. Due to the structure of the Medical Decision Making Project measures of decision stress were restricted to information that could be collected at the same time as audio-taping consultations, and would take up minimal surgery time. Three measures of decisional stress and a measure of feeling towards patients were used and these were tested separately for interaction effects with gender and management. However these measures were found to interrelate. Across all complaints feelings towards patients was related to certainty of diagnosis and management, as was time spent with patients (Chapter six). So instead of being divided into separate forms, decisional stress may be a dynamic experience made up of a combination of stresses. Since the research was carried out, a decision conflict scale has been developed by O'Connor (1995). Although so far this has only been used to assess patients' feelings about decisions they have made about their health care, this may also be relevant to the measurement of GPs' decision stress.

Inability to Identify Consultation Processes to Explain

Gender Differences in Management

Although when not feeling positive towards patients significant differences in management were found for men and women, the consultation processes to explain this disparity could not be found. This may be accounted for in at least three ways. Firstly, it is possible that results of the log-linear analysis (Chapter six) are confounded, although efforts to discount the effects of individual differences and extraneous patient variables such as age and social class have been

made. If the results of log-linear analysis do reflect genuine differences in the treatment of men and women when feeling positive and not positive towards patients, the inability to identify process differences could be due to the type of coding or classification systems used. These may have not been sensitive enough to capture differences in style or content of communication. However, on balance this seems unlikely. The use of Stiles' classification system is well established in general practice contexts and was shown to be reliable (Chapter seven). The classification system for coding the content of communication was also shown to be reliable (Chapter seven). Coding according to functional style and content of communication were both relevant to the theoretical approach adopted in the thesis. It was anticipated that GPs would spend more time during consultations with women asking closed questions and referring to feelings and emotions as a means of confirming their stereotypical expectations and arriving at management decisions.

Alternatively, it may not be possible to identify process differences that explain why women are prescribed drugs and men are given advice or referral because these differences are not *available* for identification. Instead of being observable disparities that can be coded with the use of classification tools, they may be implicit processes that cannot be detected. Although management differences may be best explained by reference to gender stereotypes, evidence of stereotyping may not be observable from the communication between GP and patient. This idea contrasts to the cognitive miser paradigm which assumes that the use of stereotypes can be detected by observing the information that individuals selectively encode. Results of a study carried out by Billings and Marcus (1983) suggest that although individuals' may request the same amount of information prior to making decisions, decision outcomes may differ

depending on how this information is weighted and combined. In this way stereotyping does not influence the sort of information that is encoded but the way that this information is used once it has already been encoded. It could be suggested that when not feeling positive towards patients and therefore experiencing cognitive load, although GPs use the same style of communication and discuss similar aspects of patients' complaints, they weigh and combine information differently for male and female patients.

Implications of more drug Prescribing for Women

Management decisions were referred to as either drug or non-drug based. This distinction was particularly relevant to the management of psychological complaints as researchers have generally investigated treatment differences in these terms. Consistent with expectations, when GPs did not feel positively towards patients women were prescribed significantly more drugs than men were. This was explained in terms of the greater association of women with psychological presentations and psycho tropic drugs.

The general finding that women receive twice as many psycho tropic drugs as men has at least two implications. Some researchers have understood this to mean that women are over serviced and are receiving more drugs than are actually warranted by their complaints. Alternatively, men may be under serviced and denied drugs that they could benefit from. Results of analyses described in the thesis suggest that when not feeling positive towards patients women were more likely than men to be prescribed drugs. If these decisions were made on the basis of stereotypic associations rather than on individual needs women are likely to have been over prescribed drugs. However, men may have been denied prescriptions because of the

disassociation of men with psychological complaints and psychotropic management.

Explaining Management Differences in the Absence of Cognitive load

Management differences in the treatment of men and women when GPs were feeling positive towards patients were somewhat unexpected and difficult to explain. Under conditions of low cognitive demand decisional conflict theory predicts that GPs are less likely to rely on stereotypes and more likely to attend to individuating information. It was presumed that the complaints included in the log-linear analysis were gender neutral. In the absence of cognitive load it was expected that there would be no differences in the treatment of men and women. Unexpected differences in the treatment of men and women may be explained in at least two ways.

Under non-stressful conditions disparity may reflect genuine differences in the needs of men and women. With comparatively less restrictions on information processing capacity, GPs may have been able to carry out thorough search and appraisal of relevant patient cues, relying on individuating rather than stereotypical information. Alternatively cognitive load may not govern whether stereotypes are likely to be employed, but may influence the kind of stereotypes used. According to this explanation GPs may consistently draw upon gender stereotypes in order to arrive at management decisions, but the nature of these stereotypes may depend on GPs' feelings towards patients. This alternative is comparable to the ideas of Spears and Jansen (1994). They suggest that under conditions of low cognitive load, individuals are equally likely to use stereotypes as individuating information as they are equally effortful.

In contrast, the cognitive miser approach assumes that stereotypical information is much easier to process than individuating information as it is consistent with already existing schema. During interviews, some GPs reported that when feeling under time pressure they preferred to concentrate on physical symptoms rather than more psycho social aspects of complaints. This may be because they have more well established schema for physical complaints than complex psychological issues. In turn, this is likely to be a result of medical training which teaches students to recognise patterns of symptoms for a range of organic conditions. On the basis of interview responses there was some evidence to suggest that GPs differentiate between easier and more demanding information and that under demanding circumstances prefer schema consistent information. Under less demanding conditions, GPs may be less motivated to terminate consultations by relying on their expectations and more motivated to arrive at the most appropriate decisions for their patients. After carrying out more thorough information search and appraisal, differences in GPs' decisions are likely to reflect the different needs of men and women than reliance on stereotypical expectations.

Feeling Towards Patients as a Measure of Cognitive Load

The feeling towards patients variable was the only measure to interact with patient gender and management. This measure may be more complex than time pressure or uncertainty. Rather than an external constraint which is produced by the organisation of general practice or the nature of medical science, GPs' feelings towards patients may be multiply determined. They may relate to personal feelings, or be determined by how the individual acts as a patient, such as whether they are compliant or co operative. As previously explored in the thesis, GPs' feelings may be influenced by global aspects of the consultation, such as whether they spent enough time

with patients or whether they were certain or uncertain about the diagnoses or management of their complaints. Not feeling positive towards patients may constitute a different type of demand for GPs compared to time pressure and uncertainty. Although the influence of emotion on cognition is widely recognised in clinical literature, it remains largely absent from theories of decision making. This seems somewhat surprising in the face of a large body of literature in which GPs have reported their feelings of dislike towards certain patient groups. Rather than indicating that feelings towards patients do not influence management decisions, the lack of attention to this issue may be due to reluctance to accept that GPs may sometimes respond to more personal and less clinically relevant aspects of the consultation. The notion of the heart sink patient is well established in general practice. Difficult patients have been associated with feelings of discomfort for GPs who have been reported to feel that they have lost control of the consultation or fear that the doctor-patient relationship is at risk (Bradley 1992). Therefore, feelings towards patients is a very plausible condition of cognitive load. However, without more specific measures it is not possible to identify the exact source of GPs' feelings. Preliminary observations reported in Chapter eight indicate that GPs' feelings towards patients depend on how much control they have over the consultation and management decision. Contrary to the predictions of the cognitive miser model, evidence of gender stereotyping was observed in the feel positive condition in terms of somatising of men's complaints and emotionalising of women's. However, without carrying out further qualitative analysis of audio-taped data, it is not possible to refute the cognitive miser account or to arrive at any more reliable alternative explanations of the gender x feeling x management interaction.

Management Decisions as Consequential Decisions

Decisional conflict theory works on the assumption that decisions made are consequential. It is the knowledge that whatever course of action is taken has serious drawbacks or risks associated with it that provokes feelings of apprehension and anxiety in individuals who are not able to carry out appropriate search and appraisal of information relevant to decisions to be made. In the thesis it was presumed that management decision making in general practice can be consequential for both doctor and patient. However, consequences of decisions may vary amongst consultations and this could have important implications for the degree of decisional conflict and subsequent feelings of decisional stress experienced by GPs. According to Janis and Mann level of conflict depends on the degree of perceived risks anticipated from the course of action decided upon. One indication of the level of consequence associated with a consultation is the severity of the patient's complaint. By including a measure of severity on patient checklists, it may have been possible to identify a more representative sample of consultations carried out under the influence of decisional stress.

Theoretical Questions Arising from the Thesis

Is Gender a Non-clinical Variable ?

Under conditions of decisional stress it was presumed that patient gender entered into the decision making process as a non-clinical variable. Although it was perceived to be irrelevant to the management of patients' complaints, it was suggested that relying on patient gender enabled GPs to simplify decision tasks. This interpretation of gender may be somewhat controversial, particularly where complaints such as heart disease are concerned. Both lay and medical opinion is that heart disease is more prevalent and serious for

men than for women. Consequently, it could be argued that for certain complaints, differences in the management of men and women are related to differences in disease prevalence and patient needs.

However, studies upon which conclusions about disease prevalence have been made have recently been questioned. The main problem with such studies is their inclusion of young, pre menopausal women (e.g. Kannel and Feinlieb, 1972; Weiner, Ryan and McCabe, 1979). Critics argue that results of these studies are misleading as although under the age of fifty-five women experience less than a third of the heart disease experienced by men, over fifty-five women catch up with men so that by the time they reach their seventies there is little difference in the prevalence of heart disease (Steingart, Hamm and Packer et al, 1991). Similar controversies have arisen in trying to explain the differential treatment of men and women with kidney disease. While doctors may believe that differences in access to dialysis and transplants are due to genuine differences in disease prevalence, some researchers have argued that this prevalence gap is not sufficiently wide to justify disparity in treatment (Kjellstrand and Logan, 1987; Kjellstrand 1988).

Explanations of differences both in the prevalence and treatment of men and women presenting with psychological complaints are also open to debate. As with cardio-vascular and kidney disease the debate centres around the belief on one hand that women have a biological predisposition towards psychological illness and therefore are more frequently diagnosed as having psychological problems and more frequently treated with psycho tropic drugs. On the other hand differences in diagnosis and management have also been explained in terms of doctors' reliance on gender stereotypes that associate the characteristics of women more frequently to psychological illness and

psycho tropic drug management (Ashton, 1991). It was somewhat unexpected to find gender differences in the management of musculo-skeletal problems. Unlike for psychological complaints, these findings appear to be unrecognised by psychological and medical literature. It seems impossible to reach any firm conclusion about the issue of whether patient gender is a non-clinical variable that is irrelevant to patients' complaints or whether it is a relevant factor that needs to be taken into consideration. GP opinion about the relevance of gender may vary according to their training and experience.

Does Stereotyping Reduce or Enhance Available Information?

The predictions of decisional conflict theory rest on the assumption that individuals have limited information processing capacity. It therefore suggests that under conditions of cognitive demand individuals prefer to rely on their stereotypical expectations as a means of information reduction. Alternatively the meaning model suggests that individuals use stereotypes to cope with too little information rather than too much. In addition researchers who adopt this approach claim that categorising information according to group membership i.e. stereotypes, and individual attributes are equally effortful. They suggest that stereotypical information is most likely to be preferred under conditions of moderate demand when individuals cannot remember all the individuating information perfectly, but still retain some category level information about other individuals. In contrast to the cognitive miser approach, the meaning model predicts that when not experiencing cognitive load management decisions are equally likely to be influenced by stereotypical or individuating information. When experiencing high levels of cognitive load GPs are unlikely to be able to attend to stereotypical or individuating information.

It was assumed in the thesis that levels of cognitive load experienced by doctors during consultations were unlikely to reach the heights comparable to those likely to be experienced in disaster situations upon which the theory of decisional conflict is based. It was recognised that doctors are required to undergo a considerable period of training and thus are to some degree prepared for difficulties that arise. Thus, the effects of moderate levels of cognitive load were investigated in the thesis. Although the merits of the meaning model are recognised, as mentioned earlier, the cognitive miser approach is more consistent with GPs' responses to interview questions. In response to the question of how time pressure influences management decisions, GPs overwhelmingly expressed the need to terminate consultations by taking shortcuts. These shortcuts sometimes involved using directive communication techniques that served to discourage patients from presenting too much information, particularly with regard to psycho social problems. In the context of general practice and in the face of cognitive demands of external constraints such as time pressure, it is likely that GPs rely on stereotypes as a means of reducing information rather than as a way to enhance it.

Future Studies

Qualitative Analysis of Data

The thesis was carried out within the boundaries of a larger funded project investigating many aspects of medical decision making. Consequently, data collection and sometimes methodology were restricted by the demands of the project. The project required a large amount of data to be collected and as a result a systematic and quantitative approach to analysis was adopted. While this quantitative approach gave rise to robust findings which are suitable to use as a basis for making general recommendations to GPs, it was

unable to take account of the more subtle and complex aspects of doctor-patient interaction. In hindsight of the thesis it seems highly appropriate to revisit some of the specific issues raised by analysing selected data that has already been collected but perhaps not fully exploited. This exercise is particularly appropriate for audio-taped interview and consultation data.

The Feeling Towards Patients Variable

As already mentioned earlier, to further clarify explanations of the gender x feeling x management interaction it is necessary to carry out a qualitative analysis of a larger selection of the audio-taped data, using an established technique such as grounded theory. It must be remembered that the three way interaction was found for musculo-skeletal as well as psychological complaints. Finding explanations for the influence of gender on the management of musculo-skeletal complaints may be particularly interesting as reports of gender effects with this complaint are currently absent from the literature.

Influence of GP Gender

As there was an insufficient number of female GPs in the sample it was not possible to test for GP gender differences. This is not only a problem for the thesis but for much of the research carried out. This could be remedied by recruiting a larger sample of GPs and ensuring that an adequate proportion of these were female. The inclusion of an adequate sample of female GPs would make it possible to investigate the distribution of stereotypes amongst male and female GPs.

Alternatively, the small sample of audio-taped consultations already collected from female GPs could be studied qualitatively along side a matched selection of consultations from male GPs.

Other Non-clinical Variables

Patient gender may be only one of many non-clinical patient variables to influence decision making. It would be interesting to investigate the effects of factors such as social class and age. These could be studied individually or in combination with gender. For example men and women in social classes four and five may be managed differently to those in the higher social classes. Alternatively, it would be interesting to investigate whether gender differences in treatment are more likely to occur with middle aged women or younger women.

Individual Differences

Carrying out research on a larger sample would make it possible to explore individual differences in decision making with respect to the use of non-clinical variables. Differences may be associated with styles of coping that GPs employ. In the interview study (Chapter three) GPs were able to put forward specific strategies of coping with difficulties such as time pressure and uncertainty. Individual differences may also be associated with certain personality traits, such as anxiety.

Contribution of Thesis

Psychological theories of medical decision making have only recently taken into account the influence of non-medical factors in the decision making process. Work carried out in the thesis contributes to this recent development, concentrating specifically on the influence of patient gender on GPs' management decisions. Although gender differences in the treatment of men and women are well documented, there has been little attempt to provide a theoretical basis to explain these differences. Researchers have generally accounted for differences in terms of GPs' attitudes towards men and women

without explaining the inconsistency with which disparities occur. This inconsistency is accounted for in the thesis in two ways. According to decisional conflict theory, gender differences in decision making are most likely to occur under conditions of decisional stress. This is because GPs rely on gender stereotypes to simplify decision tasks. According to Deaux and Major's interactive model of gender-related behaviour (1987), even under conditions of decisional stress the occurrence of gender differences depends on the motivations of patients as well as their doctors.

In addition to theoretical contributions, the thesis also has practical implications. A recent Audit Commission Report (1994) identified a need for more rational prescribing amongst GPs. The report suggests that over prescribing constitutes the greatest amount of financial waste in general practice. It also recognises that unnecessary drug prescribing may complicate and prolong patients' complaints rather than alleviate them. By understanding the concepts of decisional stress and cognitive load and their potential effects on decision making, GPs may be better able to recognise when their decision making is most likely to be influenced by non-clinical factors of patients' complaints. More importantly, it is crucial for GPs to be aware of less established forms of stress such as feelings towards patients in addition to widely accepted stressors such as time pressure and uncertainty. The thesis focused specifically on GPs' reliance on patient gender as a non clinical factor in the decision making process. This has treatment consequences for all patients, both male and female. According to the decisional conflict approach adopted, under conditions of constraint, GPs decisions about patients are more likely to be made in response to non clinical variables than on the basis of more careful clinical consideration.

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APPENDIX A

PROTOCOL FOR INITIAL EXPLORATORY INTERVIEWS

When did you qualify as a doctor ?

Where did you undertake your medical training ?

How many years have you been working as a G.P ?

In which areas of medicine do you consider yourself to be particularly skilled in ?

When you were trained, what kind of consulting style did you learn ?

How would you describe your catchment area ?

Are there particular types of patients who come to your surgeries ?

In what ways do patients pose difficulties ?

How do you deal with such patients ?

What kind of patients are more easy to deal with ?

Have you developed particular ways of dealing with elderly patients ?

Have you developed particular ways of dealing with children ?

How do you deal with male & female patients ?

For what sort of reasons would you decide to refer a patient ?

Do you perceive each consultation as being divided up into certain stages ?

What are these stages ?

What sort of information are you aware of at each stage ?

What sort of things are you likely to pay attention to ?

How do you come to a management decision ?

What factors do you take into account ?

What about non medical/social/psychological factors ?

How important are patient characteristics when making such decisions?

How does the age of the patient influence the decisions you make ?

How does the gender of the patient influence the decisions you make ?

How does knowledge of the patient influence the decisions you make?

How do you make decisions in the absence of information as with new patients ?

Is it necessary to identify causes of patient complaints before using a management strategy ?

In what circumstances do you feel unsure of how to manage a patient?

How often do you feel that these situations arise ?

How do you deal with uncertainty ?

How tolerant of uncertainty do you consider yourself to be ?

Which complaints do you find most difficult to deal with ?

Why do such complaints pose difficulties ?

What sort of complaints are easier to deal with ?

Why are they easier ?

What do you consider to be more psychological complaints ?

Are you prepared to deal with such complaints?

Have you developed certain ways of handling these sort of complaints?

Are you prepared to deal with drug & alcohol related complaints?

How do you deal with such cases ?

On average, how much time do you spend with patients ?

Does time pressure have an impact on the time you spend with patients ?

How does time pressure affect your decision making ?

What sort of a GP would you describe yourself as ?

Do you find it stressful being a GP ?

What are the main sources of stress in your opinion ?

Do you enjoy being a GP ?

What aspects of the job give you most satisfaction ?

APPENDIX B

GPS' IDEAS CONCERNING MALE AND FEMALE PATIENTS IDENTIFIED FROM INITIAL INTERVIEWS

Numbers in brackets indicate line numbers from transcripts.

GP 1

There is an element of embarrassment in consultations with some women (205, 206)

The GP is cautious about prescribing drugs for women who are pregnant or on the pill (388-390)

GP 11

It is culturally more acceptable for women to express concerns in an emotional way (77)

Female patients are more able to express emotional aspects of their complaints (73)

Women consult more often than men (70)

Women present with more stress related complaints and present them earlier than men (79)

Male and female patients consult differently (68)

GP tunes in to feminine side of his nature with female patients (82)

GP 10

GP explains more to female patients (254)

Stress and gynaecological complaints need more explanation (255)

Male patients require a more direct approach (256)

GP is more directive with male patients (150)

Female patients present with more stress related complaints (155)

Females have difficulty coping with the family (159)

Female patients present with stress related physical complaints

Many families in the particular practice are single parents who lack support (160, 163)

GP perceives difficulty empathising with female patients (72)

GP uses females' own vocabulary (146)

GP perceives female patients to have difficulty communicating about certain complaints (145)

GP tries to appear relaxed and willing to listen to female patients (147, 148)

GP 12

Male patients consult less frequently than female patients (110)

GP is more likely to carry out health promotion work with male patients (110, 113)

Women's problems have been medicalised (107)

Female patients consult more often than male patients (108, 117)

Male and female patients present with different problems (106)

GP 14

GP anticipates manipulation by male drug users (167)

GP is firm with male drug users (163-165)

GP fears assault from male drug users (157)

GP feels anxious with male drug users (153-154)

Female patients think that the GP will understand them (179-180)

Female patients are more willing to talk about their anxieties (192-193, 604-605)

Males feel that it is unacceptable for them to talk about their anxieties (183-185, 605-606)

Male patients don't talk about their anxieties (181-182)

GP 15

Male patients usually present with organic disease (98)

Male and female patients present with different problems (95)

Consultations with male patients are shorter (98)

GP feels that men are more practical (150)

GP uses a more practical approach with male patients (104, 154)

GP takes a more professional approach with male patients (104)

GP feels unsure of her credibility with male patients (155, 156)

GP tries to impress male patients (157)

GP questions motives of males who present with sexual problems (99, 100)

GP has difficulty dealing with male sexual problems (98)

GP responds to sex typed behaviour of patients (105)

GP 19

Men prefer to be told things in a frank way (67, 68)

Men present problems all in one go (67, 68)

Pattern of the consultation is more organised with men (67, 68)

GP 18

Men and women have different stresses fears and problems (367-370)

GP attracts dependent women (340-341, 345, 399-341)

GP is a definite person who gives clear cut answers (344-345)

Mothers who are ill need someone to listen to them (817-823)

Mothers who are ill often refuse help (817)

Men and women are physically different (378-379)

Men and women use different body language (380- 381)

Men present in a more direct way (317)

GP responds to differential body language (379-380)

Men ask for a diagnosis more often than women (405)

Women ask for help more than men (402-403)

GP 17

Male and female patients present differently (677, 679)

GP takes child care into consideration when admitting a female patient to hospital (660-662)

GP perceives that women do not like mechanical analogies (654, 655)

GP uses simple (less mechanical) terms when explaining investigation and treatment to female patients (250-252, 655-658)

Women freely discuss their emotional problems (240-241)

GP can deal with what is distressing female patients (242)

Female patients present with more emotional problems than male patients (227-228, 233-234)

GP 20

Women are more expressive and demonstrative (131)

There are anatomical differences between men and women (131)

Male and female patients present differently (127)

Women consult more often than men (127, 130)

Patient may respond to male or female GP (107)

GP tries to find causes of patients' anxieties and illnesses (135)

GP wants to facilitate consultation (123)

