A Study of Emotional Intelligence, Leader Member Dyads and Employee Outcomes in the British National Health Service

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Declaration

Except where explicit reference is made to the work of others, this dissertation is the result of my own work. None of the material contained in this dissertation has been submitted for any other degree at the University of Strathclyde or any other institution.

Hannah C. Hesslegreaves

To Mum

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It is with humility that I submit this thesis as solely my own. There are so many people who have provided instrumental and emotional support to me in completing this.

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Abstract

This study aimed to develop a model that explained the relationships between emotional intelligence (as a model of individual differences), the quality of hierarchical relationships (utilising leader-member exchange theory), and a selection of employee outcomes, of which stress was of particular interest. This model was tested using a sample of hospital staff within one national health board in Scotland.

A cross sectional survey design was chosen. The sample consisted of 122 dyads from five hospitals. Each study variable was measured using previously validated measures. The key independent variables were emotional intelligence, measured using the ECI-2 (Boyatzis, Goleman, & Rhee, 1999) and leader-member exchange, using the LMX-7 (Graen & Uhl-Bien, 1995). Both were rated by supervisors and employees. The main dependent variables were stress, performance, organisational commitment, and job satisfaction. LMX was also tested for it's hypothesised mediating effects on the relationship between emotional intelligence and stress, as was social support. Perceived organisational support, relationship tenure, and liking were control variables, to isolate the effects the key independent variables. Dyadic responses were matched and paired to analyse unique leader-member exchanges. Data were analysed using stepwise regresson analysis, and for the tests of mediation,

hierarchical regression analysis was employed.

There were several main findings. Emotional intelligence (EI) was found to positively relate to the quality of leader-member exchange, suggesting that emotional intelligence may inform the development and management of hierarchical relationships. Emotional intelligence did not have a direct relationship with stress. EI also predicted performance, but not job satisfaction or organisational commitment. Percieved organisational support explained more variance in these outcomes that emotional intelligence of leader-member exchange quality.

Leader-member exchange did influence the way in which stress was experienced, particularly the frequency with which employees felt job pressure. This relationship was non-linear. However, stress severity had a negative linear relationship with LMX, describing that LMX was related to lower stress intensity. LMX was positively related to performance. Finally, a hypothesised interaction between EI and LMX was not supported, suggesting that individual differences did not moderate the extent to which LMX impacted stress outcomes. It is considered that an interaction effect was not found because of the limited range in ratings of emotional intelligence and leader-member exchange.

This study responds to an identified gap in the organisational behaviour literature, contributing to the exploration of how leader-member relationships are influenced by notions of individual differences such as emotional intelligence, and how outcomes at individual and organisational levels can be affected, particularly in large public sector organisations.

Contents

List of Figures

List of Tables

Chapter 1

Introduction

1.1 Introduction

Understanding workplace stress and its causes is increasingly important in influencing organisational life. Of particular focus in research, is the role of individual differences in a range of employee and organisational outcomes. The interest of this study is the examination emotional intelligence, and its effects on how individuals manage relationships at work, particularly with supervisors, and the implications for employee stress, attitudinal, and performance outcomes. The assessment of emotional intelligence in supervisor-employee relationships and the effects on stress are considered particularly unique. This responds to an identified gap in the exploration of how leadership is influenced by notions of individual differences such as emotional intelligence, social support, and how outcomes at individual and organisational levels can be affected.

This chapter introduces the rationale for the thesis. First, three main variables are identified as being of central importance to the development of this

research project: emotional intelligence, leader-member exchange, and stress. They are introduced, defined, and their theoretical backgrounds examined. Secondly, the research aims demonstrate the development of a model of the relationships between the variables, linking the role of emotional intelligence in the development of relationships and coping strategies to manage stress. The utilisation of supervisors as a source of support is central to the linkage of these relationships. Third, the practical contribution and significance of this research is considered. Fourthly, the methods used to examine the proposed research model are discussed, along with their limitations. Finally, the main findings and the significance of this research are summarised.

This study is thought be the first to examine the relationship between emotional intelligence, leader-member exchange, and stress. Moreover, it will be the first to relate these to a healthcare setting. A sample of hospital staff within one national health board in Scotland is used to validate the model proposed. This is thought to be of considerable significance, as staff working in healthcare may display a specific set of characteristics and attitudes in their working life, which are explained and informed by the research model proposed in this thesis. Particularly, the healthcare sector may be susceptible to unique and recognised stressors (McVicar, 2003; Brown & Edelmann, 2000; Foxall et al., 1990; Bakker et al., 2000) and the type of individual that chooses a career in healthcare may have a unique set of motives and interests, and therefore experience and perceive organisational life differently to employees of others sectors. Finally, healthcare in the UK is a sector plagued with change, beauaucracy, and poor leadership. This context creates an idiosyncratic setting, with distinctive implications for research.

The background to the literature search for this investigation is now examined. to justify the selection and omissions of various theoretical options for the development of the hypothesised model. This also demonstrates the areas in which the study contributes to theoretical and empirical understanding of specific theories of individual qualities and theories of leadership.

1.2 Theory

1.2.1 Leadership and the role of individual differences

In previous research, many theories of leadership have been used to empirically analyse the links between EI and leadership, but the multi-faceted relationships between leader-member exchange and EI has not been explored and empirically tested.

Leadership theories, social capital, and their relationships with EI and stress are well-established associations. Leadership theories have utilised the facets of EI in order to understand vehicles of influence, and have established a significant correlation between EI and leadership styles and effectiveness (Charbonneau and Nicol, 2002; Locke, 1991; Palmer et al., 2001).

Leader-member exchange is a model of leadership that regards the relationship between leader and member as developable. This is based on the premise that the relationship can be rated on a continuum from low to high quality, and can be developed into a high quality exchange. This process is known as 'leadership making', and is unique from other leadership models for the emphasis on developing differentiated relationships, characterised by properties such as respect, trust, and obligation (Graen & Uhl-Bien, 1995).

Traditionally, leadership theories have been categorised into trait approaches, behavioural approaches, and situational approaches (Yukl, 1989). LMX may be considered as a transactional approach, which focuses on the transaction, or exchange of valued commodities between individuals. Although the basis of this transaction is subordination to a leader, where the leader directs action based on hierarchical status, it also requires the compliance of the subordinate for the exchange to be mutually beneficial. Traditionally, the supervisor has possession and control over rewards and penalties to affect this compliance.

This same dynamic applies to leader-member exchange, although the commodities being exchanged are different to the traditional view of a transaction. In leader-member exchange theory, the aforementioned properties of respect, trust and obligation are mutual. Therefore, respect is rewarded with respect, and trust is rewarded with trust. Consequently, the theory suggests that the relationship develops into a high quality, equitable relationship, as the exchange is mutually beneficial. A high quality, or 'mature' exchange, or transaction, involves the obligatory feelings of the subordinate to take on more responsibility, over and above that contracted, which signifies that the subordinates interests have moved from being focused on self-benefit, to a focus on mutual, or even organisational interests.

1.2.2 A focus on EI

EI is used in the study to explain what properties may influence the development of this exchange or transaction into one of high quality, and what the implications of such relationships are for stress outcomes.

Emotional intelligence is a concept that has been widely applied in popular management texts, but has been scrutinised extensively for its academic relevance and uniqueness in the field of individual differences, and for its capability for measurement. This concern has focused on criticisms that EI is too broad as a concept and is used in an attempt to explain a multitude of individual differences. However, the term was born out of notions of intrapersonal intelligence (knowing oneself) and interpersonal (social) intelligence (Gardner 1983; Thorndike & Stein, 1937). These concepts are still identifiable in the model of emotional intelligence, popularised by Goleman (1995), who has further defined two intrapersonal facets as 'self-awareness' and 'self-management', and two interpersonal facets as 'social awareness' and 'relationship management'. Twenty dimensions are "clustered" into each of these four domains.

One of the main criticisms of EI is that it does not possess any uniqueness from theories of personality. However, personality theories are predominately trait-based, in that they define an individuals' personality, and suggest that this personality profile remains unchanged over time. In contrast, the competency-based models of emotional intelligence (Boyatzis, Goleman, & Rhee, 1999) promote the development of individual characteristics as competencies that can be developed and changed over time, and has therefore been chosen as the conceptual framework for this study. Furthermore, models used for the workplace, and more importantly, models relating to characteristics for developing outstanding leadership skills, address limitations of other literature about individual differences. This is of central importance to the development of the conceptual model in this thesis.

EI has also been associated with developing social networks, through the EI facets of empathy, building bonds, and teamwork and collaboration. Empirical investigation has revealed that individuals develop close and affectionate relationships with others if their EI is high (Schutte et al., 2001), demonstrating the appropriateness of investigation into the association between EI and theories of social exchange.

1.2.3 Implications for employee outcomes

Several models of EI for the workplace have encompassed stress management as an element of importance. Bar-On (1997) developed a model of EI by dividing facets into five dimensions, one of which was stress management. Emotional intelligence is proposed to have a negative relationship with stress, by developing competencies which promote stress tolerance (Slaski & Cartwright, 2002). Self-awareness and self-management are considered to aid the detection and management of stress.

The 'member' rather than the 'leader' is chosen as the unit of analysis in this research, in order to assess employee outcomes and minimise the number of questions asked to individuals in management positions. One of the main consequences of such a relationship is the effect on the stress levels of a member. In order to examine this effect, models of stress focusing on person-environment fit are examined, as they address the process where agency and environment interact (Edwards & Cooper, 1990; McGrath, 1976). This general approach allows the examination of how individual differences, demonstrated in the EI construct, affect stress outcomes in the structural context of a leader-member relationship. Implications for employee job satisfaction

and organisational commitment are also examined.

1.3 The healthcare context

A significant facet of the healthcare context broadly, and specifically in the British National Health Service (NHS), is the rapid and constant change within the organisational structure (Cummings et al., 2005; Burke, 2003), and the difficulties in managing such dynamic structures (Vitello-Cicciu, 2002). The effects of these changes on hospital staff has been the focus of some interest. particularly on nursing staff. The impact of change and re-structuring on staff include reductions in job satisfaction. the quality of care provided, and employee attitudes towards the organisation (Cummings & Estabrooks, 2003; Sochalski, 2001; Burke, 2003).

However, emotional impacts, including stress have also been determined as resulting from health care's unstable employment environment (Cumming et al., 2005; Jenkins & Elliot, 2004), which have been compounded by down-sizing and job overload for the staff who are left. These circumstances have attracted interest in the role of leadership, to gain an understanding about how to manage change, and in the role of competencies, as an approach to inform how staff cope and perform (Snow. 2001). Emotional intelligence has now become recognised with health care, and nursing in particular, as central to the development of staff (Secker et al.. 1999; McQueen, 2004; Cummings et al., 2005). Moreover, emotional intelligence has been identified as a competency set that informs the recruitment of nurses (Cadman, 2001), and their training and education (Freshman & Rubino. 2002; Meyer et al., 2004; Freshwater & Stickley, 2004).

The theory of LMX is considered within the transactional paradigm of the vast area of leadership theory, and addresses a flux in power dynamics. This is an area in which the development of high quality leader-member relationships, where a focus of interest moves from an individual level to the organisational level, may have a contribution. It also confirms the general trend of leadership, towards empowerment, where decision making power is moved as far down the organisational echelons, as is reasonable in the interests of the organisation (Braizier, 2005). This is further exemplified in modern organisations' endeavour for flatter organisational structures (Snow, 2001).

1.4 Research aims

The purpose of this thesis is to examine the relationships between emotional intelligence, leader-member exchange, stress, and employee attitudinal outcomes, by developing a theoretical model for empirical testing. The connections between the described concepts are presented in sets of hypotheses. The first cluster of hypotheses relates to the direct effects of emotional intelligence on leader-member exchange quality, stress, organisational commitment, and job satisfaction. These constructs are expected to be affected by emotional intelligence on the basis that it represents a selection of competencies which determine an individual's ability to conduct relationships and influence their own well-being. The second set of hypotheses refers to the direct effects of LMX, also predicting the effects on stress, and attitudinal outcomes. LMX is presented as a model of leadership that differentiates relationships with other dyadic members on the basis of exchanged commodities. These commodities

are valued such that they are expected to predict employee outcomes related to well-being.

The final set of hypotheses is concerned with explaining the relationships between emotional intelligence, leader-member exchange, social support, and stress. Social support is hypothesised as a mediator in the relationship between LMX and stress, highlighting the importance of the supervisor as a source of support (Kraimar, Wayne, & Jaworski, 2001; Borchgrevink & Boster, 1997; LaRocco, et al., 1980). LMX is also proposed as a mediator, in the relationship between EI and stress. LMX may explain why EI results in lower stress, through the utilisation of high quality hierarchical relationships. Finally, this research suggests that the interaction between EI and LMX strengthen the hypothesised experiences of stress.

Five hospitals within the National Health Service (NHS) were chosen to test these hypotheses, for several reasons. First, the highly structured nature of public sector organisations was preferred in order to ensure that a large number of cases were returned. This increases reliability. The NHS, characterised by a tall hierarchy, enabled many hierarchical dyadic relationships to be sampled. Second, healthcare professionals have a highly stressful work environment and the nature of their work is also stressful. Theory has established that individuals with work responsibilities of other individuals, rather than task oriented responsibilities, are more likely to experience stress (Sutton & Kahn, 1987). The explanation of stress and how to manage it in hospital staff may therefore have explanatory value in other care-related careers.

1.5 Research design

Using a largely positivistic approach to data retrieval and analysis, a cross-sectional research design was used, particularly chosen as it allowed the analysis of a large amount of data. Surveys were employed as they gather information about a large, multivariate subject matter, and establishing cause-effect relationships. The choice of research design was based on its ability to test the hypotheses.

However, there are other approaches to the examination of emotional intelligence, LMX, and stress. From a critical realist ontology, an assumption implicit in the research is that events exist independently of an individuals knowledge of them. Therefore, reality has an objective existence. However, the examination of reality, and individual endeavours for knowledge, is inherently complex. Individuals' perceptions, experiences, and values mean that reports of events are differential, and therefore render knowledge imperfect. Epistemologically, knowledge is limited and research cannot suppose to understand an event, phenomenon, or individual fully although any methods of attaining relevant knowledge must be considered. Therefore, this research can gain only partial knowledge to fully understand its context, participants, and their experiences, despite a selection of survey and interview methods.

Some qualitative data were gathered from semi-structured interviews with gatekeepers to each of the five hospital settings. This allowed insight to the cultural, contextual, and situational factors which may impact the nature of responses. This had value in providing the researcher with an understanding of some significant changes currently affecting the organisations. This was a very important factor to consider in the research, and further study

in this area may introduce theories of change management to the further development of the model presented here.

The research design approach adopted in this study contributes to the validity and reliability of investigations of emotional intelligence and leader-member exchange. Specifically, a multi-source design is used for many of the variables of interest including emotional intelligence and LMX. This is considered by many researchers in the field of leadership and the measurement of EI as a strength of the research. Emotional intelligence is assessed using a multiple rater instrument. However, this approach is certainly not the most common method of measuring EI and there is a need for more research using this design. There has been an increasing interest in the role of EI, as a competency in healthcare, some specifically related to promoting leadership behaviours in management positions of healthcare (Freshman & Rubino, 2002). Other research has been concerned with the role that EI has in assisting emotional coping in health professionals (Humpreys, Brunsen, & Davis, 2005).

Likewise, leader-member exchange has a range of instruments for assessment of relationship quality. The multi-source nature of the data gathering method meant that for every member rating of EI and LMX quality, there was also a leader rating. Members were administered their version of the survey through their supervisors, for logistical constraints on access to identify participants. This may have influenced how many members responded, and also how they responded. The researcher assured participants that only the researcher would have access to their responses, and that their participation would be completely confidential.

Although the content of LMX surveys are similar, the administration of surveys, and the research design utilised to ascertain LMX quality is too often limited to single raters, and they are commonly the member, rather than the leader (Lagace, Castleberry, & Ridnour, 1993; Schriesheim, Neider, & Scandura, 1998)). Given the methodological complexity of attaining dyadic responses in large numbers, this common approach is not surprising. However, dyadic responses were required in this research, and constitute a considerable strength. The rating of EI and LMX by two individuals to explore the nature of individual differences in relationships and stress has not been found in other research.

This approach has methodological advantages, and also limitations, as well as matters of reliability and validity. These issues were given attention in considering the research design that should be addressed in any replication of this research. The first is that, although a questionnaire was used to gather appropriate data, some bias in responses is inevitable. The sensitive nature of some of the items in the questionnaire means that some responses are subject to a degree of bias. Secondly, not all potentially influencing contextual factors could be controlled, and therefore there may be variables that could arise from further research in validating the presented model that should be accounted for. In addition to this, the researcher was not in a position, due to access restrictions, to use other methods, like interviews with survey respondents or observations, to explore other factors, as all respondents were anonymous. However, some issues raised in this study, for example, organisational change, and the development of LMX, could benefit from a longitudinal design, and qualitative exploration of contexts and relationships

over time.

Additionally, the measures used for these constructs, as well as the construct of stress, are tested in a healthcare setting. This setting is a rigorous test of EI, LMX, and stress instruments, as it has particular interests and investments in employee individual differences, and outcomes, such as attitudes and stress, as all determine performance. Additionally, people-oriented responsibilities and tasks, central to the nature of health care roles, foster a particular kind of stress (Jenkins & Elliot, 2004; McVicar, 2003).

1.6 Chapter structure

Chapter Two introduces the construct of emotional intelligence. Being the main independent variable in this research, attention is given to the historical development of the concept, and its properties. Emotional intelligence is presented as a theory of individual differences, and distinguished from theories of personality. This highlights the theory of emotional intelligence as one which is based on competencies, which can be developed. The main models used in organisational research are identified, and justification for the selection of a multi rated model of competency clusters is proposed. Furthermore, the chosen model of emotional intelligence which develops competencies of outstanding leadership, has obvious contributions in this research. EI is divided into self-oriented dimensions and other-oriented dimensions, and both have implications for relationship management, employee attitudinal outcomes, and stress. Correlates of EI are then presented. Associations with theories of leadership are an area which assisted the popularisation of emotional intelligence, so leadership and social support are discussed as related

concepts. Social support is included, not only as a variable of interest for the development of the model, but also as an illustration of emotional intelligences' role in acquiring social capital, through awareness and management of relationships.

The introduction and exploration of leader-member exchange is the objective of Chapter Three. Orientated in the field of leadership, literature on this subject is vast, and precision in defining leader-member exchange critical. Therefore, the development of differentiated hierarchical relationships is discussed, before identifying two models of leader-member exchange and the dimensions attributed to the theory in each model. Known antecedents of LMX are presented, including the role that emotional intelligence may have by drawing on similarities between the two concepts. For example, the social awareness and relationship management competencies of EI may have implications for how such individuals experience the relationship with their supervisor. Issues of power are also given attention, as the traditional vertical power structures prevalent in organisations are adjusted when high quality leader-member exchanges are achieved.

Chapter Four identifies a selection of employee outcomes which are of interest to this research. Specifically, the outcomes of emotional intelligence and leader-member exchange known throughout literature are organisational commitment and job satisfaction. Employee performance is an organisational outcome, included as a variable of ultimate interest to organisations. However, the emphasis of this chapter is placed on the role of EI and LMX in stress outcomes. This is assessed through the examination of stress as a model of transaction, with focus on a process between causes and conse-

quences. This is pertinent to this research, which focuses on the process of exchanging commodities between individuals. The stress model presented illustrates the process of transaction and interaction between environmental stressors and individual reactions and consequences. An examination of sources of stress is also provided, dividing stressors into individual level and organisational level sources. The remainder of the chapter concentrates on the impact of EI and LMX on stress, and other aforementioned outcomes. The first three literature chapters provide the theory necessary to understand the development of a model, which is the focus of Chapter Five.

Chapter Five is designed to demonstrate the theoretical basis for the proposed relationships between variables and propose a model of how they are related. This model is the basis for testing the research hypotheses. Of particular note, the chapter illustrates the predicted relationships between EI, LMX, and stress. This chapter is divided into five main sections, which each describe a set of hypotheses. The first of these sections postulates the relationships that predict direct outcomes of emotional intelligence; the second proposes the direct outcomes of leader-member exchange; the third postulates social support as a mediator; and the fourth examines the mediating effects of LMX. Finally, the interaction between dimensions of emotional intelligence and leader-member exchange is proposed to have a combined effect on stress. Therefore, both social support and LMX have explanatory value in understanding the effects of these concepts on stress. The sections reviewed here develop a model into a framework for hypotheses testing.

Chapter Six presents the findings of the research. The analysis took into account various characteristics of the healthcare context of the research

participants, including the nature of the dyad which was the focus of analysis, and the amount of time that the leader-member dyad had been in an employee-supervisor relationship. Other factors which were controlled in the hypothesis testing analysis were the extent to which participants liked their co-respondent and the employees' perception of organisational support.

The results and discussion of results are presented in Chapters Seven and Eight. Findings are analysed by an examination of the variety of data described. Qualitative information about the context of healthcare assists in understanding the relationships between variables. For example, emotional intelligence was hypothesised to interact with LMX quality to affect stress. However, this framework of individual differences does not have a moderating effect, and focus is given to organisational and task characteristics to explain a complex LMX-stress relationship. Leader-member exchange quality is theorised to affect stress in two ways; support provided by the leader will reduce stress; delegation from the supervisor will increase stress. Both are supported in different ways, and this has implications for how hierarchical relationships in healthcare are managed. Furthermore, emotional intelligence predicts LMX quality, but does not directly explain variance in stress. These findings inform how emotional intelligence can be utilised to develop leadership competencies and hierarchical relationships, and illustrates the importance of creating a balance between demands and support to develop a high quality leader-member exchange. Job satisfaction, organisational commitment and social support were not predicted by emotional intelligence, but perceived organisational support did influence employees' experiences of stress. Furthermore, emotional intelligence had a significant effect on per-

formance. Similarly, LMX did not have significant effects on commitment or job satisfaction, although did influence ratings of performance. LMX and performance are discussed as being linked through processes of delegation and trust.

The concluding chapter addresses how these findings and theoretical reflections could inform NHS management in developing leadership competencies and relationships. This research may be pertinent to the organisations established endeavour to develop competencies in staff, and promote partnerships and leadership skills, during times of continual change. The weaknesses of this study are acknowledged, which also inform future research suggestions.

1.7 Theoretical contribution

Contributions to the literature on leader-member exchange have been made in establishing the role that emotional intelligence competencies play in the quality of relationships. EI provides one means of conceptualising individual differences and their effects on LMX, stress, and other employee outcomes. Specifically, if EI is regarded as a set of competencies that can be developed, justification is provided for exploring its use in developing leader-member exchanges from ones of low quality to ones of high quality.

The other main contribution of this research is methodological. Previous research into matched paired dyadic ratings is far less common than individual rated relationships. In some research, a leader has rated a number of exchanges with various members (Schriesheim, Neider, & Scandura, 1998). This approach to relationship measurement is not as reliable as the matched dyad approach used in this study, as it is not consistent with theory. LMX is

a theory of differentiated relationships. and in order to assess the ability of EI to predict this differentiation, there must be a leader for every member. This more reliably establishes the effects of EI on differentiation of LMX quality, as the rating of EI will be different in each dyad, as the individuals in each dyad are different. The use of multi-source data is a significant strength of this study's research design.

1.8 Practical contribution

In the NHS and more generally, the current research contributes to the evidence base about the prevalence of self-orientated and relationship-oriented competencies, and demonstrates how these are contributing to employee outcomes, like performance, stress, job satisfaction, and commitment. Furthermore, underutilisation of employee assistance programmes (EAPs) may be informed by this research, in addressing areas where EAPs could improve. The study defined stress in terms of how intensely and frequently they are experienced. Employee assistance programmes could benefit from information about what stress factors are affecting the NHS work force, and therefore target their material by focusing on the nature of stress reported. Moreover, and particularly pertinent to the current NHS organisational climate, is the role that this research has in demonstrating the effects of change on employees. With further research in a change-orientated theoretical perspective, the findings of this project may be developed to assist management in understanding the nature of the workforce during times of change, and therefore, how it could be managed with optimal effect. This is an area which will attract interest in British health care, as it is in continual flux (Wilkinson et

al., 2004).

Chapter 2

Emotional Intellegence

2.1 Introduction

This chapter reviews the conceptual development of the construct of emotional intelligence and considers some parallel constructs and variables. The chapter also considers the explanatory power that these could provide to the outcomes of interest in this research. These areas relate to hierarchical relationships, including leadership theories, social capital, and leader-member exchange. The potential value of emotional intelligence to these constructs is presented.

The chapter is presented in two main parts; firstly, defining emotional intelligence; and secondly reviewing correlates and antecedents of emotional intelligence. In the first part, emotional intelligence is introduced as a broad concept by addressing its historical developments. Emotional intelligence (EI) is considered to have originated from previous psychological and social constructs such as personal intelligence (Gardner, 1983) and social intelligence (Thorndike & Stein, 1937). Debate over the added value of emotional

intelligence has been important to its formation and definition. This chapter therefore explains the rationale for using emotional intelligence as a variable which is thought to predict performance at work and life success.

The first area of definition discussed is that of the main models of emotional intelligence, based on Goleman's (1995) propositions. This analysis presents EI as a problematic concept, with areas of agreements and disagreement among EI scholars. The second set of definitions considers emotional intelligence as a trait. Thirdly, issues surrounding the presentation of models that propose a competency based approach to emotional intelligence are discussed, by taking into account theories of personality, skill and ability. These concepts are important as they portray EI as a skill that can be developed, which, when applying it in organisations, has implications for training and development of individuals, and more importantly, relationships.

The final section considers the main correlates and antecedents of EI. The relationship between EI and the variables of leadership effectiveness and leadership styles, social capital, and networks are the main focus as they reflect the role EI plays in hierarchical relationships. These factors illustrate the influence of developing and maintaining relationships, which is central to the emotional intelligence framework and the impact of EI on leader-member exchange and the leader as a source of social support.

2.2 Definitions and models of emotional intelligence

2.2.1 Historical development

The term emotional intelligence (EI) emerged from several other constructs in order to reassess the value of the more traditional ideas about forms of intelligence and ability based on reason and rationality. Rather than conceiving rational based thought and emotional thinking as separate, EI promotes the idea that it is "empirically realistic and useful to conceptualise emotions and cognitions as close, interactive partner" (Robins, 2002, p. 4). Robins, (2002) goes on to suggest that social skills are distinct from traditional intelligence, in that it involves a skill in engaging interpersonally, and accurately assessing how to react in social situations. Several models of emotional intelligence use terminology which suggests the importance of building social skills on the basis of personal intelligence (Brotheridge, 2002). Moreover, the popularity of emotion-based and social forms of intelligence has increased in post-industrial revolution workplaces, where working in rapidly changing environments, within close proximity to others, and increasing dependency on technology, creates the need for socially acceptable forms of coping (see for example, Ashforth & Humphrey, 1995; Ashkanasy, Hartel & Zerbe, 2000; Robins, 2002).

Although EI was popularised by Goleman (1995) the construct was first labelled as such by Salovey and Mayer (1990). Emotional intelligence has most of its conceptual roots in individual constructs, developed in earlier parts of the twentieth century. These can be clearly identified by splitting

EI into intrapersonal (knowing oneself) and interpersonal (relating to others) dimensions. Intrapersonal intelligence refers to self-awareness and self-regulation or management, while the interpersonal intelligence refers to social awareness and relationship management. These four areas are identical to Goleman's (1995) four emotional intelligence competencies, which Goleman developed for workplace application, and specifically for leadership positions (see Table 2.1). If one has intrapersonal intelligence, according to Gardner (1983), they can access their internal emotional states and can identify characteristics that distinguish between states. Social intelligence was introduced by Thorndike and Stein (1937), who were looking for a variable that might account for performance, when cognitive ability did not. Social intelligence has been defined in terms of identifying the feelings of others and having empathy (Marlowe, 1986), while Sternberg and Smith (1985) go further and say that this identification should be done without verbal prompts. Interpersonal intelligence is often referred to as empathy as it requires the capacity to read the emotions, moods and intentions of others. This dual nature of emotional intelligence can also be captured by Ciarrochi, Deane and Anderson's (2002) concepts of emotion perception and managing others' emotions.

Weisinger (1998), who has researched the application of emotional intelligence in the workplace, defined the intrapersonal aspect as the ability to "help oneself by using one's own emotions" (Charbonneau, Adelheid, & Nicol, 2002, p.1102). This requires emotional awareness and the ability to use emotions to motivate oneself. In turn, the ability to help others is developed. To help others, Weisinger (1998) states that the moods and emotions of others must be identified and guided towards positive outcomes essential to the

leadership role. He, like Goleman, regards self awareness, self management, social awareness and relationship management as distinct dimensions. Martinez' (1998) interpretation of emotional intelligence is similar to Goleman's (1995) and Weisinger's (1998) by its division into two aspects: self-orientated and other-orientated. George (2000) suggests that, despite the long history of the emotional intelligence origins in personal and social intelligence, EI "captures more of the essence of the active and purposeful integration of feelings and thoughts for effective functioning than these earlier constructs" (p.1038). Mayer, Salovey, and Caruso (2000) share this sentiment, in that emotional intelligence is theoretically preferable to earlier concepts like social intelligence, as it focuses more on affect. Thus, the value of a construct like EI is that it considers both self-related and other-related abilities together, and infers links between them. These links, termed "clusters" are examined in closer detail in the next section.

Emotional intelligence has been defined in a variety of ways, causing problems of identification of facets, poor judgement in measurement, and continuous debate among scholars regarding what the construct consists of. This makes cross-referencing of components and the value of EI for other variables problematic. The following sections examine the various models of emotional intelligence that receive the most scholarly and practical attention, including the model proposed by Goleman (1995), which is central to most other models. These definitions are arranged around themes that have been identified from the literature, and will have significance in the current research project. These are Golemans' (1995) model of EI, the inappropriateness of trait theory, and competency based approaches.

2.2.2 Main models of EI

The four major aspects to emotional intelligence, as outlined by Goleman (1995) are: the appraisal and expression of emotion; the use of emotion to enhance cognitive processes and decision making; knowledge about emotions; and management of emotions.

The Emotional Competence Inventory (ECI, Boyatzis, Goleman, & Rhee, 1999) was the instrument used to measure the main dimensions of EI (Goleman, 1998). The ECI (summarised in Table 2.1) presents EI as a model of twenty competencies, arranged in four clusters. The four clusters comprise firstly, "self-awareness" including emotional awareness, accurate self-assessment, and self-confidence. Second is the "self-management", or "self-regulation" cluster composed of self-control, trustworthiness, conscientiousness, adaptability, achievement drive, and initiative. This cluster has been regarded as the most essential for sustainable self-management, suggesting a causal element to the model (Boyatzis, Goleman & Rhee, 1999). This competency will enable an individual to regulate feelings like anger and anxiety. The first two groupings relate to the personal competencies.

The third cluster is the "social awareness", or "empathy" cluster and includes understanding others, service orientation, and, organisational or political awareness. Empathy relates to an understanding of others' emotions and, as Salovey and Mayer (1990) propose, to "re-experience them oneself" (p.194). Plutchik (1987) regards empathy as a skill that shares emotions and as a result, facilitates similar behaviours. In this way, experiencing similar feelings and behaviours may create attachments between individuals. Organisational awareness relates to an understanding of the general emotional and

political climate of the whole organisation, as well as groups.

The final cluster is named the "social skills" cluster, encompassing skills of developing others, influence, communication, conflict management, leadership, change catalyst, building bonds, teamwork cooperation and collaboration. Goleman proposes that skill in managing relationships facilitates an individual's influence over another individual, which is considered as an imperative task for managers and leaders. The final two groups refer to the social competencies.

This model was refined subsequent to statistical analysis, where a third domain named the "adaptability", and sometimes referred to as the "motivation" cluster, was abandoned. This cluster comprised achievement orientation and drive, commitment, initiative, and optimism.

Personal competence	**Self-awareness cluster**		**Self management cluster**	
	Dimension	**Description**	**Dimension**	**Description**
	Emotional self-awareness	Recognising our emotions and their effects	Adaptability	Flexibility in dealing with changing situations or obstacles
	Accurate self-assessment	Knowing one's strengths and limits	Emotional self control	Inhibiting emotions in service of group or organisational norms
	Self-confidence	A strong sense of one's self worth and capabilities	Initiative	Proactive, bias toward action
			Achievement orientation	Striving to do better
			Trustworthiness	Integrity or consistency with one's values, emotions, and behaviour
			Conscientiousness	Taking responsibility for personal performance
	Social awareness cluster		**Relationship management cluster**	
Social competence	Empathy	Understanding others and taking active interest in their concerns	Inspirational leadership	Inspiring and guiding groups and people
	Service orientation	Recognising and meeting customer's needs	Developing others	Helping others improve performance
	Organisational awareness	Perceives political relationships within the organisation	Communication	Listening openly and sending convincing messages
			Change catalyst	Initiating or managing change
			Conflict management	Resolving disagreements
			Building bonds	Nurturing instrumental relationships
			Teamwork and collaboration	Building relationships with and creating a shared vision and synergy

Table 2.1: Emotional intelligence clusters and their dimensions (Boyatzis, Goleman & Rhee, 1999)

Goleman (1996) notes that it is more effective for competencies to be examined in clusters. as the components do not function independently of each other. Competencies are grouped, as in real life they support one another, particularly in their role in performance (McClelland, 1998; Boyatzis, Goleman, & Rhee, 1999). Furthermore, Goleman (1996) indicates a causal flow to the competency cluster. For example, relationship skills are somewhat dependent on the extent to which others' emotions are understood. In turn, that ability is dependent upon self-management. For instance, if an individual cannot control emotional outbursts at work, they are likely to be inconsiderate of the effect of that outburst on others. This represents a lack of empathy, causing poor relations.

Such inter-competency connections and causality can be claimed on competencies within the clusters. For example, political awareness (within the social awareness cluster) is a necessary aptitude to building networks and collaboration (within the relationship management cluster). Goleman claims that emotionally intelligent individuals will have competence in at least six of the named EI competencies, and at least one from each cluster. This claim may be convincing theoretically, but there has been no empirical evaluation. Similarly, although Boyatzis, Goleman, and Rhee's (1999) model of emotional intelligence is inclusive, its validity is still to be proven. Sternberg (1999) and Davis, Stankov, and Roberts (1998) argue that its close correlations to areas of personality as a result of its all-encompassing nature, is a perceived limitation. Sternberg (1999) prefers more restrictive models of emotional intelligence, like that presented by Salovey and Mayer (1989).

2.2.3 Trait theories of personality

The link between emotional intelligence and personality, specifically the Five Factor model, has received much attention. It has been important in the EI literature to illustrate construct uniqueness, especially with regard to models of personality. Tischler, Biberman, and McKeage (2002) noted that many personality theories are based on the premise that an individual's personality is seldom changed, and that if it is, the process takes a long time. Personality has been defined by Gross (1996) as "those relatively stable and enduring aspects of individuals which distinguish them from other people..." (p. 744), highlighting personality as consisting of traits. It is with this notion that EI theories are distinct from concepts of personality, as many EI theories are competency-based, and can be developed, particularly in adults (Dulwicz and Higgs, 2000).