GP is pliant to the presenting situation (122)

GP responds to and feeds off female traits (108)

GP 27

Men and women have different complaints (187)

GP is cautious about prescribing drugs for women who are pregnant or on the pill (210-212)

Women in their teens and early twenties are concerned with contraception and pregnancy (190-192)

Women present more often than men, especially those in their teens and early twenties (188, 189)

GP 24

Women are more used to coming to the surgery (632)

Women present psychological complaints earlier than men (629, 630)

Men and women react to stress in different ways (255, 256)

Women who present with stress put it down to PMS (267, 268)

Men present with physical symptoms of stress (273)

GP has more in common with women than men (238)

GP can empathise with women about certain problems (229-233)

Consultations with women are easier (237)

GP 23

Female patients come with specific things they want to be answered (136, 137)

Female patients are easier to deal with than male patients (137, 138)

It is accepted and allowed for women to show emotion (130, 131)

It is normal for women to go to the doctors' to ask about health care (131, 132)

It is culturally unacceptable for men to express concerns about health (146)

Men feel that it is a weakness to go to the doctors' to ask about health matters (132, 133)

Men often neglect their health care (134, 135)

Male patients have problems that are difficult to overcome (135, 136)

GP 22

Men are more likely to resist admission decisions (551-561)

Practice offers male and female GPs (240-241)

GP finds it curious when women register with him and present with gynaec problems (241-243)

GP is cautious about prescribing drugs for pregnant women (598-602)

Women are responsible for contraception and family (319-324)

Women's lives are more medicalised than men's (324-325, 345)

Women are more used to and less anxious about going to the doctors' (347-349, 358-359)

GP has preconceptions about men and women's responsibilities (277-280)

GP anticipates men and women's issues (293-295)

GP thinks that men present problems to him that they could find difficult to present to a female GP (247-250)

GP 30

Young women say more and open up more than young men (147-151)

Young mothers are new to family life and responsibilities (310-313)

Young mothers need support (315, 316)

GP 33

Extra sensitivity with women is needed especially during examination (144-150)

Women tend to relate physical symptoms to sexual concerns (166-171)

GP 37

Women consult more often than men (145-146)

GP gets on better with women (144, 151-152)

Men want to get better quickly so that they can go back to work (147-148)

Men don't have time to listen to simple explanation (149-150)

Men are more abrupt (146-147)

Women have the time to talk (160)

Women want to talk more (159-160, 160-161)

GP 36

Men don't have time to go to the doctors' (74)

Women consult more often than men (76)

Women have responsibility for children (76)

Women are more willing to talk about their problems (76)

Male and female patients present with different problems (68)

Some female patients find male GPs threatening (70)

Female patients may be difficult to deal with at first (71)

Women are likely to somatise (128)

Women reflect the psychological problems in their relationships with men (136)

GP is more likely to look for psychological problems related to physical illness with female patients (125)

Some women disguise symptoms of anxiety (76)

Female patients present with physical symptoms of stress (133)

GP 4

Some men are aggressive during consultations (280-281)

Some women are flirtatious during consultations (283-286)

Women are usually at home with children (249, 250)

Women are available to go to the doctors (251)

Women consult more often than men (242)

Social pressures allow women to go to the doctors' but discourage men (253, 254)

Men see going to the doctors' as a weakness (255)

Men do not allow themselves to go to the doctors (256, 257)

GP 5

Men and women are biologically different (171)

Men and women hold different positions in the family (172)

Male and female patients have different problems (171)

GP sees female patients as mothers to children (174-176)

GP sees female patients more often (174-178)

GP builds different relationships with male and female patients (173, 174)

GP may see male patients only once a year (177-178)

GP 8

It is more difficult to tease out women's expectations (195, 196, 445, 446)

Women are more difficult than men (191, 194)

GP reflects differential communication in his responses (232, 233)

Men are more direct than women and want direct answers back (224-228, 442, 443)

GP allows women to have more choice over treatment (434-436, 438)

GP has to listen more closely to women (228)

Men are more assertive and demanding than women (198-216)

GP 9

GP carries out less examination of men who are embarrassed about it (504, 507)

GP takes account of anatomical differences when managing men and women (501, 502)

GP thinks that some men are not stereotypical male patients (195-206)

GP feels that she is selected by men who want an empathetic GP (212)

GP draws on her own personal experience with women (171, 173)

GP has more immediate rapport with women (171, 172)

Some men use flirtatious behaviour to overcome embarrassment (164, 165)

There is a sexual content in some consultations with men (162, 163)

GP 31

Men are more likely to resist admission decisions (551-561)

Men and women make different small talk (254-261)

Women will come to the doctors' to talk about psychological problems (233-235)

GP is more likely to look for psychological concerns with women (237-238)

Men and women's behaviour are governed by cultural constraint (241)

Men often present with physical complaints (215-216)

Men neither expect nor want to talk about emotional concerns (221-223)

Men have a business like approach to consultations (214, 215)

GP 29

GP is aware of the gender of patients (118)

GP takes a professional approach with patients (119, 120)

GP sometimes uses a chaperone with female patients (109)

Females have more psychological complaints than males (273)

Females carry the responsibility for family and children (126)

Females consult more than males (124)

Females need to consult regarding maternity and gynaecology (126)

There are major anatomical differences between males and females (264)

Management may be different for male and female patients (260, 261, 263)

GP tends to refer female patients with psychological complaints for counselling (276)

Male and female patients have different psycho social complaints (278, 281, 282)

Females tend to take responsibility for family planning (126)

GP 34

Men don't consult as often as women (160, 161, 162)

GP thinks male patients' stories are more relevant (163, 164, 166)

GP takes more interest in the presenting story of a male patient (162, 163)

Women come about childbirth (157, 158)

Women are responsible for children (158, 159)

Women are responsible for contraception (156, 157)

Women consult more often than men (155, 159)

GP 28

Women are more open about psychological concerns (341, 346)

Women present with more psychological problems than men (348, 350, 356)

Men who do come find it more awkward to talk about their psychological concerns (354-355)

Social stereotyping makes it unacceptable for men to have psychological problems (350-352)

Men feel that it is unacceptable for them to present with psychological complaints (352-354)

Men try to cope with psychological concerns on their own (358)

GP 2

GP thinks that men and women treat him differently (248-249)

GP talks down to women (252-253)

Men are more used to controlling conversations than women (310-311)

Men control consultations more than women (302-306, 311-313)

Men are used to looking at things in an analytical way (288, 289)

Issues affecting men's lives are simpler (283-286)

The relationship between a man and his male GP is different to that between a woman and her male GP (289-291)

Consultations with men are more clearly defined even when emotional problems are presented (568-571)

GP assumes that women have multiple roles (565-568)

GP recognises the strain of being ill if a housewife (573-575)

GP tries to minimise women's disabilities so that they can go back to work (568-571)

GP 21

Women present with more than one complaint (356-357)

Young women have more depression than young men (370-371)

GP makes additional inquiries with women (317-319)

With some women there is a hidden gynaecological agenda (711-713, 736-738)

Women come to take advice rather than to talk about major problems (363-365)

Men are too busy to go to the doctors' (343-344)

Men don't like going to the doctors' (343)

Men present with strong physical complaints (340-341)

Men come to the doctors' to get medication (349-350)

Men don't discuss psychological concerns with their doctor (348-350)

Women see the doctor as a useful source of help (351-352)

Women are more willing to see a doctor (352-353)

Women have particular problems with infertility and periods (127-129)

Women have more anxieties about their symptoms (121-130)

Women have gynaecological problems (95)

Women consult more than men (92-94)

GP takes a softer approach with women who are anxious (707-708)

Teenage girls are sensitive about consulting with a middle aged male GP (320-322)

GP looks for cues of anxiety with females (711-713)

GP 26

Women consult more often than men (464)

Men are more resistant to help seeking and dependency than women (509, 510)

Men are frightened of and underestimate their symptoms (501-505, 543-546, 538-546)

GP sees women in a non hierarchical position (200-204)

GP feels less confident about consulting with men (216, 217)

GP finds it easier to communicate with women (207, 208)

GP prefers consulting with women (196)

GP's consultations with men are shorter (489, 490)

GP 16

Women consult more often than men (176, 177)

Women have responsibility for the home and children (191-195)

GP is more sympathetic to female patients (184-186, 188-190)

Some women want prescriptions as evidence for illness so that they can excuse themselves from household responsibilities (226-230)

GP 6

Men don't like going to the doctors' (279)

Men want a quick and to the point consultation (254, 256, 282-283)

Men are very matter of fact (253-254)

Women are better at expressing emotions (275-277)

Women have more problems than men- emotional and physical (266-267)

Women need and want more time to talk (258, 263-264, 272-273)

Women consult more often than men (259, 294-295)

Women come for contraception, ante natal care and smears (286-287, 289)

Women are more used to going to the doctors' (285-286)

Women are more relaxed about coming to the doctors' (290-291)

APPENDIX C

SAMPLE CHECKLIST

This includes a copy of the checklist used by GPs to record information about patients included in the audio-taping study.

TIME Is this case solely a

	repeat prescription	<input type="checkbox"/>
	contraceptive prescription	<input type="checkbox"/>
MALE / FEMALE	sick note	<input type="checkbox"/>
(Please circle)	administrative task?	<input type="checkbox"/>

IF YOU HAVE TICKED ANY OF THESE THEN STOP HERE

How do you feel towards this patient?

Strongly positive Positive Neutral Negative Strongly negative

How much time do you feel you spent with the patient?

Not enough time Just right Too much time

Diagnosis or presenting complaint

Management Decision

Advice given	<input type="checkbox"/>
Drug prescribed	<input type="checkbox"/>
Referral to consultant	<input type="checkbox"/>
Referral to other	<input type="checkbox"/>
Further investigation	<input type="checkbox"/>
Returning after a time period	<input type="checkbox"/>
Other	<input type="checkbox"/>

Degree of certainty of diagnosis
(if specified)

Degree of certainty about management decision

Age

Under 5	5 - 15	16 - 40	41 - 65	66 - 75	Over 75
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Social class

I or II	III n	III m	IV or V
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Weight

Very obese	Obese	Overweight	Normal	Under
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Smoking behaviour (if known)

Heavily	Regularly	Occasionally	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Patient's attitude
(to proposed treatment)

Opposed	Cautious	Open to advice	Requesting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Does this patient pay for prescriptions?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

When did you see the patient last?

Week	Month	1 - 2 months	2 - 6 months	Over 6 months
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Further comment

(Continue on back of sheet if desired.)

APPENDIX D

LOG-LINEAR RESULTS OF MODEL TESTS

This section includes output of log-linear modelling carried out on checklist data in order to investigate the interaction between decisional stress, gender and management.

Model 1

1 - Feeling towards patients

2 - Gender

3 - Management

Model Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2,1,3	P	12.64576	0.0054746	12.52389	0.0057941	3
2,1,3	MS	9.454115	0.0238381	9.287351	0.0257187	3
2,1,3	CV	1.854480	0.6031572	1.847541	0.6046499	3
2,1,3	SK	3.954138	0.2664793	3.772055	0.2871726	3
2,1,3	GI	2.758836	0.4303339	2.748917	0.4319908	3
2,1,3	R	1.751333	0.6255867	1.757216	0.6242938	3

Note

P - Psychological, MS - Musculo-skeletal, CV - Cardio-vascular, SK - Skin, GI - Gastro-intestinal, R - Respiratory

Model 1

1 - Time spent with patients

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2,1,3	P	3.738715	0.2911146	3.642511	0.3027624	3
2,1,3	MS	2.544513	0.4673111	2.510584	0.4733920	3
2,1,3	CV	1.951105	0.5826229	1.936484	0.5856998	3
2,1,3	SK	4.667401	0.1978581	3.972067	0.2645164	3
2,1,3	GI	4.226657	0.2380276	4.158933	0.2448266	3
2,1,3	R	2.603068	0.4569633	2.627535	0.4526943	3

Model 1

1 - Certainty of diagnosis

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2,1,3	P	6.789446	0.0789418	6.415218	0.0930889	3
2,1,3	MS	5.682794	0.1281283	5.613275	0.1320415	3
2,1,3	CV	7.967483	0.0467067	7.757313	0.0513217	3
2,1,3	SK	9.378363	0.0246750	9.476542	0.0235957	3
2,1,3	GI	2.643131	0.4499900	2.637607	0.4509464	3
2,1,3	R	5.861729	0.1185576	5.982517	0.1124868	3

Model 1

1 - Certainty of management

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2,1,3	P	4.034371	0.2577969	3.909830	0.2713868	3
2,1,3	MS	2.956942	0.3983257	2.933197	0.4020540	3
2,1,3	CV	5.836043	0.1198883	5.716029	0.1262968	3
2,1,3	SK	3.811517	0.2825687	3.537864	0.3159023	3
2,1,3	GI	3.731743	0.2919450	3.694093	0.2964663	3
2,1,3	R	4.811494	0.1861551	4.884154	0.1805019	3

Model 2

1 - Feeling towards patients

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2, 13, 23	P	9.355893	0.0093044	8.992079	0.0111601	2
2, 13, 23	MS	7.611896	0.0222482	7.485806	0.0236956	2

Model 2

1 - Certainty of diagnosis

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2, 13, 23	CV	6.312143	0.0426060	6.196153	0.0451495	2
2, 13, 23	SK	6.677936	0.0354859	6.575706	0.0373465	2

Model 3

1 - Feeling towards patients

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2, 13, 12	P	11.75004	0.0028118	10.67741	0.0048064	2
2, 13, 12	MS	7.499576	0.0235331	7.406201	0.0246576	2

Model 3

1 - Certainty of diagnosis

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2, 13, 12	CV	2.609161	0.2713008	2.565583	0.2772764	2
2, 13, 12	SK	4.468354	0.1070969	4.314687	0.1156487	2

Model 4

1 - Feeling towards patients

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2, 13, 12, 23	P	8.620068	0.0033272	7.945653	0.0048233	1
2, 13, 12, 23	MS	5.718608	0.0167918	5.665748	0.0173052	1

Model 4

1 - Certainty of diagnosis

2 - Gender

3 - Management

Definition	Complaint	Maximum Likelihood Chi-square	p-level	Pearson Chi-Square	p-level	df
2, 13, 12, 23	CV	0.3411230	0.5591858	0.3398761	0.5599048	1
2, 13, 12, 23	SK	1.471818	0.2250681	1.522428	0.2172614	1

APPENDIX E
Section 1

STILES' CLASSIFICATIONS

This section includes the classification of 86 audio-taped consultations involving psychological complaints.

Abbreviations used are explained in the following keys:

Abbreviations	Verbal Exchanges
Expos	Exposition
CQ	Closed Question
Check	Checking
Dir	Direction
Inq	Inquiry
Expl	Explanation
Ins	Instruction
NS	No Speech
Un	Unrelated Chat

Abbreviations	Content Code
Ph	Physical
Ps	Psychological
C	Circumstantial
Tr	Treatment
Dir	Direction
Inq	Inquiry

Note : No Speech and Unrelated Chat sections of consultations were not coded

GP 1
Patient 1

Units	Verbal Exchange	Content code
13 - 16	Expos	tr
16 - 21	Expl	tr
21 - 27	Expos	ph
27 - 37	Expl	ph
37 - 42	Expos	ph
42 - 46	Expl	ph
47 - 60	Expos	c
60 - 63	Expl	tr
63 - 85	Expos	c
85 - 97	Expl	c
91 - 93	CQ	tr
93 - 97	Expl	tr
97 - 98	Dir	d
98 - 101	NS	
101 - 111	Un	
111	Dir	d
112 - 116	NS	
116 - 126	Expl	ph
126 - 132	CQ	tr
132 - 141	Expl	tr
141 - 146	CQ	c
146 - 149	Expos	c
149 - 156	CQ	tr
157 - 160	Expl	tr
160 - 162	Expos	tr
163 - 164	Ins	tr

GP 1
Patient 2

Units	Verbal Exchange	Content code
13 - 18	Expos	ph
18 - 22	CQ	tr
22 - 24	Expl	tr
25 - 34	CQ	tr
34 - 35	Expl	tr
35 - 39	CQ	tr
40 - 42	Ins	tr
42 - 51	NS	
52	Dir	d
53 - 58	NS	
58 - 63	Expl	ph
63 - 70	Ins	tr

GP 1
Patient 3

Units	Verbal Exchange	Content Code
8 - 17	Expos	c
17 - 19	CQ	c
19 - 45	Expos	c
45 - 51	CQ	c
52 - 55	Checking	tr
55 - 57	CQ	c
57 - 70	Expos	ph
70 - 79	Expl	ph
80 - 86	Expos	ph
86 - 93	Expl	tr
93 - 95	Ins	tr
95 - 101	Expos	tr
101 - 108	CQ	c
108 - 117	Expos	c
117 - 141	Un	

GP 1
Patient 4

Units	Verbal Exchange	Content Code
4 - 17	Expos	ph
18 - 20	CQ	ps
20 - 28	Expos	c
28 - 29	CQ	c
29 - 38	Expos	c
38 - 39	CQ	ps
39 - 50	Expos	c
51 - 52	CQ	ph
52 - 57	Expos	ph
58	CQ	ph
59 - 63	Dir	D
63 - 70	Un	
71 - 73	Dir	D
73 - 75	Inq	Inq
75 - 76	CQ	c
76 - 84	Expl	c
84 - 88	Expos	c
88 - 89	Expl	c
89 - 97	Ins	tr
97 - 107	Expos	c
107 - 109	Ins	tr

GP 1
Patient 5

Units	Verbal Exchange	Content Code
4 - 15	Expos	ph
14 - 20	CQ	c
21 - 22	Expl	c
22 - 26	Expos	ph
27 - 37	CQ	ph
37 - 39	Expos	ph
39 - 41	CQ	tr
41 - 44	Expl	c
44 - 47	CQ	c
47 - 51	Expos	c
51 - 64	CQ	c
64 - 67	Dir	D
67 - 77	CQ	c
77 - 82	Expos	c
82 - 92	CQ	tr
92 - 100	Expl	tr
100 - 101	CQ	tr
102 - 108	Ins	tr
109 - 116	Expos	ph
116 - 117	CQ	ph
118 - 126	Expl	tr

GP 1
Patient 6

Units	Verbal Exchange	Content Code
5 - 9	Expos	ph
9 - 10	CQ	ph
10 - 12	Expos	c
13 - 14	CQ	ph
15 - 16	Dir	D
17 - 25	CQ	ps
25 - 30	Expos	ph
31 - 32	CQ	tr
33 - 38	Expl	tr
38 - 42	Expos	ph
42 - 46	Expl	c
48 - 71	CQ	c
72 - 76	Expl	ps
77 - 82	CQ	ps
82 - 84	Expl	c
84 - 87	CQ	c
88 - 96	Expl	c
96 - 98	CQ	tr
98 - 107	Expl	c
107 - 135	CQ	c
135 - 139	Expl	c
139 - 143	CQ	ph
143 - 159	Ins	tr

GP 1
Patient 7

Units	Verbal Exchange	Content Code
7 - 19	Un	
19 - 24	Expos	ph
24 - 27	CQ	ph
27 - 29	Expos	ph
29 - 35	CQ	ps
35 - 37	Expos	c
37 - 42	CQ	c
42 - 46	Expos	ps
46 - 48	CQ	ps
48 - 62	Expos	c
64 - 66	Expos	ps
67 - 75	Expl	ps
75 - 80	Ins	tr
81 - 84	Expos	c
89 - 94	Un	
95 - 96	Un	
97 - 99	Ins	tr

GP 28
Patient 1

Units	Verbal Exchange	Content Code
15 - 21	Expos	ps
21 - 22		
23	Expos	tr
23 - 24	CQ	tr
24 - 28	Expos	tr
29 - 34	Expl	tr
34 - 44	Expos	c
44 - 45		
45 - 52	Expos	ps
52 - 54	CQ	ps
54	Expos	tr
55	Expl	tr
56	Check	tr
57	Expl	tr
58 - 65	Expos	tr
65	Check	tr
66 - 67		
68 - 73	Check	tr
74 - 76		
76 - 77	Expos	tr
77	Dir	d
78 - 81	Expl	tr
81 - 83		
84 - 93	Expl	c
93 - 100	Expos	c
101	Expl	ph
102 - 105		
105	Expl	ph
106 - 108	CQ	ph
109	Expl	ph
110	CQ	tr
111 - 115	Expos	tr
115	Check	tr
116 - 117	CQ	tr
118 - 119	Expl	tr
120 - 122	Expos	tr
122 - 126	Expl	tr
126 - 127	Expos	tr
127 - 129	Expl	tr
129 - 130		
130 - 133	Expl	tr
133 - 134	CQ	c
134 - 139	Expos	c
139 - 143	Expl	tr
143 - 144	Expos	c
145 - 148	CQ	c
148 - 150		
150 - 158	Expl	tr
158 - 164	Expos	c
164 - 170	Expl	c
170 - 172	CQ	tr
173 - 174	Expos	tr
174 - 178	Ins	tr

GP 28
Patient 2

Units	Verbal Exchange	Content Code
2 - 21	Expos	ps
21 - 22	CQ	ph
22 - 24	NS	
25 - 26	CQ	ph
26 - 28	Expos	ph
28 - 29	Check	ph
29	Expos	ph
30 - 31	CQ	ph
32 - 33	Expos	ph
33 - 37	NS	
37 - 39	Expos	c
40 - 42	NS	
42 - 44	Expos	ph
44 - 50	CQ	ph
50 - 54	Expos	tr
54 - 55	Expl	tr
55 - 56	Expos	tr
56	CQ	tr
57 - 58	Expl	C
58 - 61	Expos	tr
61 - 64	Ins	tr
65 - 73	Expos	c
73 - 74	Ins	tr

GP 28
Patient 3

Units	Verbal Exchange	Content Code
1 - 3	Un	
4 - 17	Expos	ph
17 - 24	CQ	ph
24 - 25	Check	ph
26 - 29	Expos	ph
29 - 36	CQ	ph
37 - 45	Expos	ph
46 - 49	Expl	ph
49 - 50	Expos	ph
50 - 52	Expl	ph
52 - 54	Expos	tr
55	NS	
56	Expl	tr
57 - 58	CQ	tr
59	Expl	tr
60 - 69	Expos	ph
69 - 70	Expl	ph
70 - 73	Expos	ph
73	CQ	tr
74 - 77	Expl	tr
76 - 89	Un	
90 - 92	Expos	tr