Some, however, consider that EI has little distinctiveness from personality theories, is not psychometrically sound as a unique construct and hence has poor reliability (Davis, Stankov & Roberts, 1998). Emotional intelligence has been relatively conclusively found to be related to theories of personality, especially the Five Factor Model. It is significantly positively correlated with the Five Factor Model's properties of extraversion, openness, agreeableness, and conscientiousness, and negatively correlated with neuroticism (Dawda & Hart, 2000; Petrides & Furnham, 2001; Schutte, 1998). Daus and Ashkanasy (2003), like others (Davies, Stankov, & Roberts, 1998). Dawda and Hart, (2000) suggest that this "overlap", is such that EI is deemed redundant.

Boyatzis, Goleman and Rhee (1999) suggest that the clusters approach to EI will provide a basis for building a theory of personality, given the strong

similarities between the clusters and the Five Factor model. For example, extraversion is thought to drive influence, leadership and communication, therefore, the social skills cluster. Openness and conscientiousness is considered to drive elements of the self-management cluster, and agreeableness has implicit similarities with the competencies of the social awareness cluster.

Other EI models, however, have been shown to differentiate from personality. Emotional intelligence is now widely regarded as an alternative to personality-based theories, owing to the similarities in the constructs, while still having enough distinctiveness by being placed in the competency paradigm. This paradigm highlights the differences drawn between EI and personality, and provides further support for the use of the competency approach. The next section illustrates further the important differences between EI and other individual differences and the validity of EI as a unique construct.

2.2.4 The competency based approach

Definitions with a competency based element propose that EI facets are not stable traits, like those of a personality model may suggest. Goleman (1998) defined an "emotional competence" as a "learned capability based on emotional intelligence that result in outstanding performance at work" (Chapter 3, p.1). Storey (1994) defines competencies by stating that the "emphasis is on demonstrated capacity to do rather than the possession of knowledge" (p.382). There has developed a consensus that EI can be developed through training or experience (Goleman, 1996; Dulewicz & Higgs, 2000; Dulewicz & Higgs, 2004; Steiner, 1997; Hopfl & Linstead, 1997; Cooper, 1997; Mar-

tinez, 1997; Tischler, Biberman, McKeage, 2002; Haydock, Connor, & Dawes, 1995). Martinez (1997) describes it as being "an array of non-cognitive skills, capabilities and competencies that influence a person's ability to cope with environmental demands and pressure" (p.72). These authors highlight an approach which Steiner (1997), Hopfl and Linstead (1997), Dulewicz and Higgs, and Cooper (1997) also observe.

Some authors have claimed that EI can increase with age, suggesting that, while the term "intelligence" infers stability, emotional competence is malleable, and can be trained at all ages (Ashforth, 2001). Although Goleman (1996) claimed that emotional competencies are best developed in childhood, Hopfl and Linstead (1997) argue that, owing to the malleable nature of EI's core competencies, exposure to workplace experiences will further develop them, in later life. This is what is referred to as the competency approach. Goleman (1998a) emphasises that an increase in one's EI illustrates a potential to increase any of the four main EI skills. However, one's emotional competence refers to what extent that potential has been fulfilled in terms of abilities shown on the job. Therefore, Cherniss and Goleman (2001) claim that emotional competence, rather than EI, is what should be measured to predict performance.

Dulewicz and Higgs (2000) prefer that in a work setting, EI competencies be related directly to job competencies. The limited work that has been conducted on this, has demonstrated a link between EI and success at work (Tischler, Biberman & McKeage, 2002). Several authors refer to the competencies that are desirable in management positions (Goleman, 1997; Fineman, 1997) including managing staff, persuasiveness, assertiveness, de-

cisiveness, sensitivity, and oral communication. Dulewicz (1994) named these "supra-competencies".

Dulewicz and Higgs' (2004) exploration of how developable EI was (i.e. whether it was possible to produce an increase in capacity by extending the range of skill, through training) showed that some elements of EI are developable, and some are exploitable, or utilisable. If an ability can be developed, it means that an individual's overall capacity to perform can be increased. However, other elements of EI, when increased, will only utilise an existing, static capacity. In this instance, an individual's capability can be increased to maximum potential, although the amount of potential was formed in earlier life.

Dulewicz and Higgs (2004) distinguished competencies which are developable and those which are not. They divided seven EI competencies into three groups. The first group, known as the 'driver' group, contains the facet 'motivation', and this energises individuals and drives them to success. These individuals tend to have high goals. The second group, called the 'constrainer' group, comprises conscientiousness and integrity. This acts as a control, to restrain the surplus drivers, particularly when the goals are misguided or unrealistic. The third group is termed the 'enabler' group. Enablers are those abilities that facilitate performance, and comprise self-awareness, emotional resilience, intuitiveness, and interpersonal sensitivity. Dulewicz and Higgs (2004) considered 'enablers' to be developable, more so than 'drivers' and 'constrainers'.

In a study that was designed to assess how each of these facets within the groups developed over time, the enablers were found to increase more than

the others after either intensive EI training, or after a period of time in high pressure circumstances (Dulewicz & Higgs, 2004). During times of strain and pressure, with no formal EI training, conscientiousness (a constrainer) also increased. This was not hypothesised, although it was theorised that individuals who are under pressure may develop their constrainer competencies, although only to maximise, or exploit their potential. This research was carried out on individuals in managerial positions, or positions of responsibility, creating a narrow research design. Nevertheless, Dulewicz and Higg's (2004) work illustrates how the facets of EI can be developed, and that EI levels do change. This strengthens the notion of EI as a distinct construct from trait theories of individual differences, as demonstrated by evidence of enablers and constrainers increasing in certain circumstances.

2.3 Correlates of EI

This section is concerned with the associations between EI and the development and maintenance of several kinds of relationships. In order to examine this effect comprehensively, two forms of relationships, drawing on different fields of literature, are considered which are important in the workplace environment. These are social capital and leader-member exchange. In order to provide a broader description of the role of EI in relationships, the section begins with a review of the associations between emotional intelligence and social capital.

2.3.1 Social capital

Emotional intelligence has been associated with the successful use of social capital in the form of networks. Social capital is defined as "the ability to create and sustain voluntary associations, or the idea that a healthy community is essential to prosperity" (Portes & Lanolt, 1996, p.18). Social capital and the utilization of networks address the social skills component of EI, and the studies presented below illustrate that the interpersonal element of EI leads to greater hierarchical connections. This, in turn, informs how EI may influence LMX.

Emotional intelligence involves the ability to understand both the emotions of oneself and others, so it seems plausible for EI to relate to the characteristics that build the relationships and increase the quality of the relationships, once established (Saarni, 1999). Theories of EI have established a positive correlation between EI and the size and quality of social networks. One benefit from building networks in the work place is that they provide social support (George, 2000). Taking account of EI, these networks would be built by the appropriate expression of emotion, to the appropriate individuals. Emotionally unintelligent individuals may either want to express emotion, but fail to do so, or do express emotion, and later regret it (Emmons & Colby, 1995). This illustrates how EI can aid relationships by appraising the feelings of others and oneself, and understanding one's effects on them.

Schutte et al. (2001) aimed to clarify the association between EI and social skills, hypothesising that higher levels of EI would correlate positively with good social skills. Social skills evaluated were social control, sensitivity, expressivity, and emotional control. The results of this research illustrated

the importance of EI in managing relationships. Schutte's (1998) measure of EI also correlated with interpersonal relations on the FIRO-B (Schutz, 1978), highlighting the relationship between EI and social skills.

An examination of the relationship between EI and relations with others revealed that higher levels of EI were associated with higher scores for close and affectionate relationships, with the use of the Fundamental Interpersonal Relations Orientation-Behaviour Inventory (FIRO-B; Schutz, 1978). This instrument measures inclusion, affection, and control in interpersonal relationships. Control was not found to be positively associated with EI, as it referred to the extent to which a person assumes responsibility and dominates in the relationship. Individuals with this quality, are regarded as non-adaptive, therefore, not likely to build strong ties in social networks. These studies attempted to empirically determine relationships between EI and qualitative elements of social capital, although all used a correlation design, hence, making any causal connections impossible to determine.

Theories of leadership also acknowledge the importance of the role of management's emotions in the overall competence of the workforce, and the social support expected from leaders (e.g. Ashekanasy, Zerb, & Hartel, 2002). Wieand (2002) claims that no other psychological concept has contributed more to the field of leadership than emotional intelligence, and the reason for such an effect is the necessity of social capital to a leader. Wieand (2002) also considers that in order to develop EI and implement durable changes to oneself and the organization, a leader will be highly dependent on social interaction during this process. Drucker realized that "deep and fundamental human change takes place at the level of identity. [He] observed that such

change is most likely to occur as a result of communication in the form of social interaction around shared values" (cited in Wieand, 2002, p.33). Drucker asserted that honest communication, openness, and trust were the most important elements in changing emotions. Drucker also considered an understanding of a broad range of emotions as being an advantage, as leaders can then adapt easily to more complex social situations. Wieand (2002) suggested that developing social capital is regarded as an important function of leadership, as when leaders develop a precise self-concept, they can use social capital to balance their short-comings and encourage their strengths. This notion, however, may be applied to individuals at all levels of an organisation, not just those in leadership roles.

Although, theoretically, the link between EI and social relationships has had extensive coverage, it has not been rigorously and empirically examined. Although any tie to another person constitutes a relationship, social capital, in this review refers to those relationships that have positive consequences for the focal person, that is, be of value to their own emotional and social life in the work place. The indices of durable relationships are reminiscent of EI components. For example, meaningful relationships, or social capital, require empathy, the ability to monitor oneself in social contexts, and cooperate. Although social capital refers to all relationships, the one specific interest of this research is the exchange between a leader and a member.

2.3.2 Leadership

Although the link between EI and leadership performance has been empirically under-developed, and remains largely theoretical (Palmer, Walls,

Burgess, & Stough, 2001; Dulewicz & Higgs, 2000) there have been some connections made, particularly between EI and transformational and transactional leadership models. However, most research that has been conducted has been with small samples (Gardner & Stough, 2002). Barling, et al. (2000) using a sample of 49 participants, and Palmer et al. (2001) using 43 participants, found justification to claim a relationship between EI and leadership effectiveness.

Charbonneau and Nicol (2002) explored the relationship between EI and leadership in adolescents, having postulated that the other-orientated element of EI would have significant correlation with leadership, as it enquires about the process of purposely influencing others (Yukl, 1989). For example, it was proposed that leaders would require skill in empathising with subordinates, in order to effectively delegate, and gauge their needs. It is regarded equally as important to be able to identify and understand the needs of others using emotional cues (Locke, 1991). Similarly, components of transformational leadership, such as generating motivation through inspiration, were found to be significantly related with the EI abilities of monitoring and managing the emotions of oneself and others (Palmer, Walls, Burgess, & Stough, 2001). These abilities, as previously mentioned, are considered equally important for organisational members who do not have formal leadership roles, as they have been found to predict valuable employee outcomes, including conflict reduction, performance, and satisfaction (Cherniss & Goleman, 2001; Goleman, 1998; Robins, 2002).

2.3.3 Leader-member exchange

Emotional intelligence, given its role in social relationships, is considered to influence to the development of hierarchical relationships too. Leader-member exchange (LMX) theory suggests that supervisors may treat subordinates differently and thus possibly use different communications tactics with subordinates in higher quality exchange relationships than with those in lower quality relationships. A manager with ten subordinates will have ten distinct leader-member-exchange relationships. Other leadership communication theories have a rather more prescriptive approach to communicating with subordinates, which promotes a 'one best way' method of treating all employees (Yrie, Hartman, & Galle. 2003). Leader-member exchange theory proposes that time and resources of both parties are limited (Green, Anderson, & Shivers, 1996) therefore some of these relationships will evolve into high-quality exchanges typified by high levels of mutual trust and respect. Others will be of lower quality and based primarily on the formal employment contract, with high levels of close supervision. Bass (1985), when describing the nature of the transactional leadership style, defined LMX as a relationship in which the "leader fulfils the needs of the followers in exchange for their performance meeting basic expectations" (p.68). Transactional leadership, a form of leader-member exchange, also promotes confidence in the subordinates (Yammarino & Dubinsky 1994). A key component in building a high-quality leader-member exchange appears to be the development of interpersonal trust within the leader-member relationship that goes beyond the formal employment contract (Dienesch & Liden, 1986). High-quality leader-member-exchange relationships are seen as evidence of successful trust

building over time.

The Emotional Competence Inventory (Boyatzis, Goleman, & Rhee, 1999) has trustworthiness as a competency within the self management cluster of emotional intelligence, as it is considered to be an ability which helps establish effective relationships. When a leader has instilled a high level of trust in a subordinate, the leader is thought to delegate important tasks to the employee. Bass (1990) stated that "delegation implies that one has been empowered by one's superior to take responsibility for certain activities" (p. 437). Hence, delegation is another important factor in a leader-member exchange. Moreover, pressure to perform increasingly responsible tasks requires an ability to cope with the demands. Rigorous empirical research has been conducted on several interpersonal facets of EI for example, empathy, and relationship effectiveness. However, no research has linked EI to LMX specifically. Some studies have highlighted the value of EI in building effective relationships between managers and employees.

Cooperation has also been noted as a skill that positively correlates with EI (Greeson, 2001). Cooperation is imperative in both vertical and horizontal working dyads, and is therefore relevant in LMX research, as well as other network relationships. Boyatzis, Goleman, and Rhee's (2000) ECI model includes a communication competence in the relationship management cluster of EI, and describes it as the ability to swap emotional information, share other information, be equally open to good and bad news, and be good listeners. These elements of EI are equally crucial in leader-member exchanges, as they help to define a mutually beneficial and open relationship, which is the intention of such exchanges.

Effective leaders will create positive emotions throughout the organisation in order to achieve common goals. However, in the process of attaining goals, conflict can occur between leaders and subordinates. This conflict has been considered inherent to the employment relationship, where a basic discordance exists between the desires of both parties (Rubery et al., 2002). Rahim (2003) claims that individuals must have the ability to handle conflict, and this will depend on the leader's style of concern. This refers to what extent a leader is concerned for oneself, and others. It can be inferred, from Rahim's (2003) proposal that approaches to conflict resolution will affect the nature of the leader-member exchange, and may have implications for levels of trust and delegation. For example, when a leader has a high concern for self and others, Rahim (2003) implies this creates a leadership style of openness, and straightforward exchange of information, which he calls 'integrating style'. This, according to the LMX literature, may imply high levels of trust between the leader and the subordinate. On the other hand, a leadership style that is 'dominating', typically resolves conflict with a high concern for self and low concern for others, or subordinates. In this instance, trust between leaders and subordinates may be low. Thus, EI attributes are important in the founding of high quality leader-member exchanges, as these studies have illustrated.

2.4 Conclusion

This chapter highlights several issues with respect to the construct of EI. Firstly, the most prominent problem of researching in the field of EI is that there is no firmly established and accepted definition of EI. This, along with

a review of the construct development, has been considered and has presented EI as a construct that has evolved from earlier constructs based on personal and social dimensions. Secondly, EI is not a new construct, and similarities with personality models have directed research towards demonstrating its uniqueness. The third theme that has arisen from the review refers to achieving such distinctiveness, which has been found in the competency based approaches to emotional intelligence. Such theories present EI as a set of abilities that can be developed, especially when developed and utilised together, as clusters. This differs from theories of personality, which pose a trait based approach to personal and social knowledge.

The final theme that has been highlighted in this review is that of the impact of EI on the development and maintenance of various hierarchical relationships. It has been identified that EI has strong positive correlations with several interpersonal skills, such as empathy, social control, cooperation (Schutte et. al., 2001), communication competence (Boyatzis, Goleman, & Rhee, 1999), and the ability to handle conflict (Rahim, 2003). Several of these, and other competencies identified as important to EI, have been studied in relation to the ability to develop social capital and build networks. These competencies also positively influence relationship quality in vertical relationships, which is of specific interest to this research. Such relationship effectiveness has been recognized as a source of social support. The next chapter elaborates the focus on vertical relationships and identifies and discusses the characteristics that influence their development.

Chapter 3

Leader-Member Exchange

3.1 Introduction

The aims of this chapter are to introduce and define leader-member exchange, and to identify factors that influence the development of high and low quality leader-member exchanges. It is proposed that the construct of emotional intelligence (EI) may provide a framework of influencing factors on LMX development, and this acknowledges an essential gap in the literature. The chapter is presented in two main sections; key themes in defining leader-member exchange; and antecedents and correlates of LMX.

In the first section, several issues that assist in the establishment of an inclusive definition of leader-member exchange (LMX) are discussed. The first is that of social capital and network theory which provides a social framework for the importance of building effective working relationships. The second relates to that of the historical development of the construct, introducing the concept of leadership making, where all subordinates are provided with the opportunity to have high quality relationships with supervisors. This adds

complexity to a previously simplistic perspective on leader-member relations. The third issue relates to the various levels of analysis, at the individual, dyadic (relationship), or organisational (network) level. Work on LMX has been criticised for not identifying the level at which LMX is being studied, and so this is therefore an important consideration in the present investigation. The fourth issue is the dimensionality of LMX. The construct has been defined by the dimensions or properties that compose a leader-member relationship. Among those identified are respect, trust, obligation (Graen & Uhl-Bien. 1995), contribution, loyalty, affect (Dienesch & Liden, 1986), and delegation.

The final issue involves the examination of models of relationship development, which approach leader-member exchanges as relationships that progress on a continuum from low to high quality through stages. The most prominent of these models is known as leadership making, and this will be presented as one approach to addressing how relationships are created and evolve.

The second section of the chapter examines antecedents of LMX. This addresses the last key theme which is about the establishment of a collection of factors that effect the development of leader-member exchanges and introduces the proposed role of EI. Other antecedent variables considered are: leadership style, organisational characteristics (such as hierarchy, unit size), task characteristics, and issues of power, all of which illustrate the process by which relationships are developed and maintained. The antecedents considered here are: demographics (age, gender), cognitive style, friendship, communication and interpersonal skills. These variables, from previous re-

search, support the role that emotional intelligence may have in developing high quality leader-member exchanges.

3.2 Defining LMX

The theoretical work on leader-member exchange has been regarded as a contribution to the field of leadership, and more specifically, a body of leadership communication theory. There are two streams of literature that focus on the communication between a supervisor and a subordinate; LMX and a more prescriptive communication approach. However, the latter is a more traditional approach to supervisor-subordinate interaction, and is based on an assumption that leadership style is uniform such that a leader will use the same leadership style in all relationships (Yukl, 1998). The prescriptive, homogeneous approach to leader-member interaction is known as the average leadership style (ALS) model. This approach was endorsed regardless of differing subordinate perceptions about a leader's treatment of individuals, by a belief that these differences in perceptions reflected measurement error (Katerberg & Hom, 1981). This 'best practice' approach is challenged by the development of leader-member exchange theory.

The theory of leader-member exchange proposes that supervisors apply differing communication styles and treatment to all subordinates. An essential premise of LMX is that supervisors have limited amounts of resources (time, energy, discretion) and that these resources are not expended equally among subordinates. Over time, the differential treatment forms relationships that vary in quality. This section reviews the development of the theory of differential relationships in order to gain a clear understanding of leader-

member exchange. Firstly, however, a brief discussion is provided on the benefits of social capital to gain understanding of how and why exchanges are made.

3.2.1 Social capital and networks

A discussion of social capital puts into context the importance, and wider implications of leader-member exchange, and the role of social skills, to organisational functioning. Burt (1997) describes the organisational scene pertinently: "observers from diverse perspectives see a shift in contemporary organisations away from bureaucracy, with layers of formal control replaced by fewer layers of negotiated informal control" (p.359). In network organisations, for example, individuals build success on establishing relationships with others in the organisation (Granovetter, 1982; Burt, 1992). Additionally, flatter hierarchies result in increased responsibility for everyone, at all levels of the organisation (Bozionelos, 2003) creating uncertainty and stress. According to Burt (1997), this type of working environment necessitates social capital.

As physical capital is tangible, being in material form, and human capital is the term given to resources in terms of skills and knowledge possessed by an individual, social capital is that which exists in the relationships between people. This makes it wholly intangible (Goleman, 1998). It is "created by interpersonal processes" (Bozionelos, 2003). The term was first used by sociologist Bourdieu (1977), to refer to the advantages incurred from being a member of a particular community. The concept has been defined as "the features of social organization, such as civic participation, norms of reci-

procity, and trust in others that facilitate cooperation for mutual benefit" (Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997, p.1491 cited in Pearce & Smith, 2003, p.125). Social capital is based on the notion of reciprocity. For example, when A does something for B, there is an expectation on the part of A, and obligation on the part of B, that A will be compensated for their time, energy, and resources, at some time in the future. The same notion of reciprocity is central to the theory of leader-member exchange. Social capital is also gained in order to provide support of varying kinds, and multiple relationships containing desired commodities such as support, create networks. In fact, some networks, called expressive networks, are developed to provide a safe channel through which to vent emotions, achieved often through friendship (Bozionelos, 2003).

Research conducted into how successful entrepreneurs use social capital, may provide insight into how valuable social skills are considered to be in interacting with and influencing significant others within working relationships. Baron and Markman (2000) have suggested that the role of social abilities means that individuals "read others accurately, make favourable first impressions, adapt to a wide range of social situations, and be persuasive" (p.41). These can improve the quality of relationships, another central notion of leader-member exchange. If an individual has social skills, they can expand their social networks. Furthermore, Baron and Markman (2000) considered social competencies, and EI in particular, as critical to entrepreneurial success. This highlights the importance of assessing social relationship and the impact of EI for psychological and social security, and how social capital can provide a framework around which to structure such enquiry.

3.2.2 Historical development of differentiated relationships

Leader-member exchange is the term attributed to the theory of varying types and quality of supervisor-subordinate relationships. The theory has been primarily concerned with making a distinction between the factors that influence the degree of quality in a relationship, based on the differing amounts of resources, supervision, and negotiating latitude afforded to each subordinate by a leader. This notion has evolved with the theory of LMX from a dichotomous "in-group" and "out-group" approach, to a more staged approach, resulting in relationships between leaders and subordinates that have become a more equal partnership. This evolution in thinking is captured in a transition from theory about LMX as a social exchange process, to a leadership process. This process is termed 'leadership making' and is described below.

LMX theory originates from the Vertical Dyad Linkage (VDL) theory (Dansereau, et al., 1975) and, as Graen and Uhl-Bien (1995) demonstrated, the theory has progressed in four defined stages, VDL being the first stage. Vertical Dyad Linkage research recognizes that, rather than using a standardized leadership style with all subordinates, as the average leadership style model suggests, leaders develop differentiated relationships with subordinates. Research into VDL was conducted by asking subordinates to describe the behaviour of their manger. Conclusions about differentiated relationships were drawn from the results that documented that subordinates produced different descriptions of the same manager. Some reported a "high quality exchange" and some a "low quality exchange", which, in the literature

about VDL is referred to as in-group and out-group, or "trusted assistants" and "hired hands", respectively (Zalesny & Graen, 1987). High quality exchanges are described and characterised by a high degree of mutual trust, respect, and obligation, and by work carried out beyond the formal job description. It should be noted that Graen and Uhl-Bien's (1995) presentation of the stages is not necessarily a chronological development of the LMX literature, but rather, a conceptual one (Schrieseim, Castro, & Cogliser, 1999).

The second stage of dyadic development research shifts the focus of analysis to the relationships and their outcomes (Graen, Novak, & Sommerkamp, 1982). This is the stage at which LMX becomes the principle term, rather than VDL. Graen and Uhl-Bien (1995) describe LMX at this stage as a relationship that is "influenced by characteristics and behaviours of leaders and members and occurs through a role-making process, and higher quality relationships have very positive outcomes for leaders, followers, work units, and the organisation in general" (Graen & Uhl-Bien, pp. 229). This presents leader-member exchange as an explanatory theory of differentiated relationships that explains a process, including antecedents (characteristics and behaviours), and outcomes (relationship quality) rather than a descriptive theory, as presented by vertical dyad linkage theory.

The third stage of LMX theory development is a more prescriptive theory concerning dyadic partnership building. This moves the theory beyond in-group and out-group, and superior and subordinate descriptions to concentrating more on effective leadership through effective relationships among "dyadic partners" (Graen & Uhl-Bien, 1995). This process is termed Leadership Making. Another central difference in the leadership making approach

is the notion that managers ought to offer all subordinates the opportunity to create a partnership relationship through the leadership making process, rather than focus on member differentiation as the earlier VDL approach suggested. By offering a partnership (high quality exchange relationship) to all members, the potential for equity is also present. The concept of dyadic partners also addresses the issue of equity, which has been a concern among LMX scholars (Scandura, 1995). LMX provides the opportunity to create a relationship between members of a hierarchy, which is fair, reciprocal, and equitable in the exchange of commodities (Sparrow & Liden, 1997; Gouldner, 1960).

Stage four, as described by Graen and Uhl-Bien (1995), develops the dyadic partnership to groups and networks, which form a matrix of inter-dependent dyadic relationships. Such relationships are not restricted to the conventional supervisor-subordinate relationship, but are expanded to include peer and team mate relationships and for relations across organisational levels. However, analysis at such a broad level brings into debate the number of high quality relationships that can be utilised in a work group, and the notion of a most effective and well supported combination of high and low quality leader-member exchanges.

This level of enquiry may benefit from the utilisation of social capital theory, introduced in the first section of this chapter, through the individual's ability to create and develop relationships with all members of a work community to incur advantages from them. This would be an appropriate theoretical approach to a matrix of relationships, described in Stage four of LMX theory, as it too is based on the reciprocal exchange of valued commodi-

ties. Therefore, social capital describes how relationships within a network of individuals may be used to the mutual benefit of the network members. The network approach to LMX considers what processes produce differentiated relationships. This may occur for several reasons. Firstly, supervisors may not be extending an offer of partnership to all subordinates. Secondly, a supervisor's offer to develop a partnership may be rejected, indicating the prospect that not all subordinates want to create a high quality relationship. It has been important to trace LMX theory development to identify which stages are appropriate for the focus of this research, and which are not.

3.2.3 Levels of analysis

Several authors (Hackman, 2003; Klein, Dansereau, & Hall, 1994; Dansereau, Alutto, & Yammarino, 1984; Rousseau, 1985) strongly promote attention to the level of analysis at which leader-member exchange is examined. As organisations consist of multiple levels, it is necessary for researchers to clearly identify the level at which the theorising takes place (Schrieseim, Castro, & Cogliser, 1999). It may be that the taller the hierarchy, and the more bureaucratic an organisation, the more important the issue of levels becomes, not only for theoretical clarity, but also for methodological simplicity. It is claimed that analysis from the levels perspective has been insufficient in providing further understanding of leadership, and confusing in relation to LMX research (Graen & Uhl-Bien, 1995). Attention to units of analysis is considered to "increase the clarity, testability, comprehensiveness, and creativity of organizational theories" (Klein et al., 1994, p. 224). LMX theory can be studied at the group level, assessing the impact of LMX on groups, and at

the dyadic level. Commonly, however, three levels are recognised from the facets of leadership: the leader, the follower, and the relationship.

Theory and research into leadership, it is suggested by Graen and Uhl-Bien (1995) and Hollander (1978) must expand beyond focus on the leader only to include the follower and the dyadic relationship. At the leader level (referred to as the leader-based domain), the topic of interest is establishing which personal characteristics, such as personality variables and perceptions, and leadership behaviours will produce the desired outcomes.

The follower-based perspective focuses on which follower characteristics and behaviours will encourage the desired outcomes. As with the leader-based approach, variables include traits, attitudes and perceptions, except in this case, such analysis is with respect to the followers, or subordinates.

The analysis of dyads, as opposed to individual, group, or organisational levels, has been the focus of VDL, as it focuses on the two individuals in a vertical relationship (Graen & Uhl-Bien, 1995). Schrieseim, Castro, and Cogliser (1999) note the comments of Dansereau et al. (1973), who claim that VDL theory "views the particular relationships between the leader and each of his individual members as the basic unit of analysis" (p.187). This approach to unit of analysis has been criticised by Dansereau et al. 1995) for confusing the issue of levels. It is recommendation that hypotheses about LMX should state clearly the unit of analysis. Graen and Uhl-Bien (1995) also advocate a focus on the factors, or dimensions, that are present within a relationship.

3.2.4 Dimensionality of LMX

Leader-member exchange (LMX) has been defined in several ways, depending upon the dimensions, or characteristics identified in differentiated relationships. Debate over the nature of LMX has centred on whether LMX is one-dimensional or multidimensional and has resulted in recurrent adjusting of LMX scales, with 2-item, 4-item, 5-item, 7-item, 12-item, and 16-item scales being produced.

Graen and Uhl-Bien (1995) considers that LMX contains respect, trust, and obligation, and that these are central LMX dimensions. An attempt by Liden and Maslyn (1998) to establish valid dimensionality has resulted in support for a multidimensional approach developed by Dienesch and Liden (1986) who identified perceived contribution, loyalty, and affect as key dimensions. The analysis by Liden and Maslyn (1998) found professional respect to be an additional dimension of LMX.

The utilization of role theory (Graen, 1976) to explain LMX also supports multi-dimensionality. Role theory emphasises the variation of the roles of both leader and subordinate, particularly as some roles are task orientated, and some are socially, or interpersonally orientated. For example, leaders supervise, resource, and liaise (Kim & Yukl, 1995), highlighting how their activities take multiple forms. Subordinates, too, have multi-faceted roles, as they are required to attend to tasks, as well as interact socially, and these are performed to varying degrees. Recognition of the social aspect to roles in organisations has given emphasis to the importance of social exchanges, and the many aspects involved in a high quality exchange. This has contributed to the multidimensional perspective, identifying material and non-material

commodities, such as advice, friendship, and support that are exchanged in a work relationship. Two common models presenting LMX dimensions are now examined.

Dienesch and Liden model

In response to what they considered a lack of theoretical underpinning, and the acknowledgement of material and non-material goods, Dienesch and Liden (1986) concluded that three currencies of exchange were the central components to LMX. These dimensions are perceived contribution, loyalty, and affect, and the authors proposed that exchange will be based on any, or all of these facets, to varying degrees.

Perceived contribution is the term used to refer to the task related behaviours of one dyadic member concerning the amount, type and quality of work-related activity that they offer to achieve the mutual goals of both members. At the start of a relationship, the leader evaluates the contribution of the subordinate, by making judgements on task related performance. Much of the literature on LMX has focused primarily on the task related contribution of subordinates, and less so on that of leaders (Graen & Scandura, 1987).

Loyalty to each other is the second dimension proposed by Dienesch and Liden (1986). This is defined as the "extent to which both leader and member publicly support each other's actions and character" (Liden & Maslyn, 1998). Graen and Scandura (1987) considered loyalty to be an outcome of the LMX process, and this was developed by Dienesch and Liden (1986) who regard loyalty as an integral dimension of LMX. They argue that loyal members

are more likely to be asked to perform responsible tasks that require self evaluation and independent judgements. However, it does seem reasonable for loyalty to be considered more as an outcome, as Graen and Scandura (1987) suggest.

Affect is a dimension that refers to members of a dyad experiencing interpersonal attraction, which is based on liking each other, rather than relating on professional and work related issues alone. Tanner, Castleberry and Ridnour (1994) proposed a two-dimensional model to describe work relationships, and identified 'work' and 'affect' as the two dimensions. The work skills mix is comparable to 'contribution' in Dienesch and Liden's (1986) model. Empirical support has been provided for the contribution of affect on leader-member exchanges by Wayne and Ferris (1990) and Liden, Wayne, and Stilwell (1993). The latter citation found that liking was a stronger predictor of LMX quality than the leader's perception of subordinate performance. Dienesch and Liden (1986) suggest, however, that affect and mutual liking may have no effect on relationships that are solidly work-based, while other relationships may be dominated by affect. This, the authors stress, applies to all three dimensions. Members of one dyadic exchange may attribute more importance to contribution, and those of another may use affect as the primary motivation for exchange. Additionally, contextual factors may influence the prominence of any dimension. For example, a high quality LMX may be the result of a relationship based on contribution, because the dyadic members work frequently together on work related projects. On the other hand, an exchange where the important dimension is affect, may develop because the individuals communicate frequently about non-work related issues

(Borchgrevink & Boster, 1997).

Dienesch and Liden (1986) have acknowledged that these three dimensions are not the only dimensions, and that others may be involved in the development of leader-member exchanges. Liden and Maslyn (1998) propose that social exchange theory may provide a framework to discover and test relational dimensions such as openness, honesty, intimacy, and support, to characterize high quality relationships (Graen & Scandura, 1987; Boyd & Taylor, 1998). These dimensions are reminiscent of the EI competencies (see Table One). The similarities between LMX dimensions and EI competencies are considered in detail in Chapter Five, where a conceptual model relating the two is presented.

Graen and Uhl-Bien model

In Graen and Uhl-Bien's (1995) model LMX is composed of the dimensions of respect, trust, and obligation. These three facets, according to the authors are the basis of high quality exchanges, or partnerships, and the origin of partnership offers. This is discussed in detail in the next section about the development of relationship quality. Graen and Uhl-Bien (1995) hypothesise that an offer is not extended or accepted without mutual respect for the other individuals' aptitudes. Scandura and Lankau (1996) reiterate the importance of respect at the initiation stage of a relationship, and define it as "admiration of another person's sense of worth or value as a result of their special or unique abilities, talents, experience, education or training" (p.245).

Professional respect has been identified in research as a separate dimension. If one is professionally respected, they are likely to be perceived as

well connected in their line of work, and association with that individual would strengthen other individuals' network ties. Furthermore, such individuals may be professionally respected owing to their skills and knowledge. Supporting this notion, research by Liden, et al. (1993) found that expectations about competence were a strong predictor of LMX quality. For example, a competent subordinate would require less supervision and monitoring, therefore using less supervising resources. When considering the limited resources that necessitate differentiated dyads, having a competent member could prove a valuable asset, and research has supported the view that managers are more likely to develop a relationship with a subordinate who is highly competent (Duchon, Green, & Taber 1986; Liden, Wayne & Stilwell 1993; Wakabayashi, Graen & Uhl-Bien 1990; Kim & Organ, 1982).

Recognition of other individuals' capacities generates trust, which in turn, is expected to deepen. Trust, in this context is a demonstration of genuine concern for another. Furthermore, it is expected, in a developing leader-member exchange, that mutual obligation will result. The presence of these characteristics, Graen and Uhl-Bien (1995) believe, is advantageous, if not necessary for working relationships to develop into mutually equal and productive partnerships. However, the authors are careful to note that such assessments of individuals are in reference to working behaviours, and professional capabilities, rather than appraisals based on friendship or personal considerations. This does not take account of judgements made about colleagues based on liking and interpersonal attraction, which are factors that are present in interpersonal relationships of all kinds, including working relationships. Owing to the contribution of liking-based, and similarity theories,

these are considered as antecedents to LMX development, and are therefore discussed in Section 3.3.3 of this chapter. The model of LMX as presented by Graen and Uhl-Bien (1995) also consolidates their approach to the staged development of LMX, in that mutual respect is important at the first stage, which nurtures trust, and mutual obligation then follows.