GP 28
Patient 5

Units	Verbal Exchange	Content Code
3 - 12	Expos	ps
12 - 13	Check	ps
13 - 16	Expos	c
16	Check	c
17 - 18	Expos	c
18 - 24	CQ	c
25 - 32	Expos	ps
33 - 35	CQ	c
35 - 36	Expl	c
37 - 44	Expl	c
45 - 47	CQ	c
47	Check	c
48 - 51	CQ	c
51 - 56	Expos	c
57 - 61	CQ	c
62 - 66	Expos	ps
67 - 70	CQ	ps
71 - 92	Expl	ps
92 - 93	CQ	tr
93 - 113	Expl	tr
113 - 115	Ins	tr
115 - 120	Expl	tr
120	Cq	tr
121	Ins	tr

GP 28
Patient 6

Units	Verbal Exchange	Content Code
3 - 18	Expos	c
18	Expl	c
19 - 21	Expos	ph
21 - 25	CQ	ph
26 - 42	Un	
42 - 44	Tc	
1 - 3	Expl	ph
3 - 9	Expos	ph
10 - 15	Expl	ph
16 - 17	Expos	ph
18 - 22	Un	
23 - 28	Expl	ps
28 - 32	Expos	ps
32 - 34	CQ	c
35 - 36	Expl	c
36 - 40	Expos	c
40 - 48	Expl	c
49 - 50	Expos	c
51 - 59	Expl	tr
59 - 69	Expos	ps
69	CQ	ph
69 - 72	Expl	ph
73 - 78	Expos	ph
79 - 81	Expl	ph
81 - 82	Expos	tr
82 - 87	Expl	tr
87 - 92	Expos	c
92	Expl	c
93 - 108	Expos	c

GP 21
Patient 1

Units	Verbal Exchange	Content Code
1 - 368	Expos	ps
36 - 37	Check	ps
37 - 55	Expos	ph
55 - 56	Check	ph
56 - 71	Expos	ps
71 - 73	CQ	c
74 - 76	Expl	c
76 - 78	CQ	c
78 - 82	CQ	c
78 - 82	Expos	c
82 - 83	CQ	c
84 - 95	Expos	c
95 - 105	CQ	ps
105 - 106	Check	ps
107 - 115	Expos	c
115 - 138	Expl	ps
138 - 152	Expos	c
152 - 155	CQ	c
156 - 168	Expl	c
168 - 174	Expos	tr
174 - 181	Expl	tr
181 - 183	Expos	tr
183 - 185	CQ	tr
186 - 202	Expos	tr
202 - 204	Expl	tr
204 - 206	CQ	tr
206 - 215	Expos	ph
215 - 218	CQ	ph
218 - 222	Expos	ph
222 - 226	Expl	ph
226 - 229	Expos	tr
229 - 234	Expl	tr
234 - 236	Ins	tr
236 - 239	Expos	tr

GP 21
Patient 2

Units	Verbal Exchange	Content Code
3 - 5	Expos	ps
5 - 8	CQ	ps
8 - 12	Expos	c
12 - 13	CQ	c
13 - 15	Tc	
15 - 21	Expos	c
21	CQ	c
22	Check	c
22 - 24	Expos	c
24 - 29	CQ	ps
29 - 41	Expos	c
41 - 42	CQ	tr
42 - 47	Expos	c
47 - 52	CQ	tr
52 - 56	Expl	ph
56 - 57	Expos	ph
57 - 58	Expl	ph
58 - 59	Expos	ph
59 - 62	Expl	ph
62 - 65	Expos	c
66 - 67	CQ	tr
68	Expl	c
69 - 72	Expos	c
73 - 75	Un	
75 - 82	Expo	c
82	Ins	tr
83	NS	
83 - 85	Expos	
85 - 89	NS	
89 - 90	Dir	
90 - 92	NS	
92 - 98	Expos	
998 - 99	Dir	
100	Un	
101 - 108	NS	
109 - 110	CQ	
111 - 116	NS	
116 - 124	Un	
124 - 125	Expos	
125 - 131	UN	
131 - 133	Expl	
133 - 136	Expos	
136 - 137	CQ	
137 - 145	Expos	
145 - 148	Ins	
148 - 150	Expl	
151 - 154	Un	

GP 21
Patient 3

Units	Verbal Exchange	Content Code
1 - 3	Expos	ph
3 - 5	CQ	ph
5 - 6	Check	ph
6 - 10	Expl	ph
10	Check	ph
11	Dir	D
11 -15	CQ	c
16 - 22	NS	
22 - 24	Expos	
24 - 33	CQ	c
33 - 34	Check	c
34 - 36	Expos	c
36	Check	c
36 - 39	CQ	c
40 - 42	Expos	c
42 - 43	CQ	c
43	Check	c
44 - 45	CQ	c
45	Check	c
45 - 50	Expos	c
50 - 51	Expl	c
51 - 52	Expos	c
52 - 55	Expl	c
55	Expos	c
55 - 61	Expl	c
61 - 62	Expos	c
62	Expl	c
63 - 65	Expos	c
65 - 75	Expl	c
76 - 77	Expos	c
77 - 81	Expl	c
81 - 83	Expos	c
83	Expl	c
83 - 85	Expos	c
85 - 87	Expl	c
88 - 89	Expos	ph
89 - 93	CQ	c
93 - 94	Expl	c
94 - 98	Expos	c
99	Tc	
99 - 110	Expl	c
111 - 113	Expos	c
113 - 115	Expl	c
116	Expos	c
117 - 121	Expl	c

GP 21
Patient 4

Units	Verbal Exchange	Content Code
5 - 8	Expos	tr
8 - 11	CQ	ps
11 - 13	Check	ps
14 - 24	Expos	ph
25 - 28	Expl	ph
28 - 35	CQ	ph
35 - 39	Expos	ph
39 - 57	Expl	ph
57 - 62	Expos	ph
62 - 63	Expl	ph
64 - 65	Expos	ph
66 - 71	Dir	D
71 - 85	Expl	ph
86 - 91	Ins	tr
92 - 103	Expl	tr

GP 21
Patient 5

Units	Verbal Exchange	Content Code
5 - 15	Expos	c
15 - 20	CQ	c
20 - 25	Expos	c
25 - 30	Expl	c
30 - 32	Expos	c
32 - 37	Expl	c
37 - 50	Expos	c
50 - 51	Expl	c
52 - 53	Expos	c
53 - 54	Expl	c
55 - 56	Expos	c
57 - 59	CQ	c
60 - 64	Expos	c
64 - 70	Expl	c
70 - 99	Expos	c
99 - 104	Expl	tr
104 - 108	Expos	ps
108 - 124	Expl	ps
125 - 129	Expos	ps
129 - 135	Expl	c
136 - 137	Expos	c
137 - 143	Expos	c
143 - 147	Expos	c
147 - 153	Expl	c
154	Expos	c
154 - 156	NS	
156 - 158	Expos	c
158 - 163	Ins	tr
164 - 178	Expl	tr
178 - 179	Expos	tr
180 - 189	Expl	tr
189 - 194	Expos	tr
194 - 197	Ins	tr

GP 21
Patient 6

Units	Verbal Exchange	Content Code
1 - 5	Expos	ph
5 - 7	CQ	ph
8 - 9	CQ	ph
10 - 11	Check	ph
12 - 14	Expos	ps
14	Dir	D
15 - 18	NS	
19	Expl	ph
19 - 33	CQ	ph
33 - 48	Expl	ph
48 - 49	Expl	tr
49 - 50	Expos	tr
50 - 58	NS	
58 - 59	Dir	D
59 - 69	NS	
69 - 70	Dir	tr
70 - 72	Expl	tr
72 - 74	CQ	tr
75 - 82	Expl	tr
83	Expos	tr
84 - 85	Expl	tr
86 - 88	CQ	tr
89 - 90	Expos	tr
91 - 94	Un	
94 - 97	CQ	ph
98 - 99	NS	
100 - 109	Ins	tr
109 - 114	Expl	tr

GP 21
Patient 7

Units	Verbal Exchange	Content Code
3 - 7	CQ	tr
7	Expos	c
7 - 9	CQ	c
9 - 14	Exok	c
14 - 15	Expos	c
15 - 18	Expl	c
18 - 19	CQ	c
19 - 20	Expl	c
20 - 21	CQ	c
21	Expos	c
22	Expl	c
23	Expos	c
24 - 35	Expl	c
35 - 37	Expos	ps
37 - 40	Un	
40 - 42	Expl	tr
42	Expos	tr
43 - 44	CQ	tr
44 - 45	Expl	tr
45 - 46	Expos	tr
46 - 48	CQ	tr
49 - 50	Expl	tr
51 - 53	CQ	c
53 - 56	Expl	c
56 - 62	Check	tr
64	Expos	tr
65 - 68	CQ	tr
69 - 72	Ins	tr
72	Expl	tr
72 - 75	Un	

GP 21
Patient 8

Units	Verbal Exchange	Content Code
4 - 8	CQ	tr
8 - 9	Expos	tr
9 - 11	CQ	tr
11 - 13	Expos	tr
14 - 17	Expl	tr
17 - 18	Check	tr
18	Expl	tr
19	Check	tr
20	Expos	tr
21 - 22	Expl	tr
22	CQ	tr
23 - 32	Expl	tr
33 - 35	CQ	tr
35 - 36	Expos	tr
37 - 38	CQ	tr
38 - 41	Expl	tr
41 - 42	Expos	tr
42 - 49	Expl	tr
	Tc	
1 - 7	Expl	tr
7 - 8	CQ	c
8 - 18	Expos	c
18 - 20	Check	c
21	Expos	c
21 - 28	Expl	c
38 - 41	CQ	c
42 - 51	Expos	c
52 - 56	CQ	c
56 - 58	Expl	ps
59 - 63	Expos	ps
63 - 64	CQ	ps
64 - 69	Expos	ps
69 - 73	CQ	ps
73 - 76	Expos	ps
76 - 78	Expl	ps
78 - 81	Expos	ps
82 - 87	CQ	ps
87 - 88	Check	ps
89 - 90	Expl	c
90 - 91	Expos	c
91 - 92	CQ	c
93 - 114	Expl	c
114 - 117	Expos	c
118 - 119	Expl	c
119 - 123	Expos	c

GP 22
Patient 1

Units	Verbal Exchange	Content Code
12- 91	Un	
91 - 96	Expos	tr
96 - 108	CQ	ph
108 -111	Expos	tr
111 -114	Expl	tr
114 - 119	Expos	ps
119 - 128	Expl	tr
128 - 131	Expos	tr
131 - 134	Expl	tr
134 - 136	Expos	tr
136 - 141	CQ	C
141 - 149	Expos	C
149 - 159	CQ	ps
159 - 166	Expl	C
167 - 194	Expos	C
194 - 198	Expl	C
199 - 206	Expos	C
206 - 221	Expl	C
221 - 239	Expos	C
240 - 249	Expl	C
249 - 265	Expos	C
264 - 280	CQ	C
280 - 286	Expl	tr
287 - 292	Expos	tr
292 - 295	Expl	C
296 - 298	Expos	tr
298 - 305	Expl	C
305 - 309	Expos	C
310 - 324	Expl	tr
324 - 327	NS	
327 - 329	Expl	tr
329 - 336	Expos	ps
336 - 338	Expl	C
338 - 346	Expos	C
346 - 347	CQ	C
347 - 349	NS	
349 - 360	CQ	C
360 - 363	Expos	C
364 - 368	Expl	C
369 - 383	Expos	C
383 - 391	Expl	C
391 - 396	CQ	C
399 - 414	Expos	C
414 - 425	Ins	tr
425 - 430	Un	

GP 22
Patient 2

Units	Verbal Exchange
4-7	Unrel
7-67	Expos
67-68	CQ
69-79	Expos
79-80	CQ
81-94	Expos
94-95	Expl
95-99	Expos
99-100	Expl
100-102	Expos
102-103	CQ
104-113	Expos
113	Expos
114	Expl
115-118	Expos
118-120	Tape change
120-126	Expos
126-127	CQ
128-129	Expl
129-134	NS
134-140	Expos
140-153	Expl
154-170	Expos
170-176	Expl
176-181	Expos
181-186	Expl
187-191	Expos
192-195	CQ
196-202	Expos
202-213	Expl
213-240	Expos
240	Expl
240-248	Expos
248-254	Expl
255-262	Expos
262-263	CQ
264-282	Expos
282-285	Un
286-301	Expos
302-309	CQ
310-313	Expos
313	Check
314-320	Expos
320-323	Check
324-329	Expl
329-334	Expos
334-337	Expl
337-342	Expos
342-343	Un
344-346	Un
346-353	CQ
354-357	Expos
357-360	Expl
360-366	Expos
367-369	Expl
370-390	Expos
390-395	Expl

395-399 Expos
 399-401 Expl
 401-411 Expos

Note : This consultation was not content coded as it involved a patient talking to his/her GP about the complaint of a member of the family

GP 22
Patient 3

Units	Verbal Exchange	Content Code
4 - 8	Expos	
8 - 11	Expl	
12 -15	Expos	ph
16	CQ	tr
17 - 24	Expos	ph
24 - 25	Expl	tr
25 - 27	Expos	ph
28 - 32	Expl	ph
33 - 36	Expos	ph
37	Expl	ph
38	Expos	ph
39 - 40	CQ	ph
40 - 44	Expos	ps
45 - 49	Expl	c
49 - 52	Expos	c
52 - 57	Expl	c
57 - 60	Expos	ps
61 - 62	Expl	tr
62 - 63	Expos	tr
63 - 65	Expl	c
65 - 69	Expos	c
69 - 72	CQ	tr
72 - 80	Expos	ps
80 - 81	Dir	D
81 - 83	CQ	ph
83	Dir	D
84 - 89	Expos	tr
89 - 94	NS	
94 - 96	CQ	ph
100 - 103	Expos	ph
103 - 105	Dir	D
106 - 109	Expos	ph
109 - 110	Dir	D
110 - 114	NS	
114 - 115	Dir	D
115 - 117	NS	
118 - 127	Un	
128 - 130	NS	
130 - 131	Dir	D
132 - 140	Expl	ps
140 - 141	CQ	tr
141 - 152	Expl	ps
153 - 158	Expos	C
160 - 161	Expl	C
161 - 162	Expos	C

GP 22
Patient 4

Units	Verbal Exchange	Content Code
8-10	Expos	
10 - 13	Expl	
12 - 14	CQ	C
14 - 15	Expl	C
15 - 17	Expos	C
18 - 19	Expl	C
20 - 29	Expos	C
27 - 28	Expl	C
28 - 33	Expos	C
33 - 34	Expl	C
34 - 42	Expos	C
42 - 44	Expos	C
44 - 50	Expos	C
50	Expl	C
Tape 2 Counter Reset		
1 - 8	Expos	C
8 - 11	Expl	C
12 - 20	Expos	C
20 - 21	Expl	C
21 - 52	Expos	C
53	Expl	C
54 - 58	Expl	C
58	Expl	C
58 - 60	Expos	C
60 - 61	Expl	C
62 - 72	Expos	C
73 - 75	Expl	C
76 - 82	Expos	C
83 - 85	NS	
86 - 89	Expos	C
90 - 91	Expl	C
91 - 93	Expos	C
93 - 94	Expl	C
95 - 98	Expos	C
98 - 100	Expl	C
101 - 115	Expos	C
115 - 116	Expl	C
116 - 123	Expos	C
123 - 125	Expl	C
127 - 131	CQ	
131 - 150	Un	
151 - 153	Expl	tr

GP 22
Patient 5

Units	Verbal Exchange	Content Code
5 - 22	Expos	c
22 - 30	CQ	c
31 - 32	Expl	c
33 - 35	Expos	c
35	Expl	c
36 - 45	Expos	c
45 - 46	CQ	c
46 - 56	Expos	c
56 - 57	Expl	c
57 - 62	Expos	c
62 - 64	CQ	c
64 - 74	Expos	c
74 - 77	CQ	c
78 - 80	Expl	c
81 - 82	Expos	c
82	CQ	c
82 - 93	Expos	c
93 - 95	Expl	c
96 - 99	Expos	c
99 - 100	Expl	c
101 - 102	Expos	c
102 - 106	Expos	c
107 - 109	Expl	c
109 - 110	Expos	c
110 - 112	Expl	c
113 - 116	Expos	tr
117 - 118	Expl	c
119 - 120	Expos	c
121 - 122	NS	
123 - 127	Un	
127 - 130	Expl	c
131 - 135	Expos	c
135	Expl	c
135 - 138	Expos	c
138 - 150	UN	
150 - 152	Expos	tr
152 - 154	Expl	tr

GP 22
Patient 6

Units	Verbal Exchange	Content Code
10 - 13	Expos	ps
13 - 14	CQ	ps
15 - 18	Expos	ps
18	Expl	C
19 - 36	Expos	ps
36	Expl	ps
36 - 39	Expos	ps
40 - 42	Expl	ps
42 - 46	Expos	ps
46 - 47	CQ	ps
47 - 54	Expos	ps
55 - 56	Expos	ps
56 - 57	Expos	ps
57	Expla	ps
58 - 60	Expos	ps
60 - 69	CQ	ps
69 - 77	Expos	c
77 - 82	Check	c
83 - 86	Expos	ph
86 - 89	Explan	tr
89 - 102	Expos	ph
102	Expl	c
102 - 116	CQ	ph
116 - 120	Check	ps
120 - 124	Expos	ps
124 - 130	CQ	ph
130 - 142	Expos	c
142 - 143	CQ	c
143 - 148	Expos	c
149 - 150	CQ	ps
150 - 153	Expos	ps
153	Check	c
153 - 158	Expos	c
158	Check	c
159 - 171	Expos	c
171 - 172	Expl	c
172	Expos	c
173	Expl	c
174 - 175	Expos	c
175 - 186	Expl	ps
186 - 193	Expos	tr
193 - 194	NS	
195 - 206	Expos	c
206 - 227	Expl	tr
228 - 229	Expos	tr

GP 22
Patient 7

Units	Verbal Exchange
2 - 12	Expos
13 - 14	Expl
15 - 16	Expos
16	Expl
16 - 19	Expos
19 - 20	Expl
20 - 25	NS
25	CQ
26 - 44	Expos
45 - 48	Expl
48 - 56	Expos
57 - 62	Expl
62 - 63	CQ
64 - 69	Expos
69 - 70	CQ
70 - 72	Expos
72 - 73	Expl
73 - 79	Expos
80 - 81	CQ
81 - 89	Expos
89 - 90	Expl
90 - 91	Expos
91 - 97	Expl
97 - 103	Expos
103 - 107	Expl
107 - 109	CQ
109 - 113	Expos
113 - 122	Expl
122 - 139	Expos
139 - 140	Expl
140	Expos
141	Expl
141 - 143	Expos
143 - 145	Expl
146 - 172	Un

Note : This consultation was not content coded as it involved a patient talking to his/her GP about the complaint of a member of the family

GP 22
Patient 8

Units	Verbal Exchange	Content Code
8 - 14	Expos	tr
15 - 16	Expl	ph
16	Expos	ph
16 - 19	Expl	ph
19 - 20	Expos	ph
21 - 23	Expl	tr
23 - 26	Expos	tr
27 - 32	Expl	tr
32 - 33	Expos	ph
33 - 34	Expl	ph
34 - 36	Expos	ph
37 - 40	Expl	tr
40 - 43	Expos	tr
43 - 46	Expl	tr
46 - 47	CQ	tr
47 - 51	Expos	tr
51 - 54	Expl	tr
54 - 62	Expos	c
63	Expl	c
64	CQ	c
64 - 66	Expos	c
66 - 67	Expl	ph
67	Expos	ph
68 - 69	Expl	tr
69 - 70	Expos	ph
70	Expl	ph
71 - 79	Un	
79 - 86	Expl	tr

GP 11
Patient 1

Units	Verbal Exchange	Content Code
10 - 17	Expos	c
17 - 18	Check	c
18 - 20	Expos	c
21 - 24	CQ	c
25 - 28	Expl	c
28 - 36	Expos	c
36 - 38	CQ	c
39	Check	c
40 - 41	Expos	c
42 - 50	Expos	c
51	Expl	c
51 - 52	Expos	c
53 - 54	Expl	c
54 - 61	Expos	c
61	CQ	c
62	Expos	c
63	Check	c
64	Expos	c
64 - 66	CQ	c
66 - 72	Expos	c
72 - 73	CQ	c
73 - 75	Expos	c
76 - 77	Expos	c
78 - 80	Expos	c
80 - 83	Expl	c
84 - 85	CQ	tr
85 - 87	Expos	ps
87	Expl	ps
88 - 90	Expos	ps
90 - 91	CQ	tr
92 - 93	Expos	c
93 - 94	CQ	tr
94 - 95	Expos	c
95 - 97	Expl	c
97 - 99	CQ	c
100 - 102	Expl	c
102	Expos	c
102 - 103	CQ	c
104 - 105	Check	c
105 - 107	Expos	c
108 - 110	CQ	c
111 - 112	Expl	c
112 - 116	Expos	c
117 - 118	Expl	c
118 - 119	Expos	c

GP 11
Patient 2

Units	Verbal Exchange	Content Code
1 - 67		
67 - 69	Check	ph
69 - 70	CQ	ph
70 - 71	Check	ph
71 - 74	CQ	ph
74 - 76	Check	ph
76 - 79	Expos	ph
79	Check	ps
80 - 81	CQ	ps
81 - 82	Expos	c
83 - 95	CQ	c
95 - 96	Expl	c
96 - 97	Expos	c
97 - 98	CQ	c
98 - 100	Expos	c
100 - 102	CQ	c
102 - 103	Expl	c
104	Expos	c
104 - 105	Expl	e
106 - 108	Expos	c
108 - 110	Expos	e
110 - 115	CQ	e
115	Check	c
116 - 120	CQ	c
120 - 121	Check	c
121 - 125	CQ	c
125 - 126	Check	c
127 - 128	CQ	c
128 - 129	Check	e
129 - 130	CQ	e
130 - 132	Check	e
132 - 135	Check	c
135 - 138	CQ	e
138 - 139	Expos	e
139 - 143	CQ	e
143 - 147	Expl	c
147 - 149	Expos	c
149 - 151	Expl	e
152 - 153	Expos	e
153 - 154	Expl	c
154	Expos	e
154	Expl	c
155 - 156	Expos	e
157	Check	e
157 - 158	Expos	c

GP 11
Patient 3

Units	Verbal Exchange	Content Code
24 - 33	Expos	ps
33 - 43	CQ	ps
43 - 47	Check	ps
48 - 56	CQ	ps
56 - 62	Expos	ps
62 - 65	Check	ps
65 - 66	CQ	ps
67 - 69	Expos	ps
69 - 70	Check	ps
70 - 78	Expos	ps
78 - 84	Check	ps
84 - 89	CQ	ps
89 - 95	Expos	ps
96 - 104	CQ	c
104 - 107	Expl	c
107 - 112	CQ	c
112	Expos	c
113 - 118	CQ	c
119	Check	c
123 - 129	CQ	c
129 - 132	Check	ps
132	Expl	ps
133 - 140	CQ	c
140 - 142	Expos	c
142 - 143	CQ	c
144 - 145	Expos	c
146 - 150	CQ	c
150 - 151	Check	ps
151 - 155	Expos	ps
155 - 161	CQ	ps
161 - 164	Expl	ps
165 - 166	Check	tr
167 - 169	CQ	tr
169 - 170	Check	ph
170 - 173	CQ	ph
173 - 174	Check	tr
1785 - 177	NS	
177 - 178	Check	ps
179 - 191	NS	
191 - 194	Check	ps
195 - 206	NS	
206 - 207	CQ	c
207 - 222	NS	
222 - 236	Expl	tr
236 - 237	Expos	c

GP 11
Patient 4

Units	Verbal Exchange	Content Code
10 - 11	Expos	ph
11 - 14	CQ	ph
14	Dir	D
15 - 16	CQ	ph
17 - 19	Expos	
19 - 24	CQ	ph
24 - 25	Expl	ph
25 - 27	CQ	ph
27 - 28	Expos	
28 - 29	Expl	ph
29	Dir	D
30 - 32	Expl	ph
33	Expos	ph
34 - 36	Expl	ph
37 - 71		

GP 11
Patient 5

Units	Verbal Exchange	Content Code
3 - 6	Expos	ph
6	Expl	ph
6 - 7	Expos	ph
7 - 8	CQ	tr
8 - 10	Expl	ph
10 - 11	Check	ph
11 - 12	Expos	c
13 - 14	CQ	ph
15 - 16	Expl	tr
16	Dir	D
16	Inq	D
17	Dir	D
18 - 19	Expl	ph
19 - 26	Dir	D
27 - 29	Expos	tr
30 - 32	NS	
32 - 33	Ins	tr
33 - 34	CQ	tr
34 - 44	Expl	tr

GP 9
Patient 1

Units	Verbal Exchange	Content Code
7 - 22	Expos	c
22 - 26	Check	ph
26 - 36	CQ	c
36 - 38	Check	ph
38 - 80	CQ	c
80 - 82	Expos	c
82 - 84	Expl	c
85 - 94	Expos	c
95 - 100	Check	c
101 - 102	CQ	c
103 - 108	Check	c
109 - 119	Cq	c
120 - 121	Cq	ph
122 - 124	Expos	ph
125 - 126	CQ	c
128 - 130	Check	c
130 - 135	CQ	c
135 - 137	Check	c
138 - 204	CQ	c
205 - 206	Expos	c
206 - 207	Check	c
208 - 215	Expos	c
215 - 216	Check	c
217 - 219	CQ	c
219 - 231	Expos	c
231 - 236	CQ	c
236 - 238	Check	c
238 - 40	CQ	c
241 - 244	Check	c
244 - 246	CQ	c
246 - 247	Check	c
248 - 252	CQ	c
252 - 278	Expl	e
279	Expos	c
279 - 289	Expl	c
289 - 291	Expos	c
291 - 295	Check	c
295 - 321	Expl	tr
321 - 323	Expl	tr
334 - 338	Ins	tr

GP 9
Patient 2

Units	Verbal Exchange	Content Code
4 - 5	Expos	tr
5 - 8	CQ	tr
8 - 13	Expl	tr
13 - 15	Expos	c
15 - 20	CQ	c
21 - 22	Expos	c
23 - 25	Expl	c
26 - 28	Expos	c
29 - 33	CQ	c
33 - 44	Expos	c
45 - 46	Expos	c
46 - 48	Expos	c
49 - 52	Expl	c
52	Expos	ph
53 - 54	CQ	ph
55 - 57	Expos	tr
57 - 58	Expos	tr
58 - 61	Expos	ph
62 - 63	Dir	D
63	Expos	ph
64 - 70	Un	
71 - 72	Expos	c
72 - 73	Expl	c
73 - 76	NS	
76	Dir	D
77	Expl	ph
77 - 79	CQ	ph
79 - 80	Expl	ph
80 - 84	CQ	ph
84 - 89	Expl	tr
91	Expos	
91 - 96	Expl	c
98 - 99	Expos	ph
101 - 105	Ins	tr
106	Expl	tr
107 - 109	NS	
109 - 113	Expos	c
113 - 121	Expl	c
121 - 127	Expl	c
127 - 131	Expos	c
132	Expl	c
133 - 135	Expos	tr

GP 9
Patient 3

Units	Verbal Exchange	Content Code
1 - 3	Expl	tr
3 - 6	CQ	ph
6 - 9	Check	ph
9 - 14	CQ	ph
14 - 16	Expos	ph
16 - 18	CQ	ps
18 - 21	Check	c
21 - 32	CQ	ph
32 - 34	Check	ph
34 - 36	CQ	ph
36	Check	ph
36 - 41	CQ	ph
41	Dir	D
42 - 45	NS	
45 - 51	CQ	c
51 - 53	NS	
53 - 66	Expl	ph
67 - 69	NS	
70 - 74	Un	
74	NS	
75	Dir	D
76	Un	
77 - 98	Expl	ps
98 - 99	Expos	ph
99 - 116	Expl	tr
116 - 132	Ins	tr

GP 9
Patient 4

Units	Verbal Exchange	Content Code
1 - 5	Expos	ps
6 - 10	CQ	ps
11 - 13	Check	ph
13 - 16	Expos	ph
17 - 25	CQ	ph
26 - 38	Expl	ph
39 - 40	Expos	ph
41 - 46	Expl	tr
46 - 48	Expos	ps
49 - 52	Expl	ph
52 - 54	CQ	tr
55 - 66	Expl	ph
66 - 71	Expos	tr
71 - 78	Expl	tr
78 - 79	Expos	ps
79 - 94	Expl	ps
95 - 96	Expos	ps
96 - 98	Expl	ps
98 - 105	Expos	ps
105 - 108	Expl	tr
108 - 109	Expos	tr
109 - 127	Expl	tr

GP 14
Patient 1

Units	Verbal Exchange	Content Code
8 - 10	Expos	PS
10 - 11	CQ	PS
12 - 18	Expos	C
19 - 21	CQ	tr
22 - 23	CQ	C
24 - 30	Expos	C
31 - 33	Expl	C
33 - 35	Expos	C
36 - 40	Expl	tr
40 - 41	Expos	tr
41 - 45	Expl	tr

GP 14
Patient 2

Units	Verbal Exchange	Content Code
12 - 30		
30 - 32	CQ	C
33 - 44	Expos	C
44 - 45	Expl	C
48 - 50	TC	
50 - 56	Expos	C
56 - 58	CQ	C
59 - 61	Expos	C
62 - 68	Expos	C
68 - 70	Expl	C
70 - 81	Expos	C
82 - 85	Expl	C
85 - 103	Expos	C
103 - 106	Expl	C
106 - 115	Expos	C
115	Expl	C
116 - 122	Expos	C
122 - 124	CQ	C
124 - 132	Expos	C
132 - 133	Expl	C
134 - 136	Expos	C
136 - 141	Expl	C
141 - 159	Expos	C
159 - 160	Expl	C
161 - 167	Expos	C
168 - 169	Expl	C
169 - 174	Expos	C
174 - 178	Expl	C
178 - 187	Expos	C
187	Expl	C
188 - 194	Expos	C
195 - 196	Expl	C
196 - 212	Expos	C
212 - 214	Expl	tr
215	Expos	C
215	Expl	C
216 - 217	Expos	C
218 - 222	Expos	C
223 - 224	CQ	C
224 - 230	Expos	C
230 - 231	Check	C
231 - 243	Expos	C
243 - 244	Expl	C
245 - 250	Expos	C
250 - 252	CQ	C

GP 14
Patient 3

Units	Verbal Exchange	Content Code
24	Expos	ph
4 - 6	CQ	ph
6 - 8	Expos	ph
8 - 9	CQ	ph
9 - 12	Expos	ph
12	Chekc	ph
13 - 14	Expos	ph
14 - 18	CQ	ph
18 - 19	Expl	ph
20 - 22	Expos	ph
22	Dir	D
23	NS	
24	Expl	ph
25 - 26	Expos	ph
27	Un	
28 - 30	NS	
30 - 31	Un	
32 - 37	NS	
37	Expl	ph
38 - 40	Expos	ph
40 - 44	CQ	ph
44 - 46	Expos	ph
46 - 50	Expos	ph
50 - 56	CQ	ph
56 - 58	Expos	ph
58 - 60	Dir	D
60 - 62	NS	
62 - 64	Dir	D
65 - 67	NS	
68	Dir	D
69	Expos	ps
70	CQ	ps
70 - 72	Expos	ps
72 - 82	CQ	ph
83	Expl	ps
84	Expos	C
85 - 89	CQ	C
89	Expl	C
89 - 90	Expos	C
91	Expl	C
91 - 94	Expos	C
94	Expl	ps
95 - 96	Expos	ps
96 - 98	CQ	C
98	Expl	C

GP 14
Patient 4

Units	Verbal Exchange	Content Code
1	CQ	C
2	Check	C
3 - 4	Expos	tr
4	CQ	C
5 - 8	Expos	tr
8 - 10	CQ	tr
10 - 15	Expos	C
15	Check	C
15 - 29	Expos	C
29 - 30	Expl	C
30	Tc	
31 - 34	Expl	C
34 - 36	Expl	C
36 - 43	Expl	tr
43 - 53	Expos	C
54 - 57		
57 - 90	Expos	C
90	Expl	C
91 - 108	Expos	C
108 - 111	Expl	ps
112 - 167	Expos	C
167 - 169	CQ	C
169 - 204	Expos	C
204	Expl	C
205 - 210	Expos	C
211 - 214	Expl	C
214 - 217	Expos	ps
217 - 229	Expl	ps
229 - 237	Expos	ps
237 - 238	Expl	ps
238 - 245	Expos	c
245 - 246	Expl	tr
247 - 254	Expos	C
256 - 315	Expl	C
315 - 316	Expl	tr
317	Expos	tr
318 - 319	Expl	tr
320 - 321	Expos	tr

GP 14
Patient 5

Units	Verbal Exchange	Content Code
5	Expos	ps
5 - 6	CQ	ps
6 -16	Expos	C
16 -17	Expl	C
18 - 19	Expos	ps
20 - 21	Expl	C
22 - 24	Expos	C
25 - 28	NS	
28 - 32	Expl	C
32 - 33	Expos	C
34 - 35	Check	C
36 - 42	NS	
42	Check	C
43 - 46	Expl	C
47 - 52	NS	
52 - 53	Expl	C
53 - 57	Expos	C
57 - 59	CQ	C
59 - 69	Expos	C
69 - 70	CQ	C
71 - 72	Expos	c
73 - 74	CQ	ps
74 - 79	Expos	ps
80	Check	ps
81 - 87	Expos	C
87 - 88	CQ	C
89 - 105	Expos	C
105	Expl	C
106 - 134	Expos	C
134 - 136	CQ	C
136 - 138	Expos	ps
138 - 139	CQ	C
140 - 149	Expos	C
149 - 150	CQ	C
150 - 157	Expos	C
157 - 159	Expl	C
159	Expos	C
160 - 163	Expl	C
163 - 167	Expos	ps
167 - 168	Expl	C
168 - 172	Expos	C
179 - 180	CQ	tr
180 - 184	Expl	tr
185 - 186	NS	
187 - 188	TC	

GP 37
Patient 1

Units	Verbal Exchange	Content Code
3 - 5	Expl	C
6 - 8	Expos	C
8 - 10	CQ	C
11 - 16	Expos	C
17 - 18	Check	C
18 - 27	CQ	C
27 - 40	Expos	C
40 - 42	CQ	C
42 - 44	Expos	C
45 - 46	Check	C
46 - 46	Expos	C
46 - 48	CQ	C
49 - 57	Expos	C
58 - 59	Expos	C
59 - 61	CQ	C
61 - 65	Expos	C
65 - 73	Expl	C
73 - 75	Expos	C
75 - 76	Expl	C
76 - 83	Expos	C
84 - 85	CQ	C
85 - 91	Expos	C
91 - 93	CQ	C
94 - 100	Expos	C
100 - 102	CQ	C
103 - 106	Expos	C
106	CQ	C
107 - 110	Expos	C
110 - 112	CQ	C

GP 37
Patient 2

Units	Verbal Exchange	Content Code
1-2	CQ	c
3-9	Expos	ph
9-15	CQ	ph
15-17	Expos	ph
18-19	NS	
20-21	Expos	c
21-24	NS	
24-25	CQ	c
25-28	Expos	ph
28-38	CQ	c
38-42	Expos	c
42-43	Check	c
43-44	Expos	ph
45-51	Expl	c
51-52	CQ	ph
53-54	Expl	ph
55	NS	
56-58	CQ	c
59-63	NS	
64-72	Expl	tr
73-74	CQ	c
75-76	Expos	tr
77-82	NS	
82-97	Un	
97-100	Ins	tr

GP 30
Patient 1

Units	Verbal Exchange	Content Code
8 - 17	Expos	ph
17 - 19	CQ	ph
19 - 93	Un	
94 - 97	NS	
97 - 100	CQ	ph
101 - 103	Dir	D
103 - 104	NS	
104 - 107	Dir	D
107 - 109	Expos	ph
109 - 111	CQ	ph
111 - 113	Expos	ph
114 - 115	Inq	D
116 - 117	NS	
118	Check	ph
119 - 124	NS	
124 - 132	Expl	ph
132 - 133	Expos	ph
134	Inq	D
134 - 140	Expl	ph
140 - 143	Expl	ph
143 - 150	NS	
150 - 153	Tc	
153 - 166	Expl	ph
166 - 168	Un	
168 - 172	Expos	ph
173 - 174	Check	ph
175 - 177	CQ	ph
177 - 178	Check	ph
178 - 180	Expos	ph
181 - 195	CQ	ph
196 - 199	Expos	ps
199 - 201	CQ	ps
201 - 204	Expos	ps
205	CQ	ps
206 - 210	Expos	ph
210 - 211	NS	
212 - 225	Expl	ps
225 - 226	Expos	tr
226 - 229	CQ	tr
229 - 237	Expl	tr
237 - 241	Ins	tr
241	Expos	tr
242 - 244	Expl	tr
245	Expos	ps
245 - 247	Expl	ps

GP 30
Patient 2

Units	Verbal Exchange	Content Code
3 - 4	Expos	ps
4 - 6	CQ	ps
7 - 9	Expos	ps
9 - 16	CQ	ph
16 - 26	Expos	ps
26 - 27	CQ	c
27 - 38	Expos	ps
38 - 39	Expl	c
39 - 42	Expos	c
43 - 44	CQ	ph
44 - 56	Expos	ps
56 - 65	CQ	c
66 - 68	Expl	tr
68 - 70	Expos	tr
71	Expl	tr
72 - 76	Expos	tr
76 - 78	Expl	ps
79 - 83	NS	
84 - 86	CQ	ps
87 - 92	Expos	c
93	Expl	
94 - 98	CQ	ps
98 - 103	Expos	c
103 - 104	CQ	ps
104 - 106	Expos	ps
106 - 108	CQ	c
109 - 118	Expos	c
119 - 128	Expl	ps
128 - 132	Expos	tr
133 - 137	Expl	tr

GP 30
Patient 3

Units	Verbal Exchange	Content Code
3 - 6	Expos	ps
7 - 31	Un	
31 - 33	Expos	ps
33	Check	ps
34 - 37	Expos	ps
37 - 41	Expl	tr
41 - 44	Expos	tr
44 - 48	Expl	tr
48 - 49	Expos	tr
49 - 50	Expl	tr
50 - 52	NS	
52 - 55	Expl	ph
55 - 56	CQ	tr
59 - 60	Expl	tr
61 - 64	Expos	c
64 - 65	CQ	c
65 - 67	Expos	c
67 - 69	Expl	tr
69 - 70	Expos	tr
70 - 72	Expl	tr
72 - 73	Expos	ph
73 - 75	Expl	ph
75	Un	
76 - 78	Un	ps
78 - 79	Expl	tr
79 - 83	Un	

GP 30
Patient 4

Units	Verbal Exchange	Content Code
2 - 4	Expos	ph
4	Check	ph
4 - 6	Expos	ph
6 - 7	CQ	ph
8	Check	ph
8 - 9	CQ	c
9 - 13	Expos	c
13 - 14	CQ	ph
14 - 15	Expos	ph
15	CQ	ph
15 - 16	Expos	ph
16 - 18	CQ	c
18	Expos	ph
19 - 23	CQ	ps
23 - 25	Expos	c
25 - 28	CQ	ph
28 - 29	Check	ph
29 - 33	Expos	c
34 - 35	CQ	ps
36	Expos	c
36 - 37	CQ	c
37 - 39	Expos	c
39 - 40	CQ	c
41 - 46	Expl	c
46 - 50	CQ	c
50 - 53	Expos	c
53 - 54	CQ	c
55 - 56	NS	
57 - 59	CQ	c
60 - 65	Expl	tr
65 - 66	Expos	ph
67	Expl	tr
67 - 68	Expos	c
69 - 70	CQ	c
70 - 73	Expl	tr
74 - 76	Ins	tr
76 - 107	Un	

GP 30
Patient 5

Units	Verbal Exchange	Content Code
2 - 3	CQ	c
3 - 6	NS	
6 - 15	CQ	tr
16 - 20	NS	
20 - 23	CQ	tr
23 - 30	Expl	tr
30 - 31	CQ	tr
33 - 42	CQ	ps
43 - 45	NS	
45 - 63	Expl	tr
63 - 65	Cq	tr
66 - 76	NS	
76 - 78	Expl	tr

GP 30
Patient 6

Units	Verbal Exchange	Content Code
3 - 4	Expos	ps
5 - 10	CQ	ps
10 - 12	Check	c
12 - 15	CQ	c
16 - 17	Expos	c
17 - 18	Check	c
18 - 20	CQ	c
21 - 22	Expos	c
23 - 24	CQ	c
25 - 30	Expos	c
31 - 35	Check	c
35 - 36	Expos	c
36 - 37	CQ	c
38 - 40	Expos	c
40 - 41	Check	c
41 - 47	Cq	c
48 - 51	Expos	c
51 - 58	CQ	c
58 - 62	Expos	c
63 - 73	CQ	c
73 - 75	Expos	c
75 - 76	CQ	c
76 - 79	Expos	c
79 - 82	CQ	c
79 - 82	CQ	c
82 - 88	Expl	c
89 - 90	Expos	c
90 - 91	Check	c
92 - 94	Expl	c
94 - 98	Expos	c
98 - 101	Expl	c
101	Expos	c
102 - 111	Expl	c
111 - 112	Expos	c
112 - 115	Expl	c
115 - 117	Expos	c
118 - 119	Expl	c
119 - 120	Expos	c
120 - 123	Expl	c
123 - 124	Expos	c
124 - 126	Expl	c
126 - 127	Expos	c
128 - 132	Expl	tr
132 - 134	Expos	c
134 - 137	Expl	c

GP 29
Patient 1

Units	Verbal Exchange	Content Code
8 - 21	Expos	ps
21 - 22	Check	ph
22 - 28	CQ	ph
28 - 29	Check	ph
30 - 33	NS	
33 - 35	CQ	ph
35 - 39	Expos	ph
39	CQ	ph
40 - 50	Expos	ph
50 - 51	CQ	ps
52 - 55	Expos	c
55 - 57	Check	c
57 - 59	CQ	c
59 - 64	Expos	c
65	Expl	c
66 - 70	Expos	ps
70 - 74	CQ	ps
74 - 88	Expos	c
81 - 82	CQ	ph
82 - 83	Check	ph
83 - 86	CQ	ph
87 - 90	Expl	ps
90 - 91	Dr	D
91 - 95	CQ	ph
96 - 97	Expos	ph
97 - 101	CQ	c
102 - 103	Expl	c
104	Dir	D
105	Expl	ph
106	Dir	D
107 - 108	NS	
109 - 111	Dir	D
112 - 114	NS	
114 - 116	Dir	D
117 - 118	CQ	ph
118 - 121	Expos	ph
121 - 128	CQ	ps
128 - 130	Expos	c
131 - 133	Expl	ph
133 - 134	CQ	ph
134 - 152	Expl	ps
152 - 156	Ins	tr
157 - 158	NS	
159 - 160	CQ	ph
160 - 161	Check	ph

GP 29
Patient 2

Units	Verbal Exchange	Content Code
7 - 10	Expos	c
10	Expl	c
10 - 12	Expos	c
12 - 13	Expl	c
13 - 15	Expos	ps
16 - 34	Un	
34 - 36	CQ	ph
36 - 38	Expos	tr
38 - 40	CQ	c
40 - 42	Expl	tr
42 - 43	Expos	TN
44 - 45	NS	
45 - 47	Expol	tr
48 - 49	CQ	c
50 - 111	UN	
111 - 112	Expos	tr
12 - 113	Expl	tr
114 - 114	Un	
117 - 120	NS	ph
120 - 122	Un	

GP 29
Patient 3

Units	Verbal Exchange	Content Code
5 - 6	Expl	tr
7 - 16	NS	
16 - 17	Expl	ph
17	Expos	ph
18 - 21	Expl	tr
22 - 25	Ns	
25 - 26	Check	ph
26 - 27	CQ	c
27 - 29	Expos	tr
29 - 36	Check	tr
36 - 38	Expos	tr
38 - 43	CQ	tr
44 - 46	Expl	tr
47 - 48	CQ	c
48 - 51	Expos	c
51 - 52	Expl	c