Indications from research by Liden and Maslyn (1998) reveal no distinction between the dimensions of loyalty and trust, suggesting that the dimension of loyalty in Diensesch and Liden's (1986) model, and that of trust in Graen and Uhl-Bien's (1995) model are conceptually considered the same. Furthermore, respect and professional respect were found to be unique dimensions. Schriescheim et al. (1999) collated the results of thirteen studies by Graen and colleagues, and identified eighteen dimensions of LMX. These are: trust, competence, motivation, assistance and support, understanding, latitude, authority, information, influence in decision making, communications, confidence, consideration, talent, delegation, innovativeness, expertise, control of organizational resources, and mutual control. The number of dimensions discovered illustrates a problem of dimensionality and therefore, of definition. However, Schriescheim, et al. (1999) identified six recurrent dimensions in most studies. These are mutual support, trust, liking, latitude, attention, and loyalty. In Chapter Five, these various dimensions will be linked to EI competencies.

3.2.5 Development of relationship quality

Leader-member exchange is a process of developing a leadership relationship into a mature partnership, where maximum and mutual benefits of associa-

tion with the other dyad member are obtained. This section examines more closely how dyadic members develop a relationship into one of high quality. Relationship quality development refers to the third stage of Graen and Uhl-Bien's (1995) four stage LMX theory development, where the notion of 'leadership making' was introduced. This model of development was based proposed by Graen and Uhl-Bien (1995), based on their identified dimensions of respect, trust, and obligation. These have been discussed in the section above. It is proposed that at each phase of leadership making, one of these three dimensions contribute to the relationship quality.

Leadership making is a model that presents a relationship as a process that develops in three phases; the 'stranger' phase, the 'acquaintance' phase, and the 'partnership' phase. These have been developed to address the simplicity of 'in-groups' and 'out-groups' categorisations of relationship quality, by suggesting that there are more phases of development. The stranger phase is characterised by formality, and has been described as a "cash and carry", and an "economic exchange" approach (Graen & Uhl-Bien, 1995). Exchanges and interactions between members are solely contractual, where both members behave only within required limits, and do not go beyond agreed job descriptions and formal role definitions. This phase has also been called the 'role-taking' phase (Graen & Scandura, 1987). This level of exchange is considered to be a lower-quality LMX, where influence is unidirectional, and from the leader, resulting in a weak leadership process. In this phase "mutual respect is expected to be the critical quality and is the foundation of interactions during the initial sampling phase" (Scandura, et al., 1996). It is considered that strangers can respect each other, although would be unlikely

to trust each other, or feel obligated to each other.

The second 'acquaintance' stage is developed from the contractual relationship at phase one. and involves an offer being extended to develop the working relationship. The offer may be made from either dyadic member, although it must also be accepted for the relationship quality to progress. Not all offers are accepted. When an offer is accepted, interaction becomes less contractual and greater amounts of information and resources, of both a work and a personal nature are shared. The relationship builds through such exchanges as they provide access to internal information, allow influence to be exercised within the organisation, increased authority to make decisions, and mutual support for each other's activities (Borchgrevink & Boster, 1997). These exchanges are limited, and occur over a short period of time, as they are used to test the relationship.

The dimension of trust is added at this stage, based on the respect gained in the first phase. and members at this stage may be referred to as "trusted assistants". Trust is defined by Scandura, et al. (1996) as "reliance on the other person and confidence in the appropriate predictability of their response to a request" (Scandura et. al., 1996, pp. 248) and the establishment of trust makes more predictable the responses, performance, and support of both parties. The second phase is sometimes referred to as 'role-making' (Graen and Scandura, 1987). The 'acquaintance' phase is a decisive stage in determining the future of the relationship, as according to Graen and Uhl-Bien (1995), those dyads that do not progress from here revert to the first stage. The relationships at the acquaintance phase are considered to be of intermediate LMX quality.

Phase three is the basis of a mature partnership, where the relationship and the exchanges have become highly developed. Exchanges are 'in kind', rather than part of an expected and prescribed working behaviour. Reciprocation of exchange may span a much longer time frame than phase two, as mutual trust and loyalty are established. Interaction is of both a behavioural and emotional nature, and respect, trust and obligation grow continually. An increase in these encourages subordinates to take on more responsibility than is stipulated in a contractual agreement, and than they might usually do, and their interests move beyond a focus on the benefits to oneself, to an interest in mutual, and perhaps organisational issues. However, the leader also is available for support, encouragement, and access to career opportunities, in order to benefit the member. An awareness of role interdependency also forms, promoting obligation. This is the third LMX dimension identified by Graen and Uhl-Bien (1995), and it is built on a history of sustained performance and support.

At this stage, mutual influence allows a high degree of leadership between both members of the dyad (Graen and Uhl-Bien, 1995), and the relationship is termed as one of high quality. The most predominant differentiating characteristic of a high quality LMX is the relaxation of a formal hierarchical relationship, and the development of a peer relationship. This stage has also been labelled 'role-routinisation', or the 'commitment stage' (Graen & Scandura, 1987). At this phase, the notions of 'in-groups' and 'out-groups' have evolved into an equitable model of leadership. Figure 3.1 illustrates a model of this leadership making, staged model of leader-member exchanges, with their developed characteristics, according to Graen & Uhl-Bien (1995).

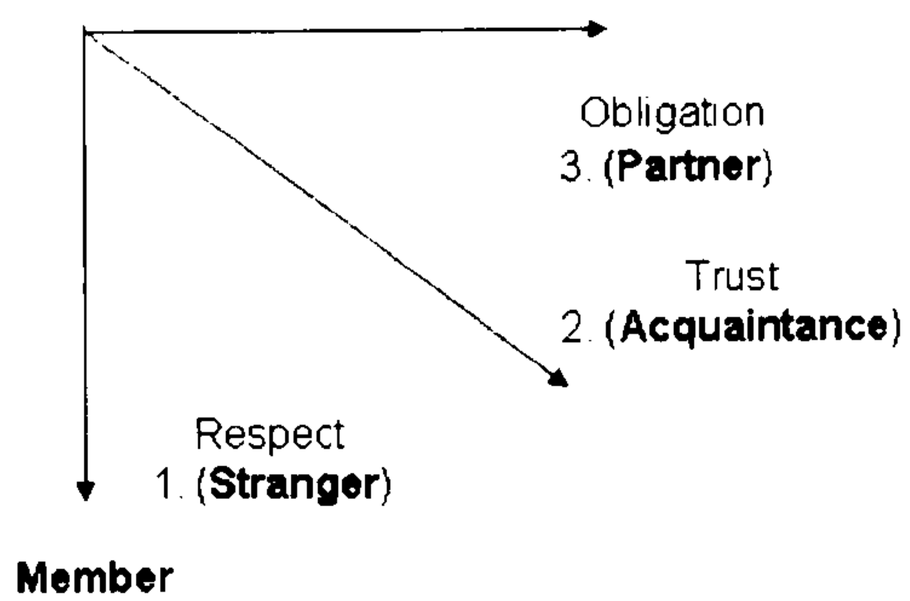

Figure 3.1: A model of leadership making

The vertical dyad linkage model regards the development of a relationship in terms of 'in-groups and out-groups', and documents that a dyad forms quickly within one of these groups and tends to remain stable. However, Boyd and Taylor (1998) claim that "the nature of a relationship may waiver back and forth between stages of development and even recycle to an earlier stage of development in the face of conflict or adversity" (Boyd & Taylor, 1998, p.6). The time frame for the development of relationships is different for each dyad. and some dyads do not progress beyond the first phase.

Gerstner and Day (1997) suggest that leader-member exchanges develop according to the leader's availability of time and energy, as it is not considered possible to give an equal amount of attention to all subordinates. However, research has suggested that LMX quality can be developed with training, particularly training in role making behaviours (Graen et al., 1982; Scandura & Graen, 1984). Tanner, Ridnour, and Castleberry (1997) suggest that trust-building in particular could be one of the dimensions that could be

improved with training. Again, similar behaviours and competencies are suggested in the emotional intelligence literature, as those that can be trained. Borchgrevink and Boster (1997) acknowledge that not much is known about how an LMX can be improved, although intra-dyadic communication has been identified as important. Communication is discussed fully as an antecedent to LMX in Section 3.3.5 of this review. Vecchio (1997) considers that some individuals may not desire to be in an in-group, as it requires more effort professionally, and possibly personally. However, in order for the relationship to be equitable, the theoretical assumption is made that all members have the opportunity to become in-group members, and that it is the member's choice about whether or not to participate in such relationship development. This implies that responsibility for out-group status is with the individual who rejects a relationship offer (Scandura 1999).

3.2.6 LMX and leadership theory

Leadership theory has traditionally been categorized into general approaches, for example trait approaches, behavioural approaches, and situational approaches (Yukl, 1989). Krishnan (2004) proposes that LMX, as an exchange, or transaction process, can be viewed as a transactional leadership model. Transactional leadership is based on the subordination to a leader (Bass, 1985). This means that the leader has the authority to make requests based on hierarchical status, and the subordinate complies due to their lower formal status. It also implies compliance to supervisor requests, as the supervisor has control of rewards and penalties.

Transactional leadership is the exchange, or transaction of benefits be-

tween individuals. based on shared values. This differs from transformational leadership, where values are regarded as malleable (Burns, 1978). Burns states that "the result of transforming leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents" (Burns, 1978, p.4, cited in Krishnan, 2004, p.58). This motivates followers to do more than is formally required of them, as would occur in the 'partnership' phase of LMX.

Gerstner and Day (1997) consider transformational leadership to be theoretically similar to leader-member exchange, as the central premise is the process of developing a unique relationship. A transformational leadership relationship would also help the leader and the member to combine goals, another important component of mature leader-member relationship.

The relationship management cluster of the emotional intelligence model includes the competency of teamwork and collaboration, which entails the building of relationships around shared and synergistic vision. Transformational leadership has been found to be positively associated with an "ability to monitor and manage emotions in oneself and others" which are also identified emotional intelligence competencies. Krishnan (2004) states, however, that even high quality leader-member exchanges do not account for the changes that may be made in the value of goals. This may be an instance were the EI competencies of adaptability, teamwork and collaboration may sustain high quality relationships.

3.3 Antecedents of LMX

Although the main dimensions of LMX have been identified by Dienesch and Liden (1986), and Graen and Uhl-Bien (1995), it is acknowledged that antecedents will contribute to the process of developing a leader-member exchange. Tenure has been suggested to affect the quality of a leader-member relationship, on the premise that as members gain knowledge of each other over time, they will rate the relationship of a higher quality (Maslyn and Uhl-Bien, 2001). Furthermore, it is proposed that those who experience a low quality LMX will leave either the organisation, or the relationship (Graen, Liden, & Hoel, 1982a; Kacmar, Carlson, & Brymer, 1999; Maslyn & Fedor, 1998). Maslyn and Uhl-Bien 2001 found that relationship tenure and LMX interacted to promote effort in developing the relationship further. However, Schyns et al. (2005) found no relationship between LMX quality and tenure, and supposed that this may be due to their particular sample, which was characterised by high job uncertainty and organisational change.

Gerstner and Day (1997) stated "more research is needed in order to clarify the contributions of relational demography, as well as other variables that have been examined as antecedents of LMX, such as leader and member personality traits, upward influence behaviour, leader delegation, and leader-member similarity" (p.83). Here, this research proposes to make a contribution. The construct of emotional intelligence is a model of individual differences that could partially explain the development of LMX.

Emotional intelligence and other antecedents are explored here, in order to illustrate the contribution of these factors to LMX. The chosen factors are leadership style, some organisational and task characteristics, and power

issues. The effects of demographic similarity, and similarities of cognitive style, friendship, and communication and interpersonal skills on LMX are considered. These areas are selected for their comprehensive coverage in literature, and for their relevance to the concerns of this research.

3.3.1 Emotional intelligence

In order to demonstrate the relationship between each facet of LMX and EI, the most commonly used and recognised dimensions of the LMX construct are identified and compared with the definitions of those competencies presented by Goleman, Boyatzis and McKee (1999) in their EI model for outstanding leadership. This model has been chosen as a framework for the present research, as it relates to the ability to become a leader. This comparison is made by examining the dimensions in the constructs of LMX and EI for similarities. The approach to leadership adopted by the LMX literature refers specifically to "leadership making", which promotes role proficiency and subordinates as "partners" with their supervisors; this implies that leadership behaviours can be adopted by anyone. The emotional intelligence model for outstanding leadership addresses the competencies necessary for developing this leadership role in the workplace. It is, therefore, an appropriate and compatible approach for analysis into the development of LMX. These similarities between EI and LMX dimensions are presented in Table 3.1, and have been classified based on the researcher's understanding of the literal meanings of the dimensions under consideration. Evidence of other authors links is presented as part of the discussion now presented.

The EI clusters that have most relevance to LMX are the self-management

Emotional Intelligence Cluster	Emotional Intelligence Characteristic	Common LMX Dimensions	LMX Dimensions Significant to Current Model
Self Awareness cluster	•Emotional self-awareness •Accurate self-assessment •Self-confidence	•Confidence	
Self Management cluster	•Adaptability •Emotional self-control •Initiative •Achievement orientation •Trustworthiness •Conscientiousness	•Ability to manage emotions •Motivation •Innovativeness	•Loyalty •Obligation
Social Awareness cluster	•Empathy •Service orientation •Organisational awareness	•Understanding •Consideration •Assistance and Support	•Professional (Respect) •Affect •Obligation
Relationship Management Cluster	•Inspirational leadership •Developing others •Communication •Change catalyst •Conflict management •Building bonds •Teamwork & collaboration	•Communication	•Trust •Contribution •Mutual Support

Table 3.1: Relationship between EI and LMX (Source: EI clusters (Goleman et al. 1999) and LMX dimensions (Dienesch & Liden, 1986 and Graen & Uhl-Bien 1995)

cluster, and the social competency clusters. This is expected, as LMX focuses on relationship factors. Upon analysis of the three dimensions from Dienesch

and Liden's (1986) approach, and the three from Graen and Uhl-Bien's (1995) model, all six dimensions are related to competencies from the EI framework (far right column in Table 3.1). These dimensions and their relationship with EI are described in detail below.

Dienesch and Liden (1986) consider perceived contribution, loyalty, and affect to be the theoretical underpinnings of the LMX construct. Perceived contribution refers to the task-related behaviours and efforts of one dyadic member in order that they achieve the mutual goals of both members. This may be likened to the teamwork and collaboration dimension of the relationship management cluster of EI, as this relates to the awareness and ability to build relationships for the mutual benefit of a work group, or in this case, a work dyad. A member's objective then, is to behave in a manner that builds such benefits, based on an understanding of a shared vision.

Loyalty is defined as the "extent to which both leader and member publicly support each other's actions and character" (Liden & Maslyn, 1998, p.46). There is a notion of reliability and consistency associated with this characteristic, where one is faithfully and personally committed to showing support for the actions and character of the other. This, in relation to the EI model for outstanding leadership, is equated to trustworthiness. Trustworthiness relates to an "integrity or consistency with one's values, emotions, and behaviour" (Goleman, Boyatzis & McKee, 2002, p.5). One would be loyal to actions and characteristics that meet expectations and that are consistent with personal standards. This individual would be worthy of trust and confidence from others, and mutual loyalty may emerge, as is necessary for developing a leader-member exchange. The relationship between employee

loyalty (and LMX dimension) and trust (an EI dimension) is supported by other research (Matzler & Renzl, 2006).

Affect is the final dimension identified by Dienesch and Liden (1986). This refers to dyadic members experiencing interpersonal attraction. Attraction is based on mutual and personal liking, rather than agreeing solely on professional and work-related issues alone. It may be considered that liking is a characteristic that is positively correlated with empathy, depicted in the EI framework as sensing others' feelings and taking an interest in their concerns. Johnson and Dabbs (1976) used employee-supervisor dyads and found that liking and positive affect were related. One who has an interest in the life and feelings of others, may be more likely to see positive characteristics in others, and feel affect for them, or show preference for them.

Graen and Uhl-Bien (1995) found that respect, trust and obligation were the fundamental dimensions of a leader-member exchange development. Respect, they suggest is an admiration for the worth of other individuals' abilities, qualities, and experience. Graen and Uhl-Bien (1995) isolated professional respect as a separate dimension, perceiving it to be the respect for another member's development of a good reputation within their line of work. Respect and professional respect are portrayed in Table 3.1 as having an association in meaning with empathy, from the social awareness cluster in EI terminology. Empathy refers to the ability to be aware, understand, and act on one's own perceptions of others. Respect will develop with an awareness and appreciation for another individual's abilities and worth to the organisation, particularly in professional terms.

The trustworthiness competence of EI is explained as informing others of

one's values and principles, intentions and feelings, and behaving consistently with them (Cherniss & Goleman, 2001). Both of these approaches to the meaning of trust imply a consistency between values and behaviour. As is previously noted, no distinction has been empirically made between trust and loyalty in LMX research. Here, they are conceptually related to EI competences. Furthermore, effective and clear communication skills within a leader-member exchange are also built on trust, as it involves the sharing of information, perhaps of both a professional and personal nature. A degree of influence over each other's attitudes and behaviours begins to occur, in an attempt to develop a shared reality about the organisation. The ability to develop a shared vision is the essence of the teamwork and collaboration dimension of EI.

Dienesch and Liden (1986) purport that early in relationship formation, the supervisor aims to develop confidence in the ability and willingness of the subordinate to successfully complete tasks. Furthermore, the subordinate needs to develop confidence that he or she will receive desired rewards from the supervisor in exchange for commitments. If this trust is established, both parties can be more assured of benefiting from the relationship and can more readily commit to the relationship development based on a genuine concern for the other member (Bauer, Tayla, Green, & Stephen, 1996).

Obligation means to be bound by a sense of duty, responsibility and commitment. This may be a sentiment towards an individual or an organisation, although in the context of leader-member exchange, obligation occurs and increases as respect and trust increases between both dyadic members. In this sense, a relationship between obligation and organisational aware-

ness (see Table 3.1, social awareness cluster), from the emotional intelligence model (Goleman, Boyatzis, & McKee, 2002) may be inferred. Organisational awareness refers to the ability to perceive political relationships within an organisation. An awareness of these would increase an understanding about one's place and role within the organisation and, with a high quality relationship with one's supervisor, expectations should be clear. This may increase an individual's sense of function and obligation for meeting collaborative, as well as personal aims, and signifies a shift in focus from oneself, to organisational issues. Obligation also refers to trustworthiness, as obligatory feelings increase the probability of the successful fulfilment of expectation about the respective dyadic member. This promotes a sense of mutual support, which develops team-working. Each of these characteristics are thought by Graen and Uhl-Bien (1995) to develop one after the other, as the relationship matures into one of high quality.

3.3.2 Leadership style

LMX has been studied mainly in the context of two styles of leadership, transformational, and transactional. Transformational leaders are those who regard their primary task as motivating their followers. As a result of this notion, they are also called charismatic leaders. Transformational leaders aim to disseminate a degree of power to the followers, making the relationship less hierarchical (Bass, 1985). Transformational leadership is also characterised by support, social skills, sensitivity, and attributes that are aimed at affecting others positively (Shamir. 1995). The focus of such behaviours on interpersonal skills makes the approach comparable to the theory of emo-

tional intelligence, particularly in the areas of social competence. and reflects an equalised, mature LMX partnership.

3.3.3 Organisational and task characteristics

Unit size and work load are given particular attention as influences of LMX, as they have been empirically found to have a negative relationship to high quality LMX. In fact, Green, Anderson, and Shivers (1996) found the effects of such factors to be more penetrating than the effects of demographics. It was correctly hypothesised that as unit size increased, LMX quality would decrease, as managers are forced to become more autocratic, as resources are stretched (Yukl, 1994). As managers are faced with fewer choices, work load for subordinates increases, further limiting the opportunity for the development of good working relationships.

Task characteristics have also been found to moderate the relationship between LMX and performance. For example, if the tasks are mundane and monotonous, or unpredictable and variable, they are associated with a positive relationship between LMX and performance. It is suggested that, in the first extreme, boring jobs require supervisor attention as a source of socio-emotional support, and in the latter, effective leader-member relationships provide direction and support for tasks that are complex.

3.3.4 Power

Perceived power and control between and supervisor and subordinate are considered to have influences on the way a subordinate perceives his or her social environment. More specifically. Elangovan and Xie (2000) suggest

that such power may be an important predictor of employee well-being and stress. LMX literature emphasises the progression of a relationship between two hierarchically unequal individuals, into an equitable relationship. If a subordinate experiences the feeling of inequity, due to the structural imbalance of power, stress is a common result (Rahim, 1996). The relationship between power and stress is examined in close detail in the Chapter Four.

French and Raven's (1959) taxonomy of five power bases (coercive, reward, legitimate, expert, and referent power), provides a framework for examining the implications of power for LMX. The utilisation of any of these power bases by a supervisor, has an effect on how they manage their subordinates, and how the LMX is perceived. Coercive power is the result of a perception that one individual has the control to give out punishment for undesirable behaviour. Reward power is the assessment of another's ability to administer a valued commodity in return for desired behaviours. These types of power are considered to be contingent on surveillance, as the power holder requires subordinate conformity. In relation to LMX, these would be undesirable leadership styles, as supervisory monitoring can be indicative of low LMX quality, due to the need for attention and time, resulting from mistrust. These two also emphasise a vertical relationship and an imposition of power.

The other three do not require surveillance to influence others. Expert power involves the perception that the other individual has greater knowledge or skill in a particular work area. Referent power exists when one identifies with another to the extent that they conform or emulate the power holder's behaviour. Finally, legitimate power "refers to the right of one to prescribe

another's behaviour. This form of power is based on an individual's acknowledgment that it is a normative requirement to behave as desired." (Borchgrevink & Boster, 1997, p.246) Borchgrevink and Boster (1997) suggest that coercive, reward, expert, and legitimate power are antecedents of LMX. Results indicated that coercive power is negatively related to leader-member exchange. while reward power and referent power have positive relationships with LMX.

Bass (1990) indicates that differential power distribution promotes psychological and social distancing. Some maintain that such distance between a leader and subordinate allows objectivity, task directed leadership, and a leadership style that is "free of emotional concern" for the subordinates (Boyd & Talyor, 1998). Liden and Maslyn (1998) have suggested that LMX members "may be inclined to desire close exchanges with those who have power, as those with power possess resources of value" (p. 65), as indicated also by Novak (1985). However, this approach to leadership is not considered conducive for developing effective working relationships. Hollander and Offermann (1990) and Dienesch and Liden (1986) propose that effective leadership depends on power sharing and two-way influence. Bass (1990) considers that such distance creates defensive behaviour and poor communication quality. Along the same lines, Fernandez (1991) suggests that informal organisational structures and networks of communication are more conducive to the development of close relationships, than tall hierarchical structures with formal communication networks. Regardless of organisational structure though, LMX theorists hold that when a relationship develops into a mature partnership, the power differences are minimised (Boyd & Taylor, 1998).

3.3.5 Similarity and attraction

The similarity-attraction paradigm (Byrne. 1971) identifies a positive relationship between the similarity of personal characteristics of individuals, and the interpersonal attraction experienced between those individuals. This concept is a valuable one to discuss in relation to LMX, as the LMX approach to leadership focuses on work relationships that are moderated by individual differences. Additionally, it is important to explore the possible effects of such characteristics, in order to identify any explanatory power they have in this investigation.

Deluga (1998) has hypothesised that interpersonal attraction promotes positive leader-member rapport and congruence, which leads to an accurate perception of, and improved, subordinate performance. It is necessary to identify the importance of congruence, as Goleman (2002) acknowledges it as a central facet of effective leadership. Personality similarity has been positively related to the leaders' evaluation of subordinate performance (Bauer & Green, 1996), however, these reports may not be valid in objective terms.

On the other hand, Krishnan (2004) offers a notion that may destabilize the well established notion of similarity's importance to quality leader-member exchanges. Krishnan (2004) proposes that a high quality LMX does not involve a transformation of both or either of the dyadic members to become similar. Rather, a high LMX involves a "clear mutual understanding of one another's value system and goals, and does not imply similarity in value systems" (p.61). The non-essential role of similarity played in transformational leadership may be extended to similarity in other areas, where only a mutual understanding and empathetic awareness is necessary. The

role of emotional intelligence then becomes evident. Mutual understanding, rather than the need to change another individual is a central competency identified in EI literature. particularly for models of leadership.

Nonetheless, it is necessary to acknowledge several characteristics that previous study has identified in order to ascertain the nature of the relationship from an LMX perspective. These are demographic similarity, cognitive style, friendship, and communication and interpersonal skills. These are selected because of frequent recurrence in literature, and their possible explanatory power for relationship development.

Demographic Similarity

The diversity of demographic factors within a relationship has implications for relationship development. Tsui and O'Reilly (1989) examined the effects of race, gender, age, tenure and education, and established that demographic similarity between supervisors and subordinates can have a positive effect on the quality of the relationship. They also concluded that dyads consisting of mixed genders were less likely to like each other. Dyadic members who differ in educational status are thought to communicate less, therefore developing a limited LMX. As a result, perceptions and expectations about the role, and each other, create dissonance. Furthermore, research has illustrated that class dissimilarity is related to lower quality LMX. Liden, et al. (1993), however, found no significant effects of demographic similarity.

Cognitive Style

It has been noted that when one member of any dyad has a different cognitive style to another, the interpersonal relationship is affected. Cognitive style may be considered as "consistent individual differences in preferred ways of organising and processing information and experience" (Allinson et. al., 2001, p.204). Witkin, et al. (1997) imply that cognitive similarity produces easier interaction and "positive mutual feeling" (p.204). "The similarity-attraction paradigm suggests that congruence between the cognitive styles of managers and their subordinates may result in positive leader-member relationships" (Allinson, et al., 2001, p.201). For example, empirical research suggests that leaders with an intuitive cognitive style may be more nurturing and encouraging, than those with an analytical leadership style (Allinson et al., 2001). Cognitive styles have been directly linked to emotional intelligence, as these theories represent a preferred method of thinking, associated more with theories of personality (Sternberg & Grigorenko, 1997; Myers & Myers, 1980), than theories of intelligence or ability. Therefore, although previous research has identified cognitive style as significant, it is not included as a separate variable in this research, as EI is a more appropriate theory for examining individual differences, as it represents the notion of ability and competence, rather than a more stable and constant construct like personality or preference.

Friendship

Research into friendship at work has focused mainly on peer friendship, with far fewer enquiries into friendship in a vertical relationship. Boyd and Taylor

(1998) have examined the development of friendship over time between leaders and subordinates, while addressing the similarity-attraction paradigm. They claim that friendship is built on the basis of interacting with individuals who share similar attitudes. Boyd and Taylor cite the definition of friendship proposed by Wright (1978): "a relationship with extremely broad and ambiguous boundaries" (p.3). Wright believes friendship to be composed of frequent, voluntary interaction that relies on "socio-emotional" values, not just 'instrumental', practically helpful ones. However, it is emphasised that a high LMX quality does not depend on a close friendship, rather that the existence of a close friendship reinforces the leader-member exchange, assuming that the LMX is already high. The close friendship stage of a relationship is characterised by a richness of communication, which usually occurs at the mature LMX phase (Boyd & Taylor, 1998). Given the "extremely broad and ambiguous boundaries" of this term, 'liking' may be a preferable construct for identifying notions of close affect which Dienesch and Liden (1986) consider central to LMX.

Communication and Interpersonal skills

Close relationships involve communication that is efficient, and with few misunderstandings (Boyd & Taylor, 1998). However it may be supposed that, if misunderstandings were to occur, members of such relationships may be more likely to resolve the situation quickly owing to the closeness, emotional support, and empathy present between the members. This is supported theoretically within the emotional intelligence literature. Scandura and Lankau (1996), Gudykunst (1994) and Borchgrevink and Boster (1997) emphasise the

importance of bi-directional communication within working dyads, particularly diverse dyads (those where the members have significant personal differences), in order to prevent misunderstandings, especially regarding performance criteria. The skill of communicating in a way that avoids dissonance, especially with individuals who are dissimilar, is an essential one within the emotional intelligence framework. Scandura and Lankau (1996) affirm the significance of "social psychological processes such as self-knowledge, interpersonal skills, communication competence and cultural competence" (p.253-254) in aiding the development of LMX. These are also reminiscent of the self-awareness and social management clusters of EI theory. Furthermore, Morrison (1992) recognises these skills as fundamental facets of leadership.

Those who have a high quality LMX are considered to communicate more freely than those with low quality LMX's, as "informal communication may result in a supervisor who is better informed about the subordinate, more knowledgeable about the circumstances influencing the subordinate's performance, and more inclined to develop friendship ties with the subordinate" (Waldron, 1991, p.301). LMX members who communicate about work and non-work issues have a positive experience of the relationship. Research has also identified "communication responsiveness", that is, the ability to react appropriately to social prompts (Stiff et al., 1988), as an ability that relates positively to LMX quality. This ability requires a degree of empathy, and social and organisational awareness, as discussed in emotional intelligence research.

Tanner, Ridnour, and Castleberry (1997) have identified three types of relationships, based on quality as a result of communication tactics, between

leaders and members. The first is 'partners', who have a strong personal relationship, consisting of free and open communication, ample resources, and the individual's ability to work with their own judgement. The second is 'buddies', who have a strong personal relationship with the supervisor, however, do not have the same freedom to work on tasks with their own discretion. Thirdly, 'drones' receive high levels of social support from the supervisor, like a partner, although without the close personal relationship. It is accepted that not everyone will, or desire to become partners.

Therefore, managers must develop skills to communicate with drones. The theory suggests an adaptation on the part of the leader to identify with drones, rather than an attempt to change the drone into one with whom the leader can become close. "The issue may behow does the manager most effectively manage drones rather than trying to convert the drones to partners" (Tanner, Ridnour, & Castleberry, 1997, p.122). This notion is shared by Krishnan (2004) who, as previously stated, believes that individuals should manage relationships with differing characteristics, rather than change them.

Among the skills proposed for the effective management of drones (and arguably all working relationships that are not personally close) are: listening, probing, trusting, delegating, rewarding, and supporting. Tanner, et al. (1997) have suggested that management training may be appropriate for this type of relationship development, with a particular concentration on skills such as trust-building, leadership, and other communication skills. This approach supports the validity of the emotional intelligence competencies, which also include trustworthiness, leadership, adaptability, and aptitudes that involve listening and supporting others. Such parallels between the

findings of Tanner et al. (1997) and the concept of emotional intelligence, indicates further the value of understanding how EI impacts LMX.

Finally, it has been suggested that in the process of delegating tasks (used to develop high quality relationships) trust will be enhanced through the devolution of power and authority, promoting feelings of empowerment (Golembiewski, 1995). Additionally, Borowicz (2002) suggests that communication, empowerment, and loyalty are fundamental antecedents of trust, which is central to LMX. She regards communication as the most important antecedent.

3.4 Conclusion

The aims of this chapter were to introduce the theory of LMX, and to present emotional intelligence as one of several antecedents that may influence the development of LMX. These have been achieved through the analysis of several themes.

Social capital addresses the notion of changing hierarchies, and of the consequent need to develop matrices of association with others in the organisation. When support is available through networks, it may aid in an individual's ability to meet increasing demands and responsibilities. Theories of social capital also consider the concept of reciprocity, which is a key component of LMX, in terms of exchanges being mutual. Social skills are central to the development of such capital and mark the significance of emotional intelligence to the understanding of how relationships develop.

The dimensionality of LMX has received much attention, with debates surrounding whether it is uni-dimensional or multi-dimensional, and what

the dimensions are. It seems, however, that a multi-dimensional approach to LMX is the most appropriate, as it acknowledges that leaders and subordinates have multi-faceted roles within an organisation, ranging from material and task orientated roles to non-material roles and social interactions. The models of Dienesch and Liden (1986) and Graen and Uhl-Bien (1995) both take this approach, and both compliment the staged development of a leader-member relationship, where one facet of the relationship builds on the other. Additionally, these dimensions (mutual support, trust, liking, latitude, attention, and loyalty being the most prominent ones), are competency-based characteristics that may be achieved through developing emotional intelligence.

An analysis of LMX development highlights the evolution from the simplistic model of in-groups and out-groups, to a more developed approach of the relationship maturing in stages. This also emphasises the significance of a mature relationship, in which the members develop a partnership, and the implications that has for power dynamics within the relationship. This addresses concerns that a vertical dyadic relationship is inequitable.

All subordinates should have the opportunity to develop close relationships with supervisors, through a process known as leadership making. LMX theorists have now adopted a position of viewing exchanges with the primary focus on the relationship, as opposed to any given individual. This level of analysis focuses interest on relational characteristics, such as trust, respect and obligation, those which exist within the dyad. The ability to offer and accept higher quality relationships, and the obligations that they carry, require a set of social skills that are evident in the theory of emotional

intelligence.

Several other antecedents of LMX have been proposed: leadership style, organisational and task characteristics, and perceptions of power in the relationship, which consider the notion of equity central to high quality LMX theory. It has been established in theory that similarity in certain areas, for example, demography, and cognitive style, may promote high quality relationships between subordinates and supervisors. Friendship is a variable that provides an individual with the opportunity to receive support and other valuable commodities within a work organisation. It has been the intention of this chapter to highlight emotional intelligence as a model of individual differences that acts as an antecedent to the development of relationship quality. The next chapter aims to explain the effects of EI and LMX on employee outcomes, and particularly on stress.

Chapter 4

Employee Outcomes of Emotional Intelligence and Leader-Member Exchange

4.1 Introduction

This chapter introduces several employee outcomes, which may result from the separate or combined effects of individual differences and leader-member relations. Performance, job satisfaction, and organisational commitment are traditional employee outcomes of interest in the field of organisational psychology. These are discussed in this chapter as outcomes of emotional intelligence and leader-member exchange. However, the primary outcome of interest and the first emphasis in this chapter is employee stress. The relationships between EI, LMX and stress are not well tested, and previous research has shown that the effects of individual differences on stress, and

their interaction with organisational context, are complex.

Stress research has benefited from many different perspectives, and continual development. The most prominent model of stress is the transactional model, which Cooper (2001) suggests challenges generic models by moving from "simple identification of potential moderators to more comprehensive theories that explain the mechanisms by which all relevant factors interact" (p.11). An analysis of several factors and their interactions will determine the role that emotional intelligence and leader-member exchange play in the stress process, in an attempt to provide comprehensive explanations about how relevant factors to this research interact.

This chapter is presented in two parts. The first part focuses on employee stress, first introducing it as a concept, and secondly, considering its potential causes in the workplace. There are several problems associated with defining stress, as stress affects individuals differently, and manifestations are not always identified as stress. Definitions have been generated from different schools of thought, considering stress from a physiological, psychological, and from a more environmental perspective, originating in the fields of engineering and physics. McGrath's (1976) model of stress is examined, as well as the transactional stress model, which extracts elements from both the individual and environmental levels. These models are considered comprehensive as they describe causes, consequences, and the process of stress. The process is important as it analyses the nature of stress as an interaction of the individual with their environment.