GP 29
Patient 4

Units	Verbal Exchange	Content Code
2 - 3	Expos	ph
3 - 4	CQ	tr
4	Expos	tr
5 - 10	Expl	tr
10 - 12	Expos	ps
12 - 13	CQ	c
14 - 15	Expos	c
16 - 17	Check	tr
17 - 25	Expl	tr
26 - 28	Expos	ph
29 - 31	CQ	tr
32 - 37	Expos	c
37 - 39	Check	ph
39 - 40	Expos	ph
40	NS	
41 - 43	Expl	tr
43 - 45	CQ	tr
46 - 48	Ins	tr
49	NS	
50 - 51	Expl	tr
52 - 53	CQ	c
53 - 56	Expos	c
56	Expl	c
56 - 60	Expos	c
60 - 61	Expl	c
61	Expos	c
62	Expl	c
62 - 63	Expos	ph
63 - 64	Ins	tr

GP 29
Patient 5

Units	Verbal Exchange	Content Code
5 - 6	Check	tr
7 - 12	Expos	ph
12 - 13	CQ	c
13 - 14	Expos	c
14 - 15	Check	c
15 - 20	Expos	ps
20 - 21	CQ	c
22 - 26	Expos	ps
26	CQ	ps
27	Expl	ps
28 - 30	Expos	ps
30 - 32	CQ	c
33	Expos	ps
34 - 35	CQ	ps
35 - 36	Expos	ps
36 - 37	CQ	c
37	Expos	c
38 - 44	Expl	ps
45 - 49	Expos	c
50 - 57	CQ	ph
57 - 59	Expl	ph
59 - 61	Expos	ph
61 - 63	Expl	ph
63 - 68	Expos	c
68 - 70	Expl	ps
70	Expos	c
70 - 72	Expl	c
72	Expos	c
73 - 75	Expl	tr
75 - 77	CQ	ps
77 - 79	Expos	ps
80 - 81	Expl	tr
81 - 82	Expos	ps
82 - 83	Expl	tr
83 - 86	Expos	ph
87	Dir	D
88 - 91	NS	
91 - 94	Check	C
94 - 95	Expos	ps
95 - 96	Expl	c
97 - 99	Expos	c
99	Dir	D
100 - 101	Expos	ph
102	Expl	ph
103	Expos	ph

GP 23
Patient 1

Units	Verbal Exchange	Content Code
2 - 5	Expos	tr
5 - 6	Check	tr
6 - 9	Expos	ps
9 - 10	CQ	ps
11 - 17	Expos	ph
17 - 26	CQ	c
26 - 32	Expos	ps
32 - 39	CQ	c
39 - 44	Expos	tr
44 - 48	CQ	c
48 - 50	Check	c
50 - 52	Expos	c
52 - 54	CQ	c
54 - 59	Expos	c
59 - 61	CQ	c
61 - 68	Expos	c
69 - 72	NS	
72 - 74	Expl	c
75 - 76	Expos	c
76 - 88	CQ	c
88 - 99	Expos	c
100	Expl	c
101 - 106	Expos	c
110 - 121	Expos	c
121 - 122	Expl	c
123 - 130	CQ	c
131 - 142	Expos	c
142 - 143	Expl	c
143 - 148	Expos	c
149 - 152		
152 - 156	Expos	ps
157 - 160	Expl	tr
160 - 161	Expos	ps
161 - 164	CQ	ps
164 - 184	Expl	ps
184 - 187	Expos	c
188	Expl	c
189 - 191	Expos	ps
191 - 195	Expl	tr
196 - 197	Expos	tr
197 - 217	Expl	tr
218 - 221	NS	
221 - 223	Expl	tr
223	Expos	
224 - 227	CQ	ph

GP 23
Patient 2

Units	Verbal Exchange	Content Code
2 - 6	Expos	tr
6 - 7	Expl	ph
7 - 14	Expos	ph
14 - 15	CQ	c
15 - 19	Expos	c
20 -	Un	

GP 24
Patient 1

Units	Verbal Exchange	Content Code
6 - 8	Expos	ph
9 - 10	Check	ph
10 - 17	Expos	ph
17 - 18	Check	ph
19 - 20	CQ	ph
21	Expos	ph
22 - 25	CQ	ph
26 - 27	Expos	ps
28 - 34	CQ	ps
35 - 43	Expos	c
43 - 44	Check	c
44 - 45	Expl	c
45 - 49	CQ	c
50 - 53	Expos	c
53	Expl	c
54 - 57	CQ	c
57 - 61	Expos	c
61	Check	c
62 - 63	Expos	c
63 - 64	Check	c
64 - 66	Expos	c
66 - 70	CQ	c
70 - 73	Expos	c
74 - 75	CQ	c
75 - 82	Expos	c
82	Check	c
83 - 90	Expos	c
90 - 106	CQ	c
107 - 109	Expos	c
109 - 112	Expl	c
112 - 114	Check	c
115 - 135	Un	
136 - 137	Expos	c
138 - 162	Expl	tr
162 - 165	Ins	tr
165 - 177	Expl	tr

GP 24
Patient 2

Units	Verbal Exchange	Content Code
4 - 5	Expos	tr
5 - 6	CQ	tr
7 - 11	Expos	tr
11 - 12	CQ	tr
12 - 14	Expos	tr
14 - 15	CQ	c
16 - 17	Expos	c
17 - 19	CQ	tr
19 - 21	Expos	tr
21 - 22	Expl	c
22 - 28	Expos	tr
28	Expl	ph
28 - 41	Un	
42 - 43	Expos	c
43 - 46	Expl	c
46 - 49	Expos	c
49 - 50	Expl	c
50	Expos	c
50 - 54	Expl	c
54 - 56	Expos	tr
57	CQ	tr
57 - 58	Expos	tr
59	CQ	tr
60 - 65	Expos	tr
59	CQ	tr
60 - 65	Expos	tr
66 - 67	Expl	tr
67 - 69	Expos	tr
69 - 76	Expl	tr
76 - 77	Expos	tr
77 - 80	Expl	tr
81 - 83	UN	
83 - 87	Expos	tr
87	CQ	tr
88	Expos	tr
88 - 89	Expl	tr
91 - 92	Expos	tr
92 - 94	Expl	tr
95 - 96	Un	
96 - 100	Un	
100 - 120	Un	
120 - 122	Expl	tr
122 - 123	Expos	tr
123 - 128	Expl	tr
128	Expos	c

GP 24
Patient 3

Units	Verbal Exchange	Content Code
7 - 8	Expos	ps
8 - 9	CQ	tr
9 - 10	Expos	ph
10	CQ	tr
11 - 12	Expl	tr
12 - 15	CQ	ph
15 - 17	Expos	ph
18	Check	ph
19	Expos	ph
20	Expl	tr
21 - 24	Expos	ph
24 - 27	CQ	ph
27 - 28	Expos	pj
28 - 31	Expl	tr
31	CQ	c
32 - 33	UN	
33	CQ	c
34 - 36	Expos	c
36 - 37	Expos	c
37 - 38	Check	c
38 - 40	Expos	c
40 - 42	Expl	c
42 - 43	Expos	c
43	Expl	c
43 - 46	Expos	c
46 - 48	Check	c
48 - 51	Expos	c
51 - 53	Expl	c
53 - 54	CQ	c
54 - 58	Expl	c
58 - 60	Expos	c
61 - 62	NS	
62 - 63	Expl	c
63 - 64	Expos	tr
64	Expl	tr
65	Expos	tr
66 - 67	NS	
67 - 69	Expl	tr
69	CQ	tr
70 - 71	Expl	tr
71 - 72	Expos	TN
72 - 75	CQ	tr
75 - 76	Expl	tr
76 - 78	Expos	tr
79 - 92	Expl	c
92	Expos	c
93	Expl	c
93	Expos	c
94 - 99	Expl	c
99 - 102	Ins	tr

GP 3
Patient 1

Units	Verbal Exchange	Content Code
21 - 25	Expos	ps
25 - 42	CQ	c
42 - 46		
45 - 48	Expl	c
49 - 52	CQ	c
52 - 55		
55 - 58	Expl	c
58 - 61		
61 - 62	Check	c
62 - 64		
64 - 68	Expl	c
68 - 71	Expos	c
71 - 72	Expl	c
72 - 75	Expos	c
76 - 83		
83 - 84	CQ	ph
85 - 86		
87 - 92	CQ	c
92	Expos	c
93 - 94	Expl	c
95 - 97		
98 - 101	Expos	c
101 - 110	Expl	c
110 - 111	Expos	c
111 - 113	Expl	c
113 - 120		
120 - 136	Expl	c
136 - 139	Expos	c
139 - 149	CQ	ph
149 - 155	Expl	tr
156 - 160		
161 - 164	Check	ph
165 - 168	CQ	ps
168 - 170	Un	
170 - 172	CQ	ph
172 - 175	Expl	c
175 - 178	Expos	
179	Expl	
180 - 182	NS	
182 - 186	Un	
187 - 195	Expl	
196 - 203	Un	
203 - 206	Expos	
206 - 213	Exp	
213 - 216		

GP 3
Patient 2

Units	Verbal Exchange	Content Code
15 - 16	CQ	c
16 - 19	Expl	tr
19	CQ	tr
20 -23	NS	
23 - 24	Expl	tr
24 - 30	Expos	tr
31	Expl	tr
31 - 35	Expos	tr
35 - 36	Expl	tr
36 - 57	Expos	c
57 - 64	Expl	tr
64	Expos	tr
65 - 71	Expl	tr
71 - 82	Expos	tr
83 - 85	Expl	tr
85 - 86	Expos	c
86 - 87	Check	c
88 - 100	Expos	c
101 - 102	Expl	tr
102 - 106	Expos	c
106 - 109	Expl	tr
109 - 110	Expos	tr
110	Expl	tr
111 - 113	Expos	tr
113 - 114	Expl	tr
114 - 115	Expos	tr
115 - 116	Expl	tr
116 - 119	Expos	tr
119 - 120	Expl	tr
120 - 121	Expos	tr
121 - 122	Expl	tr
123 - 127	CQ	tr
127 - 129	Expl	tr
129 - 134	Expos	tr
135 - 143	Expl	tr
140	Expos	tr
140 - 143	Expl	tr
143 - 148	Expos	tr
148 - 149	Expl	tr
149 - 151	Expos	tr
151 - 154	Expl	tr
154 - 164	Expos	c
165 - 166	Expl	c
166 - 173	Expos	c
173 - 174	Expl	c

GP 3
Patient 3

Units	Verbal Exchange	Content Code
2	CQ	ps
3 - 4	Un	
4	Check	ps
4 - 8	CQ	ps
8 - 10	Check	ps
11	Expos	ps
12	Check	ps
13 - 14	CQ	c
14 - 16	Check	tr
16 - 17	CQ	ph
17 - 18	Expl	ps
19	Expos	ph
20 - 38	Expl	tr
38	CQ	tr
39 - 40	Expl	tr
40 - 43	Expos	tr
42 - 46	Check	tr
47 - 48	Ins	tr
49 - 58	Un	
58 - 59		
59 - 65	Un	
65 - 66	Ins	tr

GP 3
Patient 4

Units	Verbal Exchange
6 - 16	Expos
17	CQ
17 - 28	Expl
28 - 30	Expos
30 - 32	
32 - 120	Expos
121 - 155	Expl
155 - 169	CQ
169 - 180	Expos
180 - 202	Expl
202 - 208	Expos
208 - 217	Expl
217 - 221	Expos
221 - 222	CQ
222 - 230	Expl
231 - 236	Expos
236 - 239	Expl
239 - 240	Expos
240 - 242	Expl
243 - 244	Expos

Note : This consultation was not content coded as it involved a patient talking to his/her GP about the complaint of a member of the family

GP 31
Patient 1

Units	Verbal Exchange	Content Code
01 - 05	Expos	tr
05 - 06	CQ	tr
06 - 12	Expos	tr
12 - 13	Expl	tr
13 - 14	Expos	tr
15 - 20	Expl	tr
21 - 24	Expos	tr
25 - 38	Expos	tr
38 - 43	CQ	tr
43 - 45	CQ	tr
46 - 48	Expl	tr
48 - 52	Expos	tr
52 - 56	Expl	tr
57 - 67	NS	
67 - 70	Expos	tr
70 - 84	Expl	TN
84 - 86	CQ	TN
86 - 90	Expl	TN

GP 31
Patient 1

Units	Verbal Exchange	Content Code
1-6	Expos	ph
6-7	Expl	tr
7	Expos	tr
8-17	Expl	tr
17	Expos	tr
18	CQ	tr
19	Expos	tr
20-22	Expl	tr
23	Expos	ph
23-26	Expl	tr
26-28	Ins	tr
28-32	Expl	tr
32-34	Expos	c
34-41	Un	
41-45	Expos	ps
45-47	Expl	ps
48-49	CQ	ps
49-51	Expos	c
52-54	NS	
55-74	Expl	ps
74	Expos	ps
75-80	Expl	ps
80-81	Expos	c
82-86	Un	

GP 4
Patient 1

Units	Verbal Exchange	Content Code
3-16	Expl	ph
17-42	CQ	c
42-47	Ins	tr
48-49	Un	
49-53	NS	
53-56	Un	
57-59	Ins	tr

GP 4
Patient 2

Units	Verbal Exchange	Content Code
2 - 17	Expos	ph
7 - 13	CQ	ph
13 - 21	Expos	ph
22 - 24	CQ	ph
25 - 33	Expos	ps
33 - 52	Expl	ph
52 - 54	NS	
54 - 56	Expos	ph
57 - 65	Expl	ph
65 - 70	Expos	ph
70 - 83	Ins	tr

GP 4
Patient 3

Units	Verbal Exchange	Content Code
2 - 4	Expl	ph
5 - 8	CQ	ph
8 - 13	Expos	ph
13 - 26	CQ	ps
26 - 28	Expos	ps
28 - 35	Expl	ps
35 - 37	CQ	ps
37 - 39	Expos	ps
39 - 42	Check	ps
42 - 46	CQ	ps
46 - 57	Expl	ps
57 - 59	Expos	ps
57 - 59	Expost	ph
59 - 62	CQ	ph
62 - 73	Expl	ph
74 - 79	NS	
79 - 81	Ins	tr
82 - 88	NS	
88 - 93	Expl	ps
93 - 98	Ins	tr

GP 4
Patient 4

Units	Verbal Exchange	Content Code
2 - 4	Expl	ph
5 - 8	CQ	ph
8 - 13	Expos	ph
13 - 26	CQ	ps
26 - 28	Expos	ps
28 - 35	Expl	ps
35 - 37	CQ	ps
37 - 39	Expos	ps
39 - 42	Check	ps
42 - 46	CQ	ps
46 - 57	Expl	ps
57 - 59	Expos	ps
57 - 59	Expost	ph
59 - 62	CQ	ph
62 - 73	Expl	ph
74 - 79	NS	
79 - 81	Ins	tr
82 - 88	NS	
88 - 93	Expl	ps
93 - 98	Ins	tr

GP 4
Patient 5

Units	Verbal Exchange	Content Code
1 - 18	Expos	ph
18 - 24	Expl	ph
25 - 34	Ins	tr
25 - 34	Ins	tr
35 - 40	Expos	ph
41 - 46	Expl	ps
46 - 48	Expos	ps
48 - 51	Expl	tr

GP 4
Patient 5

Units	Verbal Exchange	Content Code
1 - 18	Expos	ph
18 - 24	Expl	ph
25 - 34	Ins	tr
25 - 34	Ins	tr
35 - 40	Expos	ph
41 - 46	Expl	ps
46 - 48	Expos	ps
48 - 51	Expl	tr

GP 7
Patient 1

Units	Verbal Exchange	Content Code
2 - 5	Expos	ps
5 - 7	CQ	ph
8 - 9	Check	tr
10 - 11	Expos	ph
11 - 13	Check	ph
13 - 27	Expos	ps
27 - 28	CQ	ps
28 - 38	Expos	ps
38	CQ	c
39 - 40	CQ	c
40 - 45	Expos	c
46 - 47	NS	
48 - 49	CQ	ph
50 - 55	Expos	ph
55 - 56	CQ	ps
57 - 60	Expos	ps
61 - 65	CQ	tr
66 - 69	Expos	tr
69 - 70	Expl	tr
70 - 72	Expos	tr
72 - 73	Expl	ps
73 - 77	Expos	ps
77 - 97	Un	
97 - 100	Expl	tr
100 - 104	Ins	tr
105 - 110	Expl	tr
110 - 11	Ins	tr

GP 7
Patient 2

Units	Verbal Exchange	Content Code
4 - 7	Expos	tr
7 - 20	CQ	ps
20 - 22	Expl	ps
22	Expos	ps
22 - 24	Expl	ps
25 - 26	CQ	tr
26 - 27	Expos	tr
27 - 29	Check	tr
29 - 32	Expos	c
33 - 35	NS	
38 - 40	Expos	c
40 - 49	Expl	tr
50 - 52	Un	
52 - 57	Un	
57 - 60	Expl	tr
60 - 62	Ins	tr
62 - 69	Expl	tr
70 - 72	Ins	ln
73 - 76	Expl	tr
77 - 78	NS	
79 - 87	Expl	tr
87 - 94	Expos	ph
94 - 97	CQ	tr
97	Expl	tr
98	CQ	tr
99 - 105	Expl	tr
105	Ins	tr

GP 12
Patient 1

Units	Verbal Exchange	Content Code
1 - 4	Expos	tr
4 - 11	CQ	tr
11 - 18	Expos	c
18 - 37	Expl	tr
37 - 38	CQ	c
38 - 49	CQ	tr
49 - 59	CQ	tr
59 - 62	Expl	tr
62 - 63	Expos	ph
63 - 65	Check	c
66 - 75	Expl	c
75 - 77	Expos	c
77 - 79	Expl	c
79 - 86	Expl	c
86 - 94	Expos	c
95 - 96	CQ	c
97 - 99	Expos	c
99 - 122	Expl	tr
122 - 125	Expos	c
125 - 133	Expl	c
133 - 139	Ins	tr
139 - 143	Expl	tr
143 - 147	Expos	ps
147 - 161	Expl	tr
161 - 163	Expos	tr

GP 12
Patient 1

Units	Verbal Exchange	Content Code
1 - 4	Expos	tr
4 - 11	CQ	tr
11 - 18	Expos	c
18 - 37	Expl	tr
37 - 38	CQ	c
38 - 49	CQ	tr
49 - 59	CQ	tr
59 - 62	Expl	tr
62 - 63	Expos	ph
63 - 65	Check	c
66 - 75	Expl	c
75 - 77	Expos	c
77 - 79	Expl	c
79 - 86	Expl	c
86 - 94	Expos	c
95 - 96	CQ	c
97 - 99	Expos	c
99 - 122	Expl	tr
122 - 125	Expos	c
125 - 133	Expl	c
133 - 139	Ins	tr
139 - 143	Expl	tr
143 - 147	Expos	ps
147 - 161	Expl	tr
161 - 163	Expos	tr

GP 15
Patient 1

Units	Verbal Exchange	Content Code
3 - 14	Expos	
14 - 18	Dir	
19 - 30	Expos	ps
31 - 44	Expl	ps
45 - 64	Expos	ps
64 - 67	CQ	ph
67 - 84	Expl	ph
84 - 88	Expos	ph
88 - 118	Expl	ps
118 - 119	CQ	OT
120 - 127	Expos	OT
127 - 137	Expl	OT
137 - 192	Expl	
196 - 257		

GP 15
Patient 2

Units	Verbal Exchange	Content Code
6 - 13	Expos	ph
14 - 15	Dir	
16 - 18	Expos	tr
18 - 22	Check	ph
22 - 24	Dir	
24 - 25	Expos	ph
26 - 30	NS	
30 - 32	Dir	
33 - 39	NS	
40 - 42	CQ	ph
42 - 43	Expl	ph
43 - 48	Expos	ph
48 - 50	CQ	ph
50 - 53	Expos	ph
53 - 57	Expl	ph
57 - 62	Expos	ph
62 - 64	Expl	tr
64 - 66	Expos	tr
64 - 66	Expos	tr
67 - 73	Expl	ph
73 - 80	Expos	c
80 - 82		
82 - 86	NS	
86 - 87		
87 - 91	NS	
91	Expos	ph
92	Dir	
93 - 94	NS	
94 - 103	Expl	ph
103 - 106	Un	
107 - 112	Expos	
112 - 113	Dir	
113 - 117	NS	
117 - 121	Dir	
122 - 126	NS	
126 - 127	CQ	tr
128 - 135	Expos	tr
135 - 136	NS	
136 - 139	Expos	tr
140 - 141	Expl	tr
141 - 144	Expos	tr
144 - 156	Expl	tr
156 - 157	Expos	ph
158 - 159	CQ	tr
160 - 164	Expos	tr

GP 15
Patient 3

Units	Verbal Exchange	Content Code
2 - 4	Expos	c
4 - 6	CQ	ph
6 - 7	Dir	
8 - 9	Un	ph
9 - 10	Expl	c
11 - 12	Expos	ps
13	Dir	D
14 - 19	NS	
19 - 20	Expl	
20 - 22	Expl	ph
23 - 26	Expl	ph
27 - 28	Check	ph
29 - 32	Expl	tr

GP 2
Patient 1

Units	Verbal Exchange	Content Code
4 - 15	Expl	c
14 - 16	Expos	c
17 - 19	Expl	c
20 - 24	Check	c
24 - 26	Expl	c
26 - 29	Expos	c
29 - 35	Expl	c
35	Expos	c
36 - 41	Expl	c
41 - 42	Expos	c
42 - 43	Expl	c
43 - 45	Expos	c
45 - 51	Expl	c
52 - 60	Expos	ph
60 - 62	Expl	tr
62 - 63	CQ	ph
63 - 65	Expos	ph
66 - 71	Expl	ph
72 - 125	Expl	tr
126 - 135	NS	
135 - 146	Un	
146 - 150	Expl	c
150 - 158	CQ	c
158 - 167	Expos	c
168 - 172	CQ	c
172 - 177	Expl	c
177	Expos	ps
178	Expl	c
178 - 181	Expos	ps
181 - 186	Expl	c
187 - 191	Expos	c
191 - 192	Expl	c
193	Expos	c
194 - 198	Expl	c
198 - 202	CQ	c
202 - 203	Expos	c
203 - 204	Expl	c
204 - 222	Expos	c
222 - 224	Expl	c
225	Expos	c
225 - 226	Expl	c
226 - 228	Expos	c
229 - 232	Expl	c
232 - 246	Expos	c
247 - 249	Expl	c

GP 2
Patient 2

Units	Verbal Exchange	Content Code
3 - 20	Un	
21 - 25	CQ	tr
25 - 28	Check	tr
28 - 35	Expos	tr
36 - 39	CQ	c
39 - 52	Expos	c
52 - 53	Expl	c
53 - 57	Expos	c
57 - 58	Expl	c
58 - 60	CQ	tr
60 - 62	Expl	tr
62 - 65	Expos	tr
65	Expl	tr
66	Expos	tr
67 - 68	Expl	tr
69	Expos	tr
69 - 71	Expl	tr
72 - 74	Tc	
75 - 82	Un	
82 - 83	CQ	tr
84 - 88	NS	
88 - 91	Expl	tr

GP 2
Patient 3

Units	Verbal Exchange	Content Code
2-15	Expos	ph
15-25	CQ	ph
25-26	Check	ph
26-27	Expos	tr
27-31	Expl	ph
31	Expos	tr
31-32	Expl	ph
32	Dir	d
33-35	NS	
35-36	Dir	d
36-40	NS	
40-43	Check	ph
43-44	Inq	d
44-45	Check	ph
46-47	Dir	d
47-49	Inq	d
49-54	Expl	ph
54-56	Expos	ph
56-65	Expl	ph
65-67	Expos	tr
67-70	Expl	tr
70-71	Expos	ph
72-80	Expl	ph
80-82	Expos	ph
82	Expl	ph
83	Expos	ph
83-86	Expl	ph
86	Expos	ph
87-95	Expl	ph
95-97	Expos	ph

GP 20
Patient 1

Units	Verbal Exchange	Content Code
28 - 33	Expos	tr
33	Check	tr
34	Expl	c
35 - 41	UN	
41 - 58	Expos	c
58 - 59	Expl	ph
59 - 63	Expos	ph
63 - 66	CQ	ph
66 - 70	Expos	ph
70 - 75	CQ	c
75 - 80	Expos	c
80 - 83	Check	tr
84 - 85	CQ	tr
86 - 105	Expos	c
105 - 108	CQ	c
108 - 119	Expos	c
119 - 133	CQ	c
134 - 139	Expl	tr
139 - 145	Expos	tr
145	Check	c
146 - 147	CQ	c
147 - 157	Expos	c
157 - 158	CQ	c
159 - 163	Expos	c
164 - 167	NS	
167 - 171	Expl	tr
171 - 174	NS	
174 - 183	UN	
183 - 185	NS	
185 - 192	Expos	c
192 - 195	Un	
195	CQ	c
197 - 199	Expl	c
199 - 200	Expos	c
200 - 201	Un	
202 - 213	Expl	tr
213 - 215	Expos	c
215	Expl	C
216 - 217	Expos	c
218 - 222	Un	
222 - 225	Expos	c
225 - 228	Expl	c
229	Ins	tr
230 - 231	NS	
232 - 234	Tc	

GP 20
Patient 2

Units	Verbal Exchange	Content Code
2 - 4	Expl	c
4 - 5	UN	
6 - 7	CQ	c
8	Expos	c
8 - 11	Expl	c
12 - 14	NS	
14 - 20	Expl	c
20 - 27	CQ	c
27 - 29	Expl	tr
30 - 31	Expos	ph
31 - 37	Expl	tr
38 - 40	CQ	c
40 - 41	Expl	c
42 - 43	NS	
43 - 44	CQ	c
45 - 46	NS	
49 - 52	NS	
53 - 57	Expl	tr

GP 20
Patient 3

Units	Verbal Exchange	Content Code
2 - 5	Expos	c
5	Expl	c
5 - 8	Expos	c
8 - 10	Check	c
10 - 11	CQ	c
12 - 15	Expos	c
16 - 17	CQ	c
18 - 19	Expos	c
19 - 21	Check	c
21 - 22	Expos	c
22 - 23	Check	tr
23 - 26	CQ	tr
26 - 27	Expl	tr
27 - 29	Check	tr
29 - 30	CQ	tr
30 - 33	Expos	tr
33 - 39	Expos	tr
39 - 44	Expl	tr
44 - 50	CQ	ps
50 - 51	Check	ps
51	Expos	ps
52 - 54	CQ	ps
54 - 59	Expos	c
59 - 68	Expl	tr
68 - 70	Check	tr
70 - 73	Expl	tr
73 - 76	CQ	tr
76	Expl	tr
77 - 78	Expos	tr
79 - 80	Expl	tr
80 - 81	Expos	tr
82 - 83	CQ	c
83 - 121	Un	
121 - 122	Dir	D
123 - 124	Un	
125 - 145	Un	
146 - 152	Expl	tr
152 - 154	Expos	C
154	CQ	tr
155 - 157	Expl	tr
157 - 159	Expos	ps
159 - 160	NS	
160 - 163	Expos	c
166 - 170	NS	
170 - 171	Check	tr
172 - 176	NS	

GP 6
Patient 1

Units	Verbal Exchange	Content Code
8-16	Expos	c
16-22	CQ	c
22-52	Un	
52-60	CQ	tr
60-70	Expos	c
70-71	CQ	c
72-78	Expl	tr
78-81	Expos	c
81-86	Expl	c
86-87	Ins	tr

APPENDIX E

Section 2

CONSULTATIONS CLASSIFIED FOR RELIABILITY TESTS

This section includes the eight randomly selected consultations that were classified for a second time according to Stiles' categories in order to carry out reliability tests.

GP 28

Patient 5

Units	Verbal Exchange
3-12	EXPOS
12-13	CHECK
13-16	EXPOS
16	CHECK
16-18	EXPOS
18-24	CQ
25-32	EXPOS
32-34	CQ
35-36	EXPL
36	CQ
37-44	EXPL
44-46	CQ
47	CHECK
48-51	CQ
51-56	EXPOS
57-59	CQ
60-62	CQ
62-67	EXPOS
67-68	CQ
69-70	CQ
71-93	EXPL
93	CQ
93-113	EXPL
114-121	INS

GP 29
Patient 5

Units	Verbal Exchange
5-6	CHECK
6-12	EXPOS
12-14	CQ
14	CHECK
15-20	EXPOS
20-22	CQ
22-26	EXPOS
26	EXPL
27	CQ
28	EXPL
28-30	EXPOS
30-33	CQ
33-34	EXPOS
34-35	CQ
35-36	EXPOS
36	CQ
38-44	EXPL
44-49	EXPOS
50-57	CQ
57-58	EXPL
59-61	EXPOS
61-63	EXPL
63-67	EXPOS
68-69	EXPL
70	EXPOS
70-74	EXPL
74-77	CQ
77-80	EXPOS
80	EXPL
81	EXPOS
82-83	EXPL
84-86	EXPOS
86-87	DIR
88-91	NS
91-93	CHECK
94-95	EXPOS
95-96	EXPL
97-98	EXPOS
99	DIR
100-101	EXPOS
101-103	EXPL
103-104	DIR
104-112	NS
112-114	1NS
114-115	CQ
116-130	EXPL

GP 21
Patient 1

Units	Verbal Exchange
18-36	EXPOS
36-37	CHECK
38-55	EXPOS
56-57	CQ
58-72	EXPOS
72-73	CQ
74-76	EXPL
77-79	CQ
79-82	EXPOS
82-84	CQ
84-95	EXPOS
96-105	CQ
105-106	EXPL
107-116	EXPOS
116-139	EXPL
139-152	EXPOS
152-156	CQ
156-168	EXPL
169-174	EXPOS
175-181	EXPL
181-183	EXPOS
184-186	CQ
186-202	EXPOS
202-203	EXPL
204-206	CQ
207-216	EXPOS
216-217	CQ
218-222	EXPOS
223-226	EXPL
227-229	EXPOS
230-235	EXPL
235-237	INS
237-240	EXPOS

GP 1
Patient 4

Units	Verbal Exchange
4-17	EXPOS
18-20	CQ
20-28	EXPOS
28-29	CQ
30-38	EXPOS
38-39	CQ
39-51	EXPOS
51-52	CQ
52-58	EXPOS
58	CQ
59-63	DIR
63-71	UNREL
71-73	DIR
73-76	INQ
76-84	EXPL
84-88	EXPOS
88-89	EXPL
89-97	INS
97-107	EXPOS
107-109	INS

GP 20
Patient 3

Units	Verbal Exchange
2-5	EXPOS
5	EXPL
5-8	EXPOS
8-10	CHECK
10-11	CQ
12-15	EXPOS
16-17	CQ
18-19	EXPOS
19-20	CHECK
21-22	EXPOS
22-23	CHECK
23-26	CQ
26-27	EXPL
27-29	CHECK
29-30	CQ
30-38	EXPOS
39-44	EXPL
44-50	CQ
50-51	CHECK
51	EXPOS
52-54	CQ
54-59	EXPOS
59-68	EXPL
68-70	CQ
70-73	EXPL
73-76	CQ
77-78	EXPOS
78-80	EXPL
80-81	EXPOS
81-83	CQ
83-121	UNREL
121	DIR
122-145	UNREL
146-152	EXPL
152-154	EXPOS
154-155	CQ
155-157	EXPL
157-159	EXPOS
159-160	NS
160-163	CQ
163-166	EXPOS
167-169	NS
170-171	CHECK
172-176	NS
177-180	EXPL
180-182	EXPOS
183-186	NS
187	EXPL
187-188	EXPOS
189-190	CQ
190-192	EXPL

GP 1
Patient 7

Units	Verbal Exchange
6-19	UNREL
19-23	EXPOS
23-27	CQ
27-29	EXPOS
29-35	CQ
35-37	EXPOS
37-39	CQ
39-46	EXPOS
46-48	CQ
48-61	EXPOS
62-63	CQ
64-65	EXPOS
65-74	EXPL
75-81	INS
81-84	EXPOS
85-88	NS
89-93	UNREL
94-96	UNREL
97-99	INS

GP 9
Patient 4

Units	Verbal Exchange
1-5	EXPOS
5-10	CQ
10-12	CHECK
13-16	EXPOS
16-25	CQ
25-38	EXPL
38-40	EXPOS
40-45	EXPL
45-48	EXPOS
49-52	EXPL
52-53	CQ
53-65	EXPL
65-70	EXPOS
70-77	EXPL
77-79	EXPOS
79-94	EXPL
94-95	EXPOS
96-97	EXPL
97-104	EXPOS
104-108	EXPL
108-109	EXPOS
109-127	EXPL

GP 30
Patient 4

Units	Verbal Exchange
2-4	EXPOS
4	CHECK
5-6	EXPOS
6-8	CQ
8	CHECK
9	CQ
9-13	EXPOS
13-14	CQ
14	EXPOS
15	CQ
15-16	EXPOS
16-18	CQ
18-19	EXPOS
19-22	CQ
23-24	EXPOS
25-28	CQ
28	CHECK
29-32	EXPOS
32-35	CQ
35	EXPOS
36-37	CQ
37-39	EXPOS
39-40	CQ
40-46	EXPL
46-50	CQ
5660-53	EXPOS
53-55	CQ
56	NS
57-59	CQ
60-66	EXPL
66-67	EXPOS
67	EXPL
68-69	EXPOS
69-70	CQ
70-74	EXPL
74-76	INS
76-86	UNREL
86-87	TC
87-106	UNREL

APPENDIX E

Section 3

KAPPA STATISTICS TO TEST THE RELIABILITY OF STILES' CLASSIFICATION SYSTEM

This section includes kappa statistics for the agreement between classifications of verbal exchanges carried out at two stages of the thesis.

Kappa = $(P_o - P_c)/(1-P_c)$ where :

P_o = observed proportion action of agreements

P_c = chance proportion action of agreements

GP 28

Patient 5

		Time 1						
Time 2	Verbal Exchange Codes	EXPOS	CQ	CH	EXPL	INS	ABS	Proportion of total for time 1 (P1)
	EXPOS	5	1	0	0	0	0	6/25=0.24
	CQ	1	7	0	0	0	1	9/25=0.36
	CH	0	0	3	0	0	0	3/25=0.12
	EXPL	0	1	0	4	0	0	5/25=0.2
	INS	0	1	0	0	1	0	2/25=0.04
	ABS	0	0	0	0	0	0	0/25=0
	Proportion of total for time 2 (P2)	0.24	0.4	0.12	0.16	0.04	0.04	

P_o = sum of diagonal entries/total of all entries

P_c = sum of $P_1 \times P_2$

Kappa = 0.74

Percentage agreement = 80.00

GP 29
P 5

Verbal Exchange Codes	Time 1								Proportion of total for time 1 (P1)
	EXPOS	CQ	CH	DIR	EXPL	INS	NS	ABS	
EXPOS	17	0	0	0	0	0	0	3	0.38
CQ	0	3	1	0	0	0	0	1	0.09
CH	0	1	3	0	0	0	0	0	0.07
DIR	0	0	0	3	0	0	0	0	0.06
EXPL	0	0	0	0	14	2	0	0	0.3
INS	0	0	0	0	2	1	0	0	0.06
NS	0	0	0	0	0	0	2	0	0.04
ABS	0	0	0	0	0	0	0	0	0
Proportion of total for time 2 (P2)	0.32	0.07	0.07	0.06	0.3	0.06	0.03	0.07	

Kappa = 0.75

Percentage agreement = 81.13

GP 21
Patient 1

		Time 1					
Verbal Exchange Codes	EXPOS	CQ	CH	EXPL	INS	ABS	Proportion of total for time 1(P1)
EXPOS	14	0	0	0	0	3	0.39
CQ	0	8	2	0	0	1	0.28
Time 2 CH	0	2	1	0	0	0	0.08
EXPL	0	0	0	7	2	1	0.22
INS	0	0	0	0	1	0	0.03
ABS	0	0	0	0	0	0	0
Proportion of total for time 2 (P2)	0.39	0.28	0.08	0.19	0.03	0.03	

Kappa = 0.80

Percentage agreement = 73.81

GP 1
Patient 4

		Time 1							
Verbal Exchange Codes	EXPOS	CQ	DIR	INQ	EXPL	INS	UNREL	ABS	Proportion of total for time 1 (P1)
	EXPOS	7	0	0	0	0	0	0	0.33
	CQ	0	5	0	1	0	0	1	0.33
Time 2	DIR	0	0	1	0	0	0	0	0.05
	INQ	0	1	0	0	0	0	0	0.05
	EXPL	0	0	0	1	0	0	1	0.09
	INS	0	0	0	0	2	0	0	0.09
	UNREL	0	0	0	0	0	1	0	0.05
	ABS	0	0	0	0	0	0	0	0
	Proportion of total for time 2 (P2)	0.33	0.28	0.05	0.05	0.05	0.09	0.09	

Kappa = 0.76

Percentage agreement = 80.95

GP 20
P3

		Time 1								
Time 2	Verbal Exchange Codes	EXPOS	CQ	CH	DIR	EXPL	NS	UNREL	ABS	Proportion of total for time 1 (P1)
		EXPOS	16	0	0	0	0	0	0	0
	CQ	0	11	1	0	0	0	0	0	0.21
	CH	0	1	6	0	0	0	0	0	0.12
	DIR	0	0	0	1	0	0	0	0	0.02
	EXPL	0	0	0	0	13	0	0	0	0.23
	NS	0	0	0	0	0	3	0	1	0.07
	UNREL	0	0	0	0	1	0	2	0	0.05
	ABS	0	0	0	0	0	0	0	0	0
	Proportion of total for time 2 (P2)	0.28	0.21	0.12	0.23	0.05	0.03	0.05	0.02	

Kappa = 0.91

Percentage agreement = 92.86

GP 1
Patient 7

		Time 1							
Verbal Exchange Codes	EXPOS	CQ	EXPL	INS	NS	UNREL	ABS	Proportion of total for time 1(P1)	
EXPOS	7	0	0	0	0	0	0	0.39	
CQ	0	5	0	0	0	0	0	0.28	
Time 2 EXPL	0	0	1	0	0	0	0	0.05	
INS	0	0	0	2	0	0	0	0.11	
NS	0	0	0	0	0	0	1	0.05	
UNREL	2	0	0	0	0	0	0	0.11	
ABS	0	0	0	0	0	0	0	0	
Proportion of total for time 2 (P2)	0.5	0.28	0.05	0.11	0	0	0.05		

Kappa = 0.81

Percentage agreement = 83.83

GP 9
Patient 4

		Time 1				
Verbal Exchange Codes	EXPOS	CQ	CH	EXPL	Proportion of total for time 1(P1)	
EXPOS	9	0	0	0	0.41	
Time 2 CQ	0	3	0	0	0.14	
CH	0	0	1	0	0.04	
EXPL	0	0	0	9	0.41	
Proportion of total for time 2 (P2)	0.41	0.14	0.04	0.41		

Kappa = 1

Percentage agreement = 100

GP 30
Patient 4

		Time 1								
Time 2	Verbal Exchange Codes	EXPOS	CQ	CH	EXPL	INS	NS	UNREL	Proportion of total for time 1 (P1)	
		EXPOS	13	0	0	0	0	0	0	0.35
		CQ	0	14	0	0	0	0	0	0.38
		CH	0	0	3	0	0	0	0	0.08
		EXPL	0	0	0	4	0	0	0	0.11
		INS	0	0	0	0	1	0	0	0.03
		NS	0	0	0	0	0	1	0	0.03
		UNREL	0	0	0	0	0	0	1	0.03
		Proportion of total for time 2 (P2)	0.35	0.38	0.08	0.11	0.03	0.03	0.03	

Kappa = 1

Percentage agreement = 100

APPENDIX E
Section 4

OUTPUT OF ANALYSES OF VARIANCE

A two (gender : male or female) by two (decisional stress : feeling positive towards patient or not positive towards patient) analysis of variance was carried out on the data for each of the dependent variables (time spent on closed questions, exposition, checking, explanation, direction and inquiry, instructions and total consultation). Full output of analysis for each dependent variable is presented in the following tables.

Effect 1 - Gender
 Effect 2 - Stress
 Effect 12 - Gender x stress

Exposition

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	1446.2	253889.1	1446.167	3096.208	0.4670769	0.4962616
2	1	82	1866.6	253889.1	1866.566	3096.208	0.6028554	0.4397245
12	1	82	778.8	253889.1	778.849	3096.208	0.2515493	0.6173302

Closed Questions

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	74.57	39937.31	74.5712	487.0404	0.1531109	0.6965950
2	1	82	141.59	39937.31	141.5948	487.0404	0.2907249	0.5912173
12	1	82	0.01	39937.31	0.0072	487.0404	0.0000148	0.9969441

Checking

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	204.654	2804.288	204.6536	34.19864	5.984261	0.0165727
2	1	82	87.147	2804.288	87.1474	34.19864	2.548270	0.1142621
12	1	82	39.338	2804.288	39.3378	34.19864	1.150273	0.2866383

Explanation

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	2630.9	116189.6	2630.852	1416.947	1.856705	0.1767363
2	1	82	1029.2	116189.6	1029.190	1416.947	0.726344	0.3965533
12	1	82	2402.7	116189.6	2404.710	1416.947	1.695695	0.1964978

Direction and Inquiry

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	0.0325	515.7596	0.03254	6.289752	0.005174	0.942
2	1	82	25.8094	515.7596	25.80937	6.289752	4.103401	0.040493
12	1	82	0.0164	515.7596	0.01638	6.289752	0.002604	0.9594226

Instructions

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	106.901	1630.119	106.9010	19.87950	5.377451	0.0228880
2	1	82	0.889	1630.119	0.8885	19.87950	0.044696	0.8330891
12	1	82	4.327	1630.119	4.3273	19.87950	0.217677	0.6420531

Total Consultation

Effect	<u>df</u>	<u>df</u>	<u>SS</u>	<u>SS</u>	<u>MS</u>	<u>MS</u>	<u>F</u>	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	82	128.3	671480.1	128.295	8188.781	0.0156671	0.9006965
2	1	82	35.1	671480.1	35.102	8188.781	0.0042866	0.9479575
12	1	82	6017.5	671480.1	6017.461	8188.781	0.7348421	0.3938166

APPENDIX F
Section 1

CONSULTATIONS CLASSIFIED FOR RELIABILITY TESTS

This section includes the eight randomly selected consultations that were classified for a second time in order to carry out reliability tests.