Theories about personal control and decision latitude related to work tasks offer a significant contribution when identifying sources of stress at the

individual level. Social support is presented as a correlate of stress, which acts as either a direct effect on or a buffer to stress. Finally, the role of emotional intelligence and leader-member exchange in employee outcomes are central to the aims of this thesis. Both of these are considered as antecedents of stress, job satisfaction, organisational commitment, and performance.

The second part of this chapter discusses potential employee outcomes of EI and LMX, namely, employee stress, organisational commitment, job satisfaction and performance, by taking each outcome in turn. Particular attention is given to the contribution of the competency model of emotional intelligence, arranged in sets of competency clusters to how individuals interpret and manage stressful experiences. The chapter identifies the relative lack of research carried out on other potential outcomes, particularly, objective measures of performance.

4.2 Work-related stress

4.2.1 General definitions of stress

As with emotional intelligence and leader-member exchange, stress is a concept on which theorists have yet to find agreement. This suggests that there is no universal definition of stress. Rather, the nature of stress can only be understood when put into context, or applied to one individual. For the purposes of this research, the context is the workplace, and more specifically, at the level of individuals within working relationships. Definitions of stress are considered firstly as an individual force, and secondly as an environmental force affecting the individual.

Stress may be viewed as a series of physiological reactions that occur in the body, rather than in the external environment (Seyle, 1974; Ecker, 1985). Ecker (1985) states that when "the situation requires no immediate physical reaction, stress is always an inappropriate response" (p.20). However, Ecker (1985) also emphasises the benefits of stress reactions to humans. and regards it as a necessary and appropriate response for survival. Stress increases heart rate and blood pressure, allowing an increased availability of oxygen to the brain that stimulates necessary responses to perceived threats to security. This, translated for organisational contexts, is portrayed by Nelson and Quick (1994), who point out that "stress carries a negative connotation for some as though it were something to be avoided. This is unfortunate, because stress is a great asset in managing legitimate emergencies and achieving peak performance" (p.202). This view of stress highlights the reactive need of individuals to protect themselves from perceived threats, and the notion that an appropriate stress response to such threats is necessary.

Taking account of the ambiguity presented by different forms and levels of workplace stress, a more generic definition may be appropriate. Beehr and Newman (1987) regard stress as the "interaction of work conditions with worker characteristics that changes normal psychological and/or physiological function" (cited in Rice, 1994, p.207). This, Rice (1994) highlights, establishes stress as a reaction to changes that promotes distress. This definition also emphasises the interaction of an individual with their environment, which will thwart or enhance performance in the workplace.

A consideration of stress as an environmental force that impacts an individual implies that the nature of this source cannot be altered by individ-

ual psychological processes. Further understanding of stress may be accomplished by an assessment of how the term is used in the fields of physics and engineering, thought to be the origins of the term (Sutton & Kahn, 1986). Kahn contests the claims of individuals who state that they are stressed when environmental factors frustrate, anger, or make them feel incompetent. Rather, Kahn (1986) suggests, stress is the external force, not the consequence felt by the force. 'Strain' is the term which explains the effects on an individual. Therefore, stress is an external pressure, resulting in strain. This analogy is illustrated in the experiments conducted on metal bars, which are likened to individuals in several ways. A heated bar, depending on the type of metal from which it is made, will react differently to pressure. Some metals will bend when pressure is exerted, and spring back when pressure is released. People can also adapt to pressure and will recover when the pressure is lifted. Metal of different compositions and poorer qualities will not adapt to pressure, and when the stress becomes too great, the material no longer returns to its original state. This analogy takes into account the individual differences and characteristics of people, which is an important feature of the present research. Stress from this perspective, therefore, belongs to the environment and strain is the internal, emotional state experienced by an individual, as well as physiological one.

The basic stimulus-response approach to stress tends to disregard individual differences that may have moderating influences, such as personality, competencies, and values. Such models are also criticised for ignoring contextual variables, for example, levels of social support and role tenure, one's role in the organisation, and status. In short, this approach does not address

the process underlying stress. The following two sections review models of stress which take into account individual differences. Acknowledgements of such personal characteristics are very important to this research, as these may establish the relevance of EI to the processes of stress and relationship development.

4.3 Person-environment fit models of stress

Three approaches to the examination of stress are presented here to represent the concept of person-environment fit, and how they contribute to the 'process' of stress, described in the last section. First a broad introduction to transactional models of stress, which endeavour to understand the interaction between individuals and the environment, acts as a prologue to the large body of literature and models aiming to contribute to the model of person-environment fit as a broad framework for understanding stress. Second, a model proposed by McGrath (1976), which describes a process of how environmental sources of stress are perceived and acted upon, and the outcomes of the environment-person interaction. Third, a model presented by Ecker (1985) is considered, who examined the interaction between in employee capabilities, employer expectations, and job limits to explain a stress outcome.

4.3.1 Transactional model of stress

Cox (1978) describes three approaches to the analysis of stress, the first of which is based on an individual's response to challenges and threats in the

environment, the second a focus on the stress stimuli itself, and the third, an approach based on its antecedents and effects. The latter approach is referred to as the interactional, or transactional approach, which brings the first two approaches into play, but focuses more specifically on "the fit or lack of fit between a person and the environment" (Deary et al., 1996, p.4). Cox explains that this model of stress places emphasis on stress as a variable within a transaction between an individual and the environment. Stress, from this perspective is related to an individual's cognitive appraisal of situations.

Cooper defines two types of appraisal that occur; a subject's awareness that something is threatening or challenging them, and the identification of resources that will aid a positive response. In this sense, stress exists neither in the individual or the environment, but in the process between them. Cooper (2001) defines the notion of transaction as:

"identifying the processes that link the different components, recognising that stress does not reside solely in the individual or solely in the environment but in the conjunction between the two, and accepting that no one component (ie., stimulus, response) can be said to be stress because each is part of, and must be understood within, the context of a process" (p.4).

In much the same way as McGrath's (1976) model of stress, Cox (1978) identifies a feedback loop process consisting of firstly, an environmental demand; secondly, perceptions of the demand and the ability to cope (influenced by personality differences and the cognitive appraisal of the situation); thirdly, a stress response; and finally, the consequences of the response.

4.3.2 McGrath's model of stress

Models of stress are used to identify components of stress, ranging from the causes of stress, to its processes and consequences. The term processes in this context, refers to the nature of the individual and the environment interacting to create an outcome, or reaction. McGrath's (1976) model of stress, on which many more recent models are based, is a four stage, closed loop model starting with sources of stress, of which four were finally identified. The first is role-based stress, which results from beliefs and perceptions about the role. The second is task-based stress, resulting from daily activities. The third is boundary-spanning or boundary role stress, which results from external sources and leads to the experience of pressure. Finally, conflict-mediating, or the outcome of handling conflicts in the workplace was also proposed as a source of stress. These four dimensions became the first stage of McGrath's model of stress.

The second stage of the model was defined as the perception of environmental situations as stressful, or threatening. The third stage involved the individual selecting a response to the situation and this resulted in consequences for individual. The consequences stage closes the loop.

4.3.3 Ecker's model of stress

Ecker (1985) has developed a model that illustrates the notion of stress resulting from varying degrees of capabilities, expectations, and limits within the employment relationship. 'Capabilities' describe all the attributes that an employee has to use in an organisation that contributes to their performance in conducting the work. 'Expectations' refers to the standards set by

the employer, and the level of performance required with which the employer would be content. 'Limits' are then set by the employer, within which the tasks must be performed. These may vary from time limits to restrictions on the allocation of resources. However, stress occurs when the limits of the job are narrower than that of the capabilities of the employee and the expectations of the employer are greater than the employee's ability to perform the tasks. This, Ecker would suggest, results from management by control, as the employer attempts to manipulate the employee into tasks that cannot possibly, or reasonably, be achieved. Additionally, job restrictions can further impede the efforts of an employee, resulting in work where employer expectations will never be met.

Ecker (1985) sets these three work attributes in boxes to portray how a desirable employment relationship, which does not generate stress (Figure 4.1). Here, employer expectations do not exceed either the limits of the job, or the employee's capabilities, illustrated by boxes which are all the same size.

Figure 4.1: The attributes of employer-employee relations. (Ecker, 1985)

Figure 4.2 demonstrates an imbalance of these attributes can cause stress. This portrayal illustrates that the expectations of the employer are greater than capabilities of the employee, and the limits or boundaries within which the job is designed.

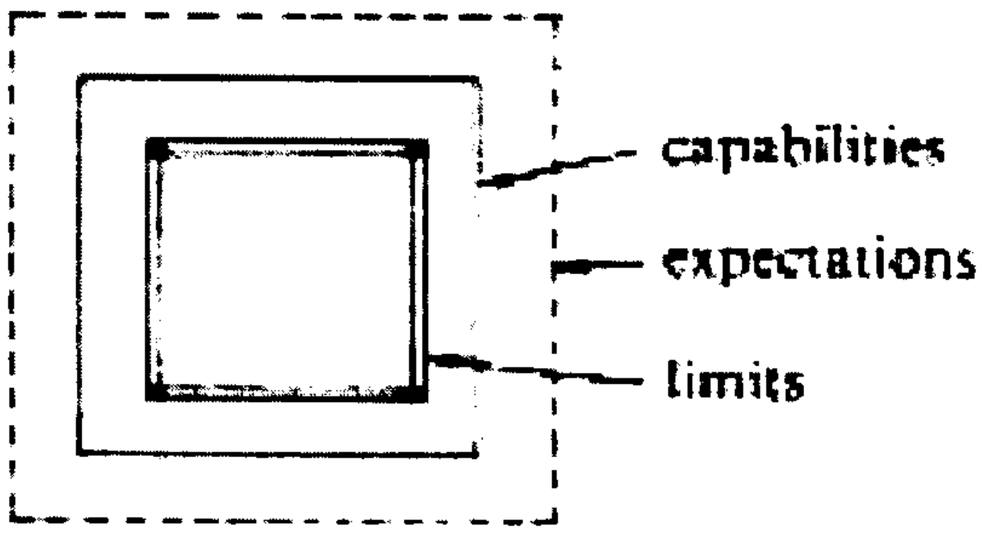

Figure 4.2: The results of management by control.

This is a model which may be useful in describing the process by which high job demands, or job overload, and control span, can create stress, while still accounting for individual differences.

An analogy described by Korman et al. (1994) supports this model by regarding "workplace stress as the entire process in which people perceive and interpret their work environment in relation to their capacity to cope with it" (p.38). Certain professional bodies also acknowledge stress in this way. The Industrial Society state "stress refers to negative changes in personal behaviour which result from an imbalance between pressure and people's current ability to cope with it" (The Industrial Society, 1995, p.3). Lawton (1982) uses the environmental-press model which examines environmental demands (presses) in accordance with an individuals' ability to meet the

demands.

4.4 Sources of stress

Rice (1987) suggests that stress may result from "characteristics of the job environment that pose a threat to the individual" (p.207). Specific examples of such stressors include excessive job demands, overload, insufficient supplies to meet the employee's needs, or aspects that are expected from the job, for example salaries and job satisfaction.

Job overload can occur in two forms. The first is quantitative overload, where an individual perceives that what is expected of him or her is too great, given limits to time and resources. The second form is qualitative overload, which refers to task complexity that is perceived by the individual to be beyond his or her abilities (Ivancevich & Matteson 1980). The perception of stressors is emphasised here, as although stressors may be present in the environment, it is the individual and their cognitive appraisal of their surroundings that may cause the stress response.

Another organisational level stressor is that of role ambiguity. This is the occurrence of uncertainty regarding what is expected of an individual within their role, as a result of unclear role objectives, or boundaries for responsibility (Ivancevich & Matteson, 1980). Rice (1987) considers that role ambiguity may be a consequence of poor information flow within the organisation. Rice (1987) also presents interpersonal stress as a source of strain resulting from work place tension. This would occur when relationships with peers are strained, either because of work, or personality differences. Interpersonal strains can also arise between employee and employer, possibly

developing from contradictions in beliefs about the expectations of each other and the job. Additionally, thwarted career development as a result of poor levels of job security and poor progression, is recognised by Rice (1987) and Ivancevich and Matteson (1980) as a source of stress.

The structural formation of an organisation has been acknowledged as an organisational stressor. Particularly, structures that diffuse an individuals level of control over their tasks result in stress, such as rigid, tall hierarchies. Ivancevich and Donnelly (1984) found that flat hierarchies generated less stress, in a comparative study with tall hierarchies. They also revealed that employees who are part of tall hierarchies but have positions in low levels of the organisation, experience low levels of control. It has been found that some individuals experience more stress when there are larger numbers of colleagues with whom to interact, possibly, due to the need to coordinate on practical and interpersonal levels, therefore reducing feelings of control (Sinha and Nayyar, 2002).

A final acknowledged environmental pressure that can result in increased stress is the nature of the responsibility that an individual holds within their work role. Ivancevich and Matteson (1980) and Sutton and Kahn (1987), highlight the difference in stress levels between individuals having a responsibility for a thing or event and being responsible for others. Wardwell (1964) revealed that those who have 'people responsibilities' are more likely candidates for heart disease, while French and Caplan (1970) found higher numbers of smokers and employees with high blood pressure, when the employees were significantly accountable for others. These authors were referring largely to employees who have responsibility for other staff members. The analysis of

'people' responsibility may also be applicable to having a responsibility for the users of the service, or a 'client' or 'customer'. Ivancevich and Matteson (1980) propose that people responsibility can be a compelling stress source because "it relates to the need to make 'unpleasant interpersonal' decisions" (p.115). This relates to awkward situations in which an employee may not feel comfortable. All of the sources discussed here are valuable contributions to identifying what stressors affect individuals.

4.5 Theories of control

4.5.1 Personal control

According to theories of stress which include personal control, a personal ability to control the work environment, or one's perception of it, can reduce stress. and alter behaviour. Sutton and Kahn (1987) define personal control as "the exercise of effective influence over events. things and persons" (p.273). A distinction has been drawn between personal control and self-control. Personal control refers to the control that an individual perceives they have over environmental events, when things appear unpredictable or undesirable (Sinha & Nayyar, 2002). The self-control model, on the other hand, refers to control an individual perceives they have over their own behaviour. Rosenbaum (1980) describes this as "learned resourcefulness", that is the conviction that the subject has the resources necessary to effectively cope with stressful demands. It is suggested that there is an inverse relationship between these types of control and experiences of stress.

4.5.2 Locus of control

Warr (1987) divides the source of control into individual and organisational settings, naming these as "intrinsic" and "extrinsic" levels, respectively. This notion equates to the theory of internal and external locus of control. Cooper and Payne (1988) emphasise the role of locus of control in a workplace setting and suggest that beliefs about situations are either controlled by an internal orientation, that is the individual's own actions, or by an external orientation, where a belief is held that control resides in outside forces, such as chance, fate, or other, more powerful individuals. Research has suggested that an individual's locus of control is more important than even social support (either from the work setting or outside work) and more specifically, that an internal locus of control can increase effectiveness in high stress work roles (Rahim. 1996), as one has a perception of increased influence over events.

This approach, however, does not appear to take into account that individuals perceive situations differently. What is considered as a stressful circumstance to one person may not be experienced as such by another owing to a lack of dispositions such as patience, good communication skills, or self esteem to deal with the situation. Others, in the same circumstance, may have more appropriate person characteristics to enable them to cope. The model of locus of control does not adequately address and explain how individual differences affect the way in which individuals perceive their sphere of influence and control over workplace factors: rather, it merely states the degree of control.

4.5.3 A model of demands, control, and support

The demand-control theory (Karasek, 1979), proposes that work-related stress originates from the organisational and structural features of the environment (Dollard et al., 2000). This model suggests that a decrease in job demands, and an increase in control and support (later considered by Johnson & Hall, 1988) is preferable when attempting to reduce stress and increase productivity, rather than by the redesign of jobs. The model shown in Figure 4.4 illustrates the inter-relationship between job demands and decision latitude, and the consequences in terms of levels of stress experienced.