GP 28
Patient 5

Units	Verbal Exchange	Content Code
3 - 12	Expos	ps
12 - 13	Check	ps
13 - 16	Expos	c
16	Check	c
17 - 18	Expos	c
18 - 24	CQ	c
25 - 32	Expos	ps
33 - 35	CQ	c
35 - 36	Expl	c
37 - 44	Expl	c
45 - 47	CQ	c
47	Check	c
48 - 51	CQ	c
51 - 56	Expos	c
57 - 61	CQ	c
62 - 66	Expos	ps
67 - 70	CQ	ps
71 - 92	Expl	ps
92 - 93	CQ	tr
93 - 113	Expl	tr
113 - 115	Ins	tr
115 - 120	Expl	tr
120	CQ	tr
121	Ins	tr

GP 29
Patient 5

Units	Verbal Exchange	Content Code
5 - 6	Check	tr
7 - 12	Expos	ps
12 - 13	CQ	c
13 - 14	Expos	c
14 - 15	Check	c
15 - 20	Expos	ps
20 - 21	CQ	c
22 - 26	Expos	ps
26	CQ	ps
27	Expl	ps
28 - 30	Expos	ps
30 - 32	CQ	c
33	Expos	ps
34 - 35	CQ	ps
35 - 36	Expos	ps
36 - 37	CQ	c
37	Expos	c
38 - 44	Expl	ps
45 - 49	Expos	c
50 - 57	CQ	ph
57 - 59	Expl	ph
59 - 61	Expos	ph
61 - 63	Expl	ph
63 - 68	Expos	c
68 - 70	Expl	ps
70	Expos	c
70 - 72	Expl	c
72	Expos	c
73 - 75	Expl	tr
75 - 77	CQ	ps
77 - 79	Expos	ps
80 - 81	Expl	Tr
81 - 82	Expos	ps
82 - 83	Expl	Tr
83 - 86	Expos	ph
87	Dir	d
88 - 91	NS	
91 - 94	Check	c
94 - 95	Expos	ps
95 - 96	Expl	c
97 - 99	Expos	c
99	Dir	D
100 - 101	Expos	ph
102	Expl	ph
103	Expos	ph
104	Dir	d
105 - 112	Ns	
112 - 114	Ins	tr
114 - 115	Check	ph
116 - 119	Expl	tr
119 - 121	Ins	tr
122 - 125	Expl	tr
126	Ins	tr
127 - 130	Expl	tr

GP 21
Patient 1

Units	Verbal Exchange	Content Code
1 - 368	Expos	ps
36 - 37	Check	ps
37 - 55	Expos	ph
55 - 56	Check	ph
56 - 71	Expos	ps
71 - 73	CQ	c
74 - 76	Expl	c
76 - 78	CQ	c
78 - 82	CQ	c
78 - 82	Expos	c
82 - 83	CQ	c
84 - 95	Expos	c
95 - 105	CQ	ps
105 - 106	Check	ps
107 - 115	Expos	c
115 - 138	Expl	ps
138 - 152	Expos	c
152 - 155	CQ	c
156 - 168	Expl	c
168 - 174	Expos	tr
174 - 181	Expl	tr
181 - 183	Expos	tr
183 - 185	CQ	tr
186 - 202	Expos	tr
202 - 204	Expl	tr
204 - 206	CQ	tr
206 - 215	Expos	ph
215 - 218	CQ	ph
218 - 222	Expos	ph
222 - 226	Expl	ph
226 - 229	Expos	tr
229 - 234	Expl	tr
234 - 236	Ins	tr
236 - 239	Expos	tr

GP 1
Patient 4

Units	Verbal Exchange	Content Code
4 - 17	Expos	ph
18 - 20	CQ	ps
20 - 28	Expos	c
28 - 29	CQ	c
29 - 38	Expos	c
38 - 39	CQ	ps
39 - 50	Expos	c
51 - 52	CQ	ph
52 - 57	Expos	ph
58	CQ	ph
59 - 63	Dir	d
63 - 70	Un	
71 - 73	Dir	d
73 - 75	Inq	inq
75 - 76	CQ	c
76 - 84	Expl	c
84 - 88	Expos	c
88 - 89	Expl	c
89 - 97	Ins	tr
97 - 107	Expos	c
107 - 109	Ins	tr

GP 20
Patient 3

Units	Verbal Exchange	Content Code
2 - 5	Expos	c
5	Expl	c
5 - 8	Expos	c
8 - 10	Check	c
10 - 11	CQ	c
12 - 15	Expos	c
16 - 17	CQ	c
18 - 19	Expos	c
19 - 21	Check	c
21 - 22	Expos	c
22 - 23	Check	c
23 - 26	CQ	tr
26 - 27	Expl	tr
27 - 29	Check	tr
29 - 30	CQ	tr
30 - 33	Expos	tr
33 - 39	Expos	tr
39 - 44	Expl	tr
44 - 50	CQ	ps
50 - 51	Check	ps
51	Expos	ps
52 - 54	CQ	ps
54 - 59	Expos	c
59 - 68	Expl	tr
68 - 70	Check	tr
70 - 73	Expl	tr
73 - 76	CQ	tr
76	Expl	tb
77 - 78	Expos	tr
79 - 80	Expl	tr
80 - 81	Expos	tr
82 - 83	CQ	c
83 - 121	Un	
121 - 122	Dir	d
123 - 124	Un	
125 - 145	Un	
146 - 152	Expl	tr
152 - 154	Expos	c
154	CQ	tr
155 - 157	Expl	tr
157 - 159	Expos	ps
159 - 160	NS	
160 - 163	Expos	c
166 - 170	NS	
170 - 171	Check	tr
172 - 176	NS	
176 - 180	Expl	tr
182 - 183	Expl	tr
184 - 186	NS	
186 - 187	Expl	tr
187 - 188	Expos	tr
189 - 190	CQ	tr
190 - 192	Expl	tr

GP 1
Patient 7

Units	Verbal Exchange	Content Code
7 - 19	Un	
19 - 24	Expos	ph
24 - 27	CQ	ph
27 - 29	Expos	ph
29 - 35	CQ	ps
35 - 37	Expos	c
37 - 42	CQ	c
42 - 46	Expos	ps
46 - 48	CQ	ps
48 - 62	Expos	c
64 - 66	Expos	ps
67 - 75	Expl	ps
75 - 80	Ins	Tr
81 - 84	Expos	c
89 - 94	Un	
95 - 96	Un	
97 - 99	Ins	tr

GP 9
Patient 4

Units	Verbal Exchange	Content Code
1 - 5	Expos	ps
6 - 10	CQ	ps
11 - 13	Check	ph
13 - 16	Expos	ph
17 - 25	CQ	ph
26 - 38	Expl	ph
39 - 40	Expos	ph
41 - 46	Expl	tr
46 - 48	Expos	ps
49 - 52	Expl	ph
52 - 54	CQ	tr
55 - 66	Expl	ph
66 - 71	Expos	tr
71 - 78	Expl	tr
78 - 79	Expos	ps
79 - 94	Expl	ps
95 - 96	Expos	ps
96 - 98	Expl	ps
98 - 105	Expos	ps
105 - 108	Expl	tr
108 - 109	Expos	tr
109 - 127	Expl	tr

GP 30
Patient 4

Units	Verbal Exchange	Content Code
2 - 4	Expos	ph
4	Check	ph
4 - 6	Expos	ph
6 - 7	CQ	ph
8	Check	ph
8 - 9	CQ	c
9 - 13	Expos	c
13 - 14	CQ	ph
14 - 15	Expos	ph
15	CQ	ph
15 - 16	Expos	ph
16 - 18	CQ	c
18	Expos	ph
19 - 23	CQ	ps
23 - 25	Expos	c
25 - 28	CQ	ph
28 - 29	Check	ph
29 - 33	Expos	c
34 - 35	CQ	ps
36	Expos	c
36 - 37	CQ	c
37 - 39	Expos	c
39 - 40	CQ	c
41 - 46	Expl	e
46 - 50	CQ	c
50 - 53	Expos	c
53 - 54	CQ	c
55 - 56	NS	
57 - 59	CQ	e
60 - 65	Expl	tr
65 - 66	Expos	ph
67	Expl	tr
67 - 68	Expos	e
69 - 70	CQ	c
70 - 73	Expl	tr
74 - 76	Ins	tr
76 - 107	Un	

APPENDIX F
Section 2

KAPPA STATISTICS TO TEST THE RELIABILITY OF CONTENT CODING

This section includes kappa statistics for the agreement between content coding of verbal exchanges carried out at two stages of the thesis.

GP 28
Patient 5

		1									
Verbal Exchange & Content Code	Expos (ps)	Expos (c)	CQ (ps)	CQ (c)	Check (ps)	Check (c)	Expl (ps)	Expl (c)	Tr	P ₁	
Expos (ps)	3	0	0	0	0	0	0	0	0	0.12	
Expos (c)	0	3	0	0	0	0	0	0	0	0.12	
CQ (ps)	0	0	1	0	0	0	0	0	0	0.04	
2 CQ (c)	0	0	0	5	0	0	0	0	0	0.21	
Check (ps)	0	0	0	0	1	0	0	0	0	0.04	
Check (c)	0	0	0	0	0	2	0	0	0	0.08	
Expl (ps)	0	0	0	0	0	0	1	0	0	0.04	
Expl (c)	0	0	0	0	0	0	0	2	0	0.08	
Tr	0	0	0	0	0	0	0	0	6	0.25	
P ₂	0.12	0.12	0.04	0.21	0.04	0.08	0.04	0.08	0.25		

Kappa = 1
Percentage agreement = 100

GP 29
Patient 5

1

Verbal Exchange & Content Code	Expos (ph)	Expos (ps)	Expos (c)	CQ (ph)	CQ (ps)	CQ (c)	Check (ph)	Check (c)	Expl (ph)	Expl (ps)	Expl (c)	Exam	Tr	P1
Expos (ph)	4	1	0	0	0	0	0	0	0	0	0	0	0	0.09
Expos (ps)	1	8	0	0	0	0	0	0	0	0	0	0	0	0.17
Expos (c)	0	0	7	0	0	0	0	0	0	0	0	0	0	0.13
CQ (ph)	0	0	0	1	0	0	0	0	0	0	0	0	0	0.02
CQ (ps)	0	0	0	0	3	0	0	0	0	0	0	0	0	0.06
CQ (c)	0	0	0	0	0	4	0	0	0	0	0	0	0	0.07
Check (ph)	0	0	0	0	0	0	1	0	0	0	0	0	0	0.02
Check (c)	0	0	0	0	0	0	0	2	0	0	0	0	0	0.04
Expl (ph)	0	0	0	0	0	0	0	0	3	0	0	0	0	0.06
Expl (ps)	0	0	0	0	0	0	0	0	0	3	0	0	0	0.06
Exp (c)	0	0	0	0	0	0	0	0	0	0	2	0	0	0.04
Exam	0	0	0	0	0	0	0	0	0	0	0	3	0	0.06
Tr	0	0	0	0	0	0	0	0	0	0	0	0	10	0.19
P2	0.09	0.17	0.13	0.02	0.06	0.07	0.02	0.04	0.06	0.06	0.04	0.06	0.19	

Kappa = 0.95

Percentage agreement = 0.96

GP 21
Patient 1

1

Verbal Exchange & Content Code	Expos (ph)	Expos (ps)	Expos (c)	CQ (ph)	CQ (ps)	CQ (c)	Check (ph)	Check (ps)	Expl (ph)	Expl (ps)	Expl (c)	Tr	P1
Expos (ph)	3	0	0	0	0	0	0	0	0	0	0	0	0.09
Expos (ps)	0	2	0	0	0	0	0	0	0	0	0	0	0.06
Expos (c)	0	0	4	0	0	0	0	0	0	0	0	0	0.12
CQ (ph)	0	0	0	1	0	0	0	0	0	0	0	0	0.03
CQ (ps)	0	0	0	0	1	0	0	0	0	0	0	0	0.03
CQ (c)	0	0	0	0	0	5	0	0	0	0	0	0	0.15
Check (ph)	0	0	0	0	0	0	1	0	0	0	0	0	0.03
Check (ps)	0	0	0	0	0	0	0	2	0	0	0	0	0.06
Expl (ph)	0	0	0	0	0	0	0	0	1	0	0	0	0.03
Expl (ps)	0	0	0	0	0	0	0	0	0	1	0	0	0.03
Exp (c)	0	0	0	0	0	0	0	0	0	0	2	0	0.06
Tr	0	0	0	0	0	0	0	0	0	0	0	11	0.32
P2	0.09	0.06	0.12	0.03	0.03	0.15	0.03	0.06	0.03	0.03	0.06	0.32	

Kappa = 1
Percentage agreement = 100

GP 1
Patient 4

1

Verbal Exchange & Content Code	Expos (ph)	Expos (c)	CQ (ph)	CQ (ps)	CQ (c)	Expl (c)	Exam	Tr	P1
Expos (ph)	2	0	0	0	0	0	0	0	0.10
Expos (c)	0	5	0	0	0	0	0	0	0.25
CQ (ph)	0	0	2	0	0	0	0	0	0.10
CQ (ps)	0	0	0	2	0	0	0	0	0.10
CQ (c)	0	0	0	0	2	0	0	0	0.10
Expl (c)	0	0	0	0	0	2	0	0	0.10
Exam	0	0	0	0	0	0	3	0	0.15
Tr	0	0	0	0	0	0	0	2	0.10
P2	0.10	0.25	0.10	0.10	0.10	0.10	0.15	0.10	

Kappa = 1
Percentage agreement = 100

GP 20
Patient 3

1

Verbal Exchange & Content Code	Expos (ps)	Expos (c)	CQ (ps)	CQ (c)	Check (ps)	Check (c)	Expl (c)	Exam	Tr	P ₁
Expos (ps)	2	0	0	0	0	0	0	0	0	0.04
Expos (c)	0	9	0	0	0	0	0	0	0	0.19
CQ (ps)	0	0	2	0	0	0	0	0	0	0.04
CQ (c)	0	0	0	2	0	0	0	0	0	0.04
Check (ps)	0	0	0	0	1	0	0	0	0	0.02
Check (c)	0	0	0	0	0	2	0	0	1	0.04
Expl (c)	0	0	0	0	0	0	1	0	0	0.02
Exam	0	0	0	0	0	0	0	1	0	0.02
Tr	0	0	0	0	0	1	0	0	25	0.05
P ₂	0.04	0.19	0.04	0.04	0.02	0.06	0.02	0.02	0.05	

Kappa = 0.94

Percentage agreement = 0.96

GP 1
Patient 7

1

Verbal Exchange & Content Code	Expos (ph)	Expos (ps)	Expos (c)	CQ (ph)	CQ (ps)	CQ (c)	Expl (ps)	Tr	P ₁
Expos (ph)	2	0	0	0	0	0	0	0	0.14
Expos (ps)	0	2	0	0	0	0	0	0	0.14
Expos (c)	0	0	3	0	0	0	0	0	0.21
CQ (ph)	0	0	0	1	0	0	0	0	0.07
CQ (ps)	0	0	0	0	2	0	0	0	0.14
CQ (c)	0	0	0	0	0	1	0	0	0.07
Expl (ps)	0	0	0	0	0	0	1	0	0.07
Tr	0	0	0	0	0	0	0	2	0.14
P ₂	0.14	0.14	0.21	0.07	0.14	0.07	0.07	0.14	

Kappa = 1

Percentage agreement = 100

GP 9
Patient 4

1

Verbal Exchange & Content Code	Expos (ph)	Expos (ps)	CQ (ph)	CQ (ps)	Check (ph)	Expl (ph)	Expl (ps)	Tr	P1
Expos (ph)	2	0	0	0	0	0	0	0	0.09
Expos (ps)	0	5	0	0	0	0	0	0	0.23
CQ (ph)	0	0	1	0	0	0	0	0	0.45
CQ (ps)	0	0	0	1	0	0	0	0	0.45
Check (ph)	0	0	0	0	1	0	0	0	0.45
Expl (ph)	0	0	0	0	0	3	0	0	0.14
Expl (ps)	0	0	0	0	0	0	2	0	0.45
Tr	0	0	0	0	0	0	0	7	0.32
P2	0.09	0.23	0.45	0.45	0.45	0.14	0.45	0.32	

Kappa = 1
Percentage agreement = 100

GP 30
Patient 4

1

Verbal Exchange & Content Code	Expos (ph)	Expos (c)	CQ (ph)	CQ (ps)	CQ (c)	Check (ph)	Expl (c)	Tr	P1
Expos (ph)	6	0	0	0	0	0	0	0	0.17
Expos (c)	0	7	0	0	0	0	0	0	0.20
CQ (ph)	0	0	4	0	0	0	0	0	0.11
CQ (ps)	0	0	0	2	0	0	0	0	0.06
CQ (c)	0	0	0	0	8	0	0	0	0.23
Check (ph)	0	0	0	0	0	3	0	0	0.08
Exp (c)	0	0	0	0	0	0	1	0	0.03
Tr	0	0	0	0	0	0	0	4	0.11
P2									

Kappa = 1
Percentage agreement = 100

APPENDIX F
Section 3

OUTPUT OF ANALYSES OF VARIANCE

A two (gender : male or female) by two (decisional stress : feeling positive towards patient or not feeling positive towards patient) analysis of variance was carried out on the data for each of the dependent variables (time spent on closed questions; physical, psychological, circumstantial, exposition; physical, psychological, circumstantial checking; physical, psychological, circumstantial, explanation; physical, psychological, circumstantial, direction and inquiry, instructions, and total consultation; physical, psychological, circumstantial).

Full output of analysis for each of the dependent variables is presented in the following tables.

Effect 1 - Gender
 Effect 2 - Stress
 Effect 12 - Gender x stress

Exposition Physical

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	37.912	6434.575	37.91153	81.45032	0.4654558	0.4970807
2	1	79	11.944	6434.575	11.94360	81.45032	0.1466367	0.7027988
12	1	79	35.257	6434.575	35.25693	81.45032	0.4328642	0.5124995

Exposition Psychological

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	227.31	11562.30	227.3090	146.3582	1.553100	0.2163613
2	1	79	40.29	11562.30	40.2942	146.3582	0.275312	0.6012598
12	1	79	34.80	11562.30	34.8001	146.3582	0.237774	0.6271691

Exposition Circumatantial

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	1.7	139137.7	1.716	1761.237	0.0009742	0.9751791
2	1	79	1436.1	139137.7	1436.058	1761.237	0.8153692	0.3692827
12	1	79	320.3	139137.7	1436.058	1761.237	0.1818467	0.6709508

Closed Question Physical

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	77.800	3034.399	77.79959	38.41012	2.025497	0.1586155
2	1	79	47.113	3034.399	47.11324	38.41012	1.226584	0.2714331
12	1	79	20.296	3034.399	20.29602	38.41012	0.528403	0.4694276

Closed Question Psychological

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	11.255	2318.587	11.25532	29.34921	0.3834966	0.5375196
2	1	79	7.787	2318.587	7.78700	29.34921	0.2653224	0.6079252
12	1	79	28.411	2318.587	28.41111	29.34921	0.9680368	0.3281741

Closed Question Circumstantial

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	693.09	34735.04	693.0920	439.6841	1.576341	0.2129895
2	1	79	378.69	34735.04	378.6947	439.6841	0.861288	0.3562053
12	1	79	8.99	34735.04	8.9949	439.6841	0.020458	0.8866307

Explanation Physical

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	22.674	7154.796	22.6741	90.56704	0.250357	0.6182148
2	1	79	164.185	7154.796	164.1853	90.56704	1.812859	0.1820161
12	1	79	2.373	7154.796	2.3730	90.56704	0.026202	0.8718223

Explanation Psychological

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	217.213	6078.642	217.2129	76.94484	2.822969	0.0968749
2	1	79	4.315	6078.642	4.3153	76.94484	0.056083	0.8134102
12	1	79	15.374	6078.642	15.3739	76.94484	0.199804	0.6561019

Explanation Circumstantial

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	1278.62	54395.87	1278.615	688.5554	1.856954	0.1768488
2	1	79	335.57	54395.87	335.569	688.5554	0.487353	0.4871604
12	1	79	118.33	54395.87	1188.333	688.5554	1.725836	0.1927460

Checking Physical

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	0.1073	495.3008	0.107276	6.269631	0.0171104	0.8962606
2	1	79	2.2883	495.3008	2.288315	6.269631	0.3649839	0.5474823
12	1	79	1.4613	495.3008	1.461254	6.269631	0.2330686	0.6305929

Checking Psychological

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	14.5162	480.5518	14.51620	6.082934	2.386381	0.1263933
2	1	79	17.2032	480.5518	17.20319	6.082934	2.828108	0.0965767
12	1	79	16.4905	480.5518	16.49047	6.082934	2.710941	0.1036349

Checking Circumstantial

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	43.122	2420.471	43.12243	30.63888	1.407442	0.2390372
2	1	79	11.974	2420.471	11.97363	30.63888	0.390799	0.5336815
12	1	79	11.774	2420.471	11.77417	30.63888	0.384289	0.5371009

Treatment

Effect	df	df	SS	SS	MS	MS	E	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	448.59	76694.23	448.5914	970.8131	0.4620780	0.4986415
2	1	79	112.24	76694.23	112.2398	970.8131	0.1156142	0.7347432
12	1	79	452.58	76694.23	452.5847	970.8131	0.4661914	0.4967419

Direction and Inquiry (Examination)

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	1.2080	461.3564	1.20799	5.839954	0.206848	0.6504962
2	1	79	20.4572	461.3564	20.45715	5.839954	3.502964	0.0649606
12	1	79	0.0474	461.3564	0.04743	5.839954	0.008122	0.9284177

Total Physical

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	60.10	32463.61	60.1003	410.9318	0.146254	0.7031685
2	1	79	607.43	32463.61	607.4282	410.9318	1.478173	0.2276812
12	1	79	174.03	32463.61	174.0326	410.9318	0.423507	0.5170804

Total Psychological

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	862.00	40815.73	861.9976	516.6548	1.668420	0.2002365
2	1	79	236.03	40815.73	236.0309	516.6548	0.456844	0.5010763
12	1	79	129.26	40815.73	129.2601	516.6548	0.250187	0.6183343

Total Circumstantial

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	17.4	393494.8	17.424	4980.947	0.0034981	0.9529860
2	1	79	1265.7	393494.8	1265.695	4980.947	0.2541072	0.6156008
12	1	79	2110.3	393494.8	2110.295	4980.947	0.4236735	0.5169985

Total Consultation

Effect	df	df	SS	SS	MS	MS	F	p-level
	Effect	Error	Effect	Error	Effect	Error		
1	1	79	4040.6	593160.8	4040.572	7508.364	0.5381428	0.4653749
2	1	79	2.7	593160.8	2.685	7508.364	0.0003576	0.9849601
12	1	79	1800.5	593160.8	1800.542	7508.364	0.2398048	0.6257042



DECISIONAL CONFLICT IN GENERAL PRACTICE: STRATEGIES OF PATIENT MANAGEMENT

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Abstract—Exploratory interviews were carried out with 37 general practitioners as an initial stage of a larger project investigating medical decision making in primary care. Qualitative analysis of free responses to a set of semi-structured questions revealed a common set of variables which influence decisions about patient management. These included: time pressure, uncertainty and patient characteristics. Results corroborate previously reported findings and may have important implications for the variation of management decisions about similar patient complaints. Strategies of patient management are identified, and the correspondence between these and the postulates of decisional conflict theory explored.

Key words—decisional conflict, primary care, coping strategies, patient management

INTRODUCTION

Research into medical decision making appears to have had a number of theoretical ages, including the traditional hypothetico-deductive model [1], and the knowledge driven model of diagnostic thinking [2-4]. More recently, it has now become widely accepted that psychological and social factors interact with clinical considerations in the decisions general practitioners make concerning the treatment and management of their patients. These have been the subject of long-standing interest, especially where variations in prescribing practice are concerned [5, 6]. However balancing assessments of therapeutic benefit and risk against social and other non-clinical concerns arising during the consultation creates varying degrees of psychological discomfort for the general practitioner. Bradley's recent interview studies have documented the factors associated with discomfort experienced by doctors when deciding whether or not to prescribe [7, 8], and these point to the need for a deeper understanding of doctors' psychological reactions to prescribing and other complex and stressful decisions in general practice.

The aims of this study were to catalogue the non-clinical variables doctors reported as relevant to their management decisions, the impact of these variables on strategies of patient management, and their prevalence in the sample of general practitioners studied.

We also explore the utility of a decisional conflict approach to decision making in general practice [9]. This approach was originally based on observations of the decision processes of individuals caught up in natural disasters and highly stressful decision crises. We believe that similar processes can be observed when decisional conflicts arise over consequential issues that generate milder degrees of stress.

According to Janis and Mann, decisional conflict

arises from simultaneous tendencies to accept and reject courses of action under conditions where inaction would lead to a serious loss or life-threatening outcome. As a result, the processing of information—especially information search and appraisal—is disrupted, and decision makers resort to strategies that reduce the level of conflict they experience. Because of their association with time pressure and uncertainty, the two strategies most likely to occur in the general practice context are defensive avoidance and hypervigilance. Defensive avoidance occurs when high levels of risk are associated with all possible options, and the decision maker holds out little hope of finding a solution better than the least objectionable course of action. Prevarication, procrastination, and information evasion are common symptoms of this coping response. Studies of cancer patients, for example, have shown that many refrain from asking questions, and selectively misinterpret what their doctors suggest about the unpleasant and potentially dangerous consequences of opting for radiation treatment or radical surgery [10].

Hypervigilance is most likely to occur when an individual believes that a satisfactory solution exists, but has insufficient time to search for and locate it. As a result, the decision maker becomes excessively alert to all incoming information and fails to differentiate the reliable from the unreliable, and the relevant from the irrelevant. As the processing load increases, so memory span is reduced and thinking becomes simplistic. Hypervigilance in its most extreme form has been observed in the inappropriate responses of civilians confronted by a rapidly approaching conflagration [11].

Decisions made in general practice may be highly consequential for both doctor and patient. Furthermore, such decisions are sometimes necessarily made under conditions of time pressure and uncertainty,

which have been found to give rise to feelings of stress [12]. Therefore, we might expect to find evidence of defensive avoidance and hypervigilance in the day-to-day patient management decisions of doctors in busy surgeries. The decisional conflict approach may provide a theoretical basis for predicting and explaining the coping mechanisms general practitioners adopt to deal with decision stress.

METHOD

Two hundred general practitioners in the South West region of Great Britain were contacted by letter and those that responded received a visit from a member of the research team, during which they were given the opportunity to familiarize themselves with the aims and procedures of the project. Of those contacted, 37 doctors (18.5%) agreed to take part in the project. Thirty three were male and four female, and were based in both urban and rural practices.

A semi-structured interview protocol was designed to gather information about well established strategies of management employed by GPs, and also to obtain general biographical data about each doctor. One question which required introspection about mental processes involved in decision making was included as a test item for a related element of the project. Questions were of an open ended nature and a series of follow up questions and probe items were used. Probe items were deliberately of a challenging nature as individuals are more likely to put forward explanations of behaviour in situations where their accountability is in question [13]. Table 1 summarizes the questions asked during interview. The frequency with which probe items were used was naturally varied across the sample, and were employed on a contingent basis e.g.

Interviewer: How might time pressure influence your decision making?

GP: ... Its only when it gets quite extreme that it has a ... significant effect.

Interviewer: ... If it was extreme, what might happen ?

GP: ... I think it's a question of taking short cuts, not doing

some of the investigations or examinations that you'd otherwise do ...

Interviewer: ... Do you feel that short cuts actually affect your management decision ... ?

GP: ... I can see myself perhaps giving a course of treatment as ... an easy and quick option ... to complete a consultation ...

Interviews were carried out at each doctor's surgery, except for two participants who requested home visits. Each interview lasted for approx. 1 hr, and interviews of the entire panel were carried out between March and July 1993. All interviews were audio-taped and transcribed. One interview proved impossible to transcribe due to poor recording quality, and was consequently not included in the analysis.

RESULTS

Qualitative content analysis of interview data has enabled us to report on the range and prevalence of patient management strategies used in response to a set of common variables. Illustrative quotations from across the whole sample have been used to support the data. Doctors on the panel are identified in these quotations by a code indicating their number and whether they are male (M) or female (F). Of the doctors on the interview panel, 11 were aged between 31 and 35 years old, nine between 36 and 40 years old, five between 41 and 45, five between 46 and 50 and three between 51 and 55 years old. Ages were not recorded for the remaining three doctors. Six doctors in the sample had been qualified for less than 5 years, 15 for between 5 and 10 years, seven for between 11 and 15 years, four for between 16 and 20 years, and four for over 20 years. Forty percent of the panel carried out their postgraduate training in London, the remaining 60% in Cambridge (6), Bristol (5), Birmingham (2), Nottingham (2), Edinburgh (1), Manchester (1) and Cardiff (1). Two GPs completed their training in India and another in the U.S.S.R. Female GPs were under-represented in the sample (12%), compared to figures for the region (34%) [14], and the U.K. (25%) [15].

Time pressure and uncertainty

All but two doctors in our sample reported feeling under time pressure during consultations, and all but one expressed feelings of uncertainty about how to manage their patients. These two variables were reported to have a considerable bearing on the actual management decisions made. Even when surgeries were appointment based, some patients inevitably take up more than their allocated time, leaving other patients with less of the doctor's time. In addition, the doctor may be called out to deal with an emergency case, either just before or during a surgery.

When faced with this situation, 28 doctors in the sample (77.8%) reported using management strategies

Table 1. Interview schedule

1. Do you ever feel under time pressure during consultations?
2. How might time pressure influence your decision making?
3. In what circumstances might you feel unsure of how to manage patients?
4. How do you deal with uncertainty?
5. What sort of information are you aware of when a patient first walks into the consultation room?
6. How might more social or psychological factors about the patient influence your decision making?
7. How might the age of the patient influence the decisions you make?
8. How might the gender of the patient influence the decisions you make?
9. How might other partners in the practice influence your decision making?
10. How do you arrive at a management decision?

that served to terminate the consultation. Such strategies were described as necessary and legitimate 'shortcuts'. Giving out a prescription was identified by 13 of these 28 (46.4%) and was the most frequently mentioned strategy used. The same subset of doctors reported that they were more likely to review or bring back patients when under time pressure. Of these 13 doctors, four (30.8%) reported reviewing patients as a safeguard after having decided to give out prescriptions under pressured circumstances:

I can see myself perhaps giving a course of treatment, as a sort of an easy and quick option to ... complete a consultation and ... feel better about it by offering a sort of follow up, later on, just ... [to] see how things have gone. (M5)

In cases where time pressure causes uncertainty about management, five doctors out of the 28 (17.9%) reported a higher level of reviewing of patients so that decisions could be temporarily deferred. However, this may be counter productive as if a patient returns to an equally time pressured consultation, the doctor may still be unable to produce a management plan for the particular condition.

Just as giving out a prescription may serve to bring a time-pressured consultation to a positive close, two doctors (7.1%, out of 28) reported using investigation to the same effect:

I certainly tend to do more investigations than I probably need to, because it's quite a good way of ending a consultation on a positive note ... (M28)

Alternatively, five doctors (17.9%, out of 28) said that they would be inclined to do less investigation themselves, but refer patients more frequently to be investigated by other agencies:

I'm aware that sometimes if one really spent longer, one might end up not referring somebody. And then actually one's saying 'Alright sod it, I'll refer you.' You know, it's easier to get them out the door and then dictate a letter over a cup of coffee. (M31)

Another way of terminating the consultation when under time pressure was to restrict management to the presenting physical symptoms. In this way, seven doctors (25%, out of 28) said that they made no attempt to try and uncover patients' hidden agendas, and used more directive and closed communication techniques in order to discourage patients from bringing up side issues. Under such circumstances, this subset of doctors expressed a preference for physical symptoms which could be dealt with relatively quickly compared to more psycho-social issues:

... someone may come in with a couple of physical complaints and a psychological complaint and I'll think OK on another time. I might pick up on these cues and say 'Well let's talk a little more about your depression', but on a day like that I'll just ignore it. (F9)

Nevertheless, on some occasions doctors found themselves unable to ignore more emotional concerns:

Of course what happens is that you're on the verge of trying to [terminate the consultation] and they burst into tears, and you've got what you thought was a four minute consultation is forty five minutes ... (M22)

It appears that time pressure influences the general pattern of the consultation, having perhaps the most profound impact on the final management decision about which the patient may receive little or no explanation:

... you're naturally under pressure to shut things down and become doctor centred, to ask closed questions, to interrupt, to not explore patients' feelings and not to negotiate ... (M31)

Uncertainty

Doctors who reported feeling uncertain about how to manage patients, generally accepted this as an inevitable feature of general practice. While uncertainty about diagnosis was associated with symptoms not fitting into recognisable patterns, uncertainty about management was related to a number of factors including social and psychological characteristics of the patient, lack of knowledge about the patient's expectations and satisfaction with the decision made and lack of trust or faith in the doctor.

When feeling uncertain about how to manage a patient, 23 doctors in our sample (63.9%) reported using 'time as a diagnostic tool'. As previously mentioned with regard to time pressure, this involves giving the patient a follow up appointment. However, instead of using this strategy to defer the decision to a slot where the doctor is under less time constraint, in the instance of uncertainty, extra time gives the doctor an opportunity to talk the matter over with other partners, consult text books or other literature, or for the symptoms to have remitted of their own accord.

In order to temporize, 8 doctors out of this 23 (34.8%) felt that it was sometimes necessary to carry out minor investigations.

If I don't know what to do, then I'm just sort of playing for time until the patient tells me ... I ... can just explore symptomatology in more detail or do some blood tests, talk about their great aunt. (M26)

As in cases of time pressure, investigation was also seen as a way of reassuring patients that some action had been taken:

I tend to ask myself if any investigations might be appropriate ... not necessarily for my sake but [so that] a patient feels something is being done to try and achieve an end ... (M1)

In addition to using time, when unsure of diagnosis and management, 21 doctors (58.3%, out of 36) said that they would refer for further investigation and to confirm diagnosis. This may be the action taken when symptoms persist forcing the doctor to take further action.

Patient characteristics

All but 4 doctors in our sample reported paying attention to visual or non-verbal cues to give them information about the patient's physical or mental state when first entering the consultation room, e.g. difficulty walking or sitting, appearing anxious or upset. Fifteen doctors out of this 32 also reported using

cues to give them some indication of the patient's social background and lifestyle e.g. dress, accent, cleanliness. Given this information, it seems that doctors form certain opinions about their patients at an early stage in the consultation, and these may have some determining effect on its subsequent course.

When deciding how to manage a patient at the end of the consultation, doctors recognised the impact of such guiding first impressions:

... doctors have got a more powerfully established set of preconceptions about what's appropriate for people than people have themselves because we do it every day ... you're beginning to make all kinds of assumptions ... Tragically at times it can take quite a long time to get unhinged from those preconceptions and you can continue to think about somebody as belonging to a particular social economic class and therefore having particular perceptions when they may not hold them at all. (M22)

Ten doctors in our sample (27.8%) reported taking the patient's financial status into consideration. Two out of this 10 said that they would be more inclined to prescribe for patients who do not pay for their medication. Deciding on management that patients can afford was put forward by a doctor in this subset, as was writing out private prescriptions and referring patients who have private health cover.

The influence of patients' social class was mentioned by three doctors in our sample, both with regard to explaining management and actually making decisions:

... you do tend to treat ... [social classes four and five] ... more. You might give them treatments with antibiotics ... more than you would, because they need more bolstering, they need more help. (M8)

Age and gender

Twelve doctors (33.3%) were able to put forward specific ways in which age influenced their management decisions. With regard to the very elderly and young children, six out of these 12 doctors felt cautious about prescribing drugs or putting patients through traumatic investigations. Concern was expressed that for the elderly, side effects of drugs may be more difficult to deal with than the illnesses themselves and that investigation may not be very fruitful. Eight out of the 12 doctors felt that they had to carry out cost effective calculations when deciding how to manage them:

... sometimes you're thinking in hard terms, 'Will the person live long enough to get the benefit of this treatment?' or 'Can I ignore it because they'll be dead of some other problem before this becomes an issue?' (F9)

One GP indicated awareness of the controversy surrounding this issue:

I've been realising that things like renal failure and coronary heart disease are eminently treatable in the seventy year olds ... and I think my trigger level for referral for ischaemic heart disease in the seventy year olds is actually probably lagging behind ... what would now be an accepted good practice. (M1)

In comparison, three of the 12 doctors reported having relatively low thresholds for referring children.

In the case of further investigation, all three said that this was done in order to allay parents' anxieties:

When you refer them on for a second opinion, you know the kid's alright, but the mother and dad are so wound up ... about it that the kid's going to suffer. (M28)

When asked about the influence of patient gender on management, only six doctors in our sample (16.7%) identified this as a relevant variable. This contrasts with 34 doctors (94.4%) who reported differences in the style of the consultation with male and female patients, including symptom presentation, style of presentation and frequency of attendance. Of these six doctors, one reported giving women more choice about treatment than men, due to the doctor's uncertainty about what women want. Child care responsibilities were taken into account by one doctor when considering hospital admission for women and two doctors expressed caution when prescribing for women who were pregnant or taking the contraceptive pill.

Although one of the six doctors reported admitting less men to hospital due to pressure from male patients about work commitments, another doctor in this subset reported feeling under greater pressure to refer men than women. The perception that women prefer treatment to be explained in simple, non mechanical terms was also expressed by another of the six.

Partners in the practice

All doctors in our sample said that other partners had little, if any influence on their decision making, due to most practices operating on the basis of personal lists. In the situation where patients are seen by other doctors, because their own doctors are unavailable, nine doctors in the sample (25%) reported complying with management unless the patient was at risk. Alternatively, three out of the 36 preferred to avoid committing themselves to any action when seeing other partners' patients.

Doctors were also given the opportunity to put forward any other factors that influence their management decision making. These included more prescribing late in the day and on Fridays (three doctors), and a lower threshold for referral when feeling tired or when having a 'bad day' (one doctor).

Insight into decision making processes

When asked to give information about their mental processes when making management decisions, responses tended to fall into three general categories:

1. Five doctors in the sample (13.8%) gave clear indications that they simply did not have access to such information: ... it all goes into a dark box and makes a decision—which sometimes mystifies me ... (M12). This finding is consistent with the theory that some high level cognitive processes appear to operate in an implicit or

unconscious way and are therefore not verbalizable [16]. If it is assumed that doctors are constantly required to decide how to manage their patients, then this task will become automated due to over learning [17] and will no longer register in short term memory [18].

2. Alternatively, 11 doctors (30.6%) gave the same indications, but in a much more subtle way, so that they explained how they negotiated management decisions to their patients, once they themselves had already decided on courses of action.
3. Finally, 12 doctors (33%) put forward a variety of general explanations as to how they make management decisions. These included comments about tailoring management to individual patients' needs and coping with patients' expectations of management. When this subset of doctors was probed further about the subject, 6 offered various kinds of theories which frequently centred around medical training and experience.

However, 8 doctors (22.2%), more interestingly, included scientific theorizations about their decision making. In this way, some sort of pattern recognition idea was either explicitly stated or implied and 'algorithms', 'decision trees', 'reflex arcs' and 'personal protocols' were also referred to.

DISCUSSION

Qualitative analysis of responses in our sample of doctors has given rise to a large pool of information concerning: (1) the social and psychological factors which doctors feel have some influence on their management decisions; and (2) corresponding management strategies used to reduce decisional conflict. The following discussion summarizes the most salient and frequently reported of these factors and strategies, incorporating relevant psychological and medical literature.

Overwhelming reports of feeling under time pressure during the consultation and feeling uncertain about how to manage patients, makes decisional conflict, as described by Janis and Mann [9], a highly plausible concept in the context of general practice. It will therefore serve as a framework for the discussion of our results. Doctors under time pressure may be unable to consider information closely enough to discriminate between the relevant and the irrelevant, and attempt to reduce stress by making decisions which terminate the consultation, e.g. giving out a prescription. This is termed hypervigilance in decisional conflict theory.

As a non-clinical variable, time pressure has previously been found to have some impact on management decisions [19], and has been put forward

as a factor to explain why differential patterns of prescribing occur for similar patient complaints [8]. Howie *et al.* found that GPs who preferred longer, patient-centred consultations experienced the most stress when working under time constraint and issued more prescriptions than when they were able to work at their preferred pace [12].

Contrary to these results, the impact of time constraint was not supported in a study by Morrell *et al.* [20]. They found no evidence to suggest that GPs working on a 5 minute appointment basis prescribed more drugs, carried out more investigation, referred more patients or requested more repeat visits than those working to 7 $\frac{1}{2}$ and 10 minute ones. Using the same data set, Roland *et al.* suggested that it was communication style rather than management decisions that were influenced by time pressure [21]. Although we accept this alternative argument, we view this study cautiously.

Most importantly, we question whether the five minute consultation was reflective of a time pressured consultation, as this time period refers to actual face to face contact, and does not include various administrative tasks that GPs must carry out after each patient. It may have been more representative to have constrained consultations of 3 or 4 minutes or include administration tasks in the 5 minute period. In addition, the greater availability of appointments in the 5 minute consultation surgeries may have resulted in more patients booking with acute illnesses, which could be considered to be less likely to cause GPs to be uncertain of management. Finally, although a large number of consultations were analysed, the study involved only one practice in London.

When time pressure leads to uncertainty about diagnosis and management, doctors reported deferring decisions by giving follow up appointments. Although we are aware that GPs may allow time to pass, as a legitimate therapeutic strategy to allow a diagnosis to emerge [22, 23], interview responses indicated that GPs also deferred making decisions as a means of coping with stress. In addition, GPs reported referring patients to other agencies. This type of decisional conflict is likely to arise when each possible choice of action is potentially risky. Under these circumstances, we would expect doctors to employ defensive avoidance as a coping mechanism. An example of this is procrastination, where the doctor can temporarily stop thinking about potential choices by avoiding processing relevant information. As mentioned in the results section, some doctors reported using directive and closed communication techniques in order to discourage patients from bringing up more emotional or psychological concerns that would prove to be time consuming.

Another example of defensive avoidance is shifting responsibility for making the decision onto someone else. Again this was a strategy reportedly used by some members of our panel. Here information gathering is limited to seeking out experts who will take over the

decision altogether or instruct the individual in what to do.

When the doctor feels that each potential decisional option is risky, but cannot defer action, or pass responsibility onto a higher authority, bolstering of the least objectionable choice would be predicted by decisional conflict theory. Although the doctor may continue to think about the issue, stress will be warded off by exaggerating supportive information, while ignoring or minimizing potentially challenging data. Evidence for the use of this strategy is difficult to identify in our data and may not be open to report due to lack insight into potential reasoning biases [16].

Deferring decisions and referring patients to other agencies were also strategies reportedly employed when feeling uncertain about how to manage patients. Grof and colleagues investigated doctors' reactions to uncertainty and found that those who were *not* risk takers (as defined by responses to his questionnaire) prescribed more antibiotics where their use was questionable, and also made more referrals to specialists [24].

It was clear from their responses that doctors' impressions about patients are formed early in consultations and that these can influence decisions to prescribe and refer. Qualitative typologies of patients and corresponding management techniques are well documented in medical literature [25], particularly with reference to difficult or 'heartsink' patients [26-29]. Due to time constraints in the consultation and the strong emotions that the patients may provoke, doctors may, in a state of hypervigilance, resort to using such non-clinical patient variables, rather than more relevant information to guide their management decisions.

Management decisions were also reported to be influenced by the age and gender of the patient, e.g. less prescribing and traumatic investigation for the two age extremes. More specifically, elderly patients may be at a particular disadvantage when cost effective calculations concerning survival after certain operative procedures are involved. This has become a controversial issue in the medical literature, where it has been suggested that elderly patients—particularly women—are subject to discrimination and denied access to treatment for renal failure and coronary artery disease [30-34]. Women may be at a particular disadvantage as they tend to develop heart and kidney disease at a later age than men [33]. As with other non-clinical patient variables, in the event of high emotional arousal and time pressure, age and gender of patients may be unreliably used by a hypervigilant doctor to aid decision making and decrease stress.

As most doctors on our panel had their own personal lists of patients, other partners were reported to have little, if any influence on their decision making. A general concern to protect the profession was expressed with reluctance to interfere with colleagues' decisions unless the patient was at risk.

On balance, these reports of decision stress and

patient management strategy correspond closely to with the theory of decisional conflict. However, although most management strategies appear to be explicit and available for report, responses to our test question on insight indicated little awareness of the cognitive processes involved in decision making itself. This is consistent with psychological literature which suggests that subjects' responses to questions about their mental processes are based on already established causal theories, rather than on the basis of any true introspection [16, 35].

If this is the case, then the question must arise as to whether the reports given above are accurate descriptions of actual decision making in patient consultations. Equally, the interview process obviously gives rise to self-presentational concerns which create the added difficulty of distinguishing what actually occurs from what doctors are ready to admit takes place in consultations with patients.

We also recognise the limitations of our sample. GPs studied were those who volunteered to take part in a research project. Older GPs and female GPs were under-represented and there was a trend towards younger age groups with less than ten years since qualification. With reference to this last point, an older, more experienced sample may have been able to report a greater repertoire of coping strategies, developed over years of dealing with decisional conflict.

We are also aware that the majority of the sample's patients are self selected groups which constitute personal lists. This means that rather than seeing other partners in the practice, the patient is managed exclusively by his or her chosen GP. Even in these circumstances, the evidence is that doctors can identify increased stress and coping strategies. GPs without personal lists, who are less familiar with their patients, can therefore be expected to exhibit higher levels of stress, and more extensive strategies of coping with it.

The next phase of the project involves analysing audio taped recordings of samples of consultations by the panel of doctors in the project. We expect this analysis to cast light on the relationship between doctors' verbal reports and their actual consultation behaviour and hope that it will enable us to explore further the impact of social and psychological variables.

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