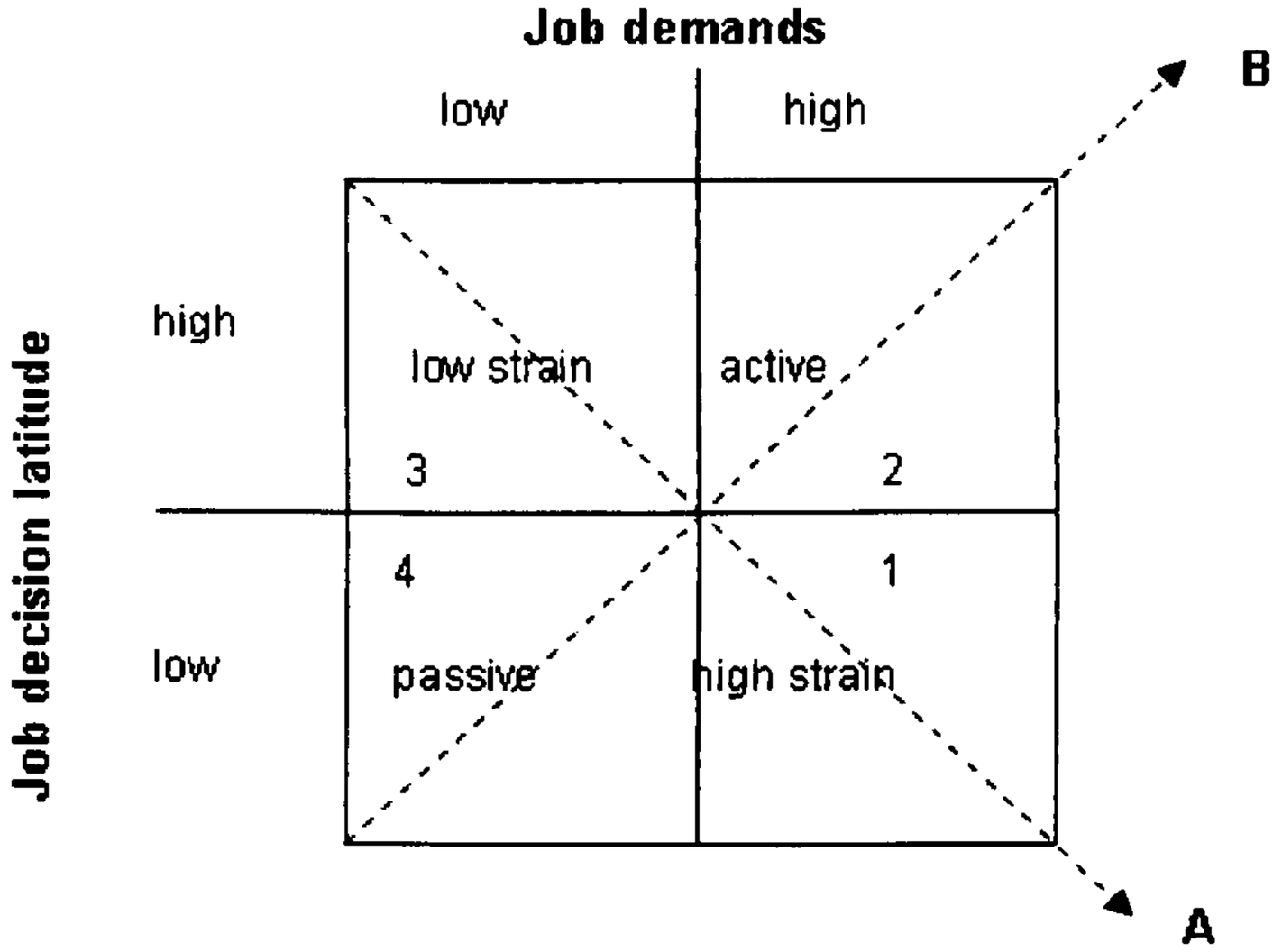

Figure 4.3: The Job demand-control model, Karasek (1979)

Karasek (1979) proposed that levels of stress would be high when job demands were high and the decision latitude low (quadrant 1). Arguments

suggest that high demands and high decision latitude are motivational, proactive, and encourage personal growth (quadrant 2). Therefore high strain and control may drive achievement in individuals. Quadrant 3 portrays a relationship where low job demands and high decision latitude result in low levels of stress. Where job demands and decision latitude are low, the job is described as passive (quadrant 4).

Social support has been defined as the availability of help from a number of sources, including supervisors (Rahim, 1996). It is used also as a coping mechanism that reduces the adverse effects of stressors, and has been added to Karasek's (1979) demand-control model by Johnson and Hall (1988), to illustrate a buffering effect on demands. Models of social capital, networking, and life-span development claim that if individuals make deposits into their social-support banks, they will have resources on which to draw (Antonucci, 1985). However, the existence of social capital and networks do not inform about the quality of such relationships, and only indicate the potential of availability for social support. Encapsulating some of these perspectives, Curtona and Russell (1990) identified five fundamental support dimensions: emotional support; network support; self-esteem support; tangible aid; and information support.

The type of support available enhances a researcher's ability to establish the quality of support, which has been identified as important. Cohen and Wills (1985) identified emotional, instrumental, and informational forms of support. It is supposed that each category of support may be more useful than others in certain circumstances, and may also be more effective if received from certain individuals, or sources. Research into cancer patients

found that emotional support was most effective from family and friends, and informational support was more important from physicians. Moreover, inappropriate forms of support were actively unhelpful from inappropriate sources (Jacques, Bram, & Frans, 1988). For example, overly emotional or informative close family members induced further stress and pressure for the patient (Dakof and Taylor, 1990). Particularly important to this research is support from a supervisor, which are examined later in this chapter.

Two models of the influence of social support on stress have been most frequently referred to in research. One is the stress-buffer model, and the other, the direct-effect model (Cohen & Wills, 1985) According to the stress-buffer model, an individual can be safeguarded from stress, when they develop high levels of social support. However, this model infers that those who experience low levels of stress benefit far less from social support. It is less effective, and therefore less important in this situation. The direct-effect model supposes that building social support is beneficial in health terms whether stress is present or not.

Structural factors in an organisation have been found to influence the experience of social support. For example, friendly and cooperative work groups have been found predominately in small organisations, with flatter structures, low task specification, and high group interdependence (Jones and James, 1979, cited in Moos, 1988).

Some research about social support has alluded to the interpersonal attraction paradigm, suggesting that individuals who are emotionally troubled are less likely to appear attractive to others, and therefore, have less social support. Therefore, Winnubst, Buunk, and Marcelissen (1988) propose that

social support is a personal characteristic, rather than an environmental one.

Embedded in the discussion surrounding the effects of social support on stress, is the issue of reciprocity. This emphasizes the importance of differentiating between available support and received support (Dunkel-Schetter & Benett, 1990). Jou and Fukada (2002) examined the effects of receiving differing levels of support than that which is given. When an individual receives more support than is provided, they are said to be over-benefiting from the relationship. This was found to create feelings of indebtedness which produces increased levels of stress. Equally, however, when an individual provides more support than is received, Jou and Fukada (2002) found this related to feelings of burden, increasing stress. In this case, individuals are considered to be under-benefiting from social support. These propositions suggest that a balance of receiving and providing support is important, if support is to buffer, or directly effect the influence of support on stress.

To further the notion of reciprocity, it has been suggested that the source of social support is equally important. Supervisory support has been considered important, and correlated positively with coping and job satisfaction (Gmelch & Gates, 1998). Furthermore, high levels of supervisory support has been the variable most significantly and positively correlated with low stress. However, it is central to the aims of this research to determine what personal characteristics dispose individuals to successful social relationships, and establish inter-relationship between these characteristics and stress.

Social support is relevant to gain some understanding into how emotional intelligence may affect stress. For example, having high levels of emotional intelligence is indicative of an individual's ability to relate well with others, by

promoting trust, being empathetic, socially aware, inspirational, influential, and collaborative.

The role of emotional intelligence in influencing stress is the focus of the next section.

4.6 Antecedents of stress

4.6.1 Role of emotional intelligence

Emotional intelligence has been found to have an effect on stress and personal well-being. Ashforth (2001) views emotional intelligence as "a loose federation of attributes, encompassing everything from conscientiousness to organizational awareness, and problem-solving to stress tolerance" (p723). Bar-On and Parker (2000) have defined emotional intelligence by dividing it into five dimensions, namely, intrapersonal EI, interpersonal EI, adaptability EI, stress management EI, and a general mood EI. Bar-On's (1997) definition of emotional intelligence as "an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures" (p.14), illustrates the significant impact of EI on general wellbeing. Environmental pressures and demands are common sources of stress, although, the transactional stress model proposes that stress is experienced differently by different individuals, depending on what each regard as stressful. Ashforth (2001), Bar-On and Parker (2000), and Martinez (1997) all regard stress as a central element of the EI construct.

EI can be regarded as a set of competencies that aid the detection and management of stress. Abraham (2000) considers the EI abilities of monitor-

ing one's own and others' emotions gives an individual insight into what the causes of stress might be, and what strategies they have the ability to develop, to cope with stress. Being in control, in a general sense, has been noted as being a major prevention of, and coping strategy for stress. Another study portraying the relationship between EI and stress, found that when using the EQ-I, and the General Health Questionnaire on a sample of 224 managers, high EI score was positively correlated with low reported stress, and high morale (Slaski & Cartwright, 2002). Finally, Pau et al., (2003) assessed the relationship between perceived stress and emotional intelligence. Subjects who were low in EI tended to experience more stress, utilise social networks poorly, and had poorer health than those with higher levels of EI. These studies provide support for the inclusion of stress management competencies in the definition of EI.

Furthermore, the transactional model of stress suggests that "constructs such as stimuli and responses are defined relationally and should be inseparable from the context within which the stress encounter takes place" (Cooper, 2002, p.19). This statement is asserting the view that no single variable can be defined as stress rather, that stress is a synthesis of factors. For this reason, the influence of emotional intelligence is proposed in line with Goleman's (1998) assertion that emotional intelligence is the clustering of facets, and that EI has combined influences on other variables. Both the transactional stress model and the EI model propose inseparability and combined influence of factors.

As argued above, there has been considerable indication that individual variables have relevance in the analysis of stress, by moderating the effects

of stress on an individual, their health, and their performance. Differences in personality characteristics and social support systems determine the vulnerability of employees to stress-induced illness (Rahim, 1996). Many of these individual characteristics are variables that affect stress, and are coherently illustrated within the framework of emotional intelligence. It is suggested in this research, that the use of an EI model is an appropriate method of assessing the effects of individual differences on stress.

Specifically, it is considered that EI has a role in perceiving and managing stress. Pau, Croucher, Muirhead, & Sohanpal (2003) assessed the relationship between perceived stress and emotional intelligence among undergraduate dental students, who were asked to complete Schutte et al.'s (1998) EI Scale and the Perceived Stress (PS) Scale (Cohen et al., 1983). The study was conducted on the premise that experiences of stress have emotional, social and behavioural components, and each of these were analysed in relation to participant abilities to manage stress responses. Several conclusions were drawn on the examination of each component, linking EI to stress (Pau et al., 2003).

Students who were low in EI tended to place strong emotional emphasis on stressful situations, while high emotionally intelligent students rationalised about stress, illustrated by quotations such as "you just have to work your way around it...I get apprehensive...a little nervous...before seeing a patient...it's just the way you work yourself up to it..." On the social element of stressful experiences, low EI individuals were found to reject the social network when stressed, whereas students with high levels of EI had a greater need for social networks.

Behaviourally, it was determined that low EI individuals tended to eat more, sleep less, and drive faster when stressed. Highly emotionally intelligent students rationalised about how such behaviour did not help them, and were more likely to engage in more reflective behaviour, and social activity. Therefore, the level of EI is proposed as an indication of how stress is perceived and managed. This study also highlights the various levels at which EI influences stress, and informs the current research on identifying similar emotional and social reactions.

Ciarrochi et al. (2001) specified that emotional intelligence measures emotion perception (EP) and emotion management (EM). EP may be regarded as similar to emotional awareness. These authors found that high scorers on EP were likely to perceive more stress than low EP scorers. This follows the notion that heightened emotional awareness may also heighten the experience of stress and that those low in EP may be relatively insensitive to stress (Simpson, Icles & Blackstone, 1995). Ciarrochi, Deane and Anderson (2002) name this the "insensitivity theory". A second explanation they provide for greater levels of stress being experienced by those high in EP, could be the result of the "confusion hypothesis", where low perception individuals are sensitive to stress but do not realise that stress is affecting them. This model may be another approach to illustrating how the self-awareness cluster of EI can impact the experience of stress.

This study also illustrated the importance of social networking as a buffer of stress, in the form of peer support. It was found that those high in emotional intelligence were more likely than those with low EI levels, to seek peer support and build networks. This has theoretical grounding (House, Rob-

bins, & Matzner, 1982; Oxman, Berkman, Kasl, Freeman, & Barrett. 1992; Pilisuk & Parks, 1986). It has become apparent from such literature that emotional intelligence and stress have associations with each other, on the emotional awareness, self-management and relationship aspects of emotional intelligence. However, there are some authors who consider it inconclusive and suggest that these constructs cannot be validated, unless they are measured taking account of existing and well-established constructs (Ashforth, 2001).

4.6.2 Leader-member exchange

The two main models of LMX addressed in the previous chapter have significant implications for stress. Dienesch and Liden (1986) consider three dimensions: perceived contribution, loyalty, and affect as central components of LMX. Of these three, the present research considers that perceived contribution and loyalty may generate stress. A high quality leader-member exchange would be generated by high amounts and quality of task related behaviour that meets mutual goals within a work relationship. This then promotes loyalty which is a form of obligation. This may be perceived as an additional pressure in a role which increases the likelihood of an individual experiencing stress. This is supported by theory concerning pressure from being responsible for, and to, others (Wardwell, 1964; Ivancevich & Matteson, 1980) as discussed in Section 4.4 about sources of stress.

The model of LMX proposed by Graen and Uhl-Bien (1995) outlines respect, trust and obligation as the main elements of LMX. Receiving respect and trust may contribute to the experience of stress in the work role, as an

individual attempts, and feels obliged, to meet constant and high expectations. Stress has been defined as "the psychological response state of disturbed effect experienced by an individual in relation to job demands and/or constraints encountered in the work environment" (Parasuraman & Alutto, 1984, p.332). Osipow and Spokane (1983) have acknowledged five types of role stress. These are role conflict, role overload, role ambiguity, role insufficiency, and role responsibility (Lagace, Castlberry, & Ridnour, 1993). The latter dimension refers to stress experienced because of a feeling of responsibility for the well-being of others. This form of stress is consistent with Ecker's (1985) model, where expectations create pressure, especially when the individual feels they possess inadequate capabilities, or are limited by the role.

Work by Van Dyne, Jehn, and Cummings (2002) have found that LMX has direct and indirect effects on employee outcomes. Firstly, it was indicated by Van Dyne and his colleagues, that the reduction, or elimination of the distraction of poor workplace relations which create stress, would increase the likelihood of high quality LMX influencing performance. The results portrayed a reduction in creativity when levels of strain were high and LMX quality was low. Van Dyne et al. (2002) suggest that individuals in relationships that lack trust and closeness may be more vulnerable to experiencing stress, and less likely to be innovative in their work.

Secondly, LMX was found to moderate the effects of strain on performance, measured as creativity (Van Dyne et al., 2002). This work was based on the premise that employees have numerous roles within the workplace, and that these roles may be the source of psychological strain, due to role

conflict. More generally, the social atmosphere at work is regarded as an important indicator of stress, and specifically, the leader-member relationship, due to its unique power structure (French, et al., 1982; Ivancevich and Matteson, 1980). Graen and Uhl-Bien (1995), Lagace, Castleberry, and Ridnour (1993), Lagace, (1990), Lapidus, Roberts and Chonko, (1997), and Tanner, Dunn, Chonko, and Source, (1993) also acknowledge the positive role that high quality LMX can have on role stress (for example, role overload, role ambiguity and role conflict) and well-being. Van Dyne, Jehn, and Cummings (2002) propose that a high quality LMX provided favourable work schedules and support to subordinates.

The analysis of leader-member exchange and its influences on stress can also be addressed by considering role theory, which encompasses a discussion on relationship development as an antecedent of stress, and the consequences of changing power relations. Role theory highlights the variations in tasks that are expected and performed by an individual, and in particular, states that roles are multi-faceted. Each dimension of the work role may promote stress individually, and even more so, when a role encompasses several role responsibilities. For example, stress may occur in a role where attending to tasks and interacting socially are both necessary.

While low quality exchanges are characterised by formal, contractual exchanges, with downward influence, and with little trust, the role requirements do not exceed the limits of the job description, and expectations regarding obligations are minimal, although support and guidance is also minimal. This supports the inverse relationship between LMX and stress examined here.

However, as a relationship develops into one of high quality, through

the processes of trust previously described, the formal and structural imbalance of power is considered to equalise, and feelings of inequality, reduced power and decision latitude are less likely, therefore reducing the chance of experiencing stress. A high quality LMX would necessitate respect, trust and obligation to be mutually benefiting, in order to avoid feelings of over-benefit or under-benefit from a relationship, which increases the probability of experiencing stress.

The demand-control-support model (Johnson et al., 1988) suggests that even when demands are high, the support of others can alleviate the negative effects of work overload. In this respect, a high quality leader-member exchange, even though demanding, as a result of high levels of trust, may generate an important source of support and buffer the effects of stress. Based on the evidence presented here, the effects of LMX on stress may be complex, and, the relationship between LMX and stress may be positive and negative. Specifically, high quality LMX and low quality LMX may be considered to increase the experience of stress. Taking account of all of the concepts presented, the relationship between LMX and stress may be considered non-linear, an approach which has been supported by Harris & Kacmar (2006), Hochwarter (2005), and Sherman (2002). This research postulated that job tension was highest when LMX was moderate and lowest when LMX was either high or low. Specifically, Harris & Kacmar (2006) considered that the acknowledged benefits of high quality LMX's, like support and clearly defined roles, would be outweighed by higher demands and obligations, as described in this section. Therefore, it can be asserted that a high quality LMX has complex implications for stress, and that the effective utilisation

of social support, especially sourced from the supervisor, may buffer these effects. This is considered next.

4.6.3 Social support

Social support has been identified as one of the commodities exchanged between a leader and subordinate in the process of strengthening the relationship. Social support is defined as "the availability of helping relationships and the quality of those relationships" (Leavy, 1983, p.5). Therefore, the reported negative relationship between role conflict and role ambiguity and LMX quality, may be the result of increased quality and frequency of communication and the provision of social support (Tanner, Dunn, & Chonko, 1993).

Support from a manager has been noted as an important and effective source of support (Kraimar, Wayne, & Jaworski, 2001; Borchgrevink & Boster, 1997). Additionally, the direction of support is important in determining the quality of the leader-member exchange. For example, at the partly developed "acquaintance" stage, support may come more from the leader, whereas in a fully developed "partnership", support should be mutual. Communication frequency and quality is considered important for reducing role ambiguity and conflict that promote feelings of stress in the work place (Tyagi, 1985). In a study conducted into sales work, Tanner and Castleberry (1990) noted that the behaviour of sales staff may motivate a supervisor to behave in a manner that affects stress, whether that be with positive or negative influence. This theory may be applied to leader-member exchanges that are not sales orientated. In the case of experienced role ambiguity, increased

leader-member communication and support should lead to a clearer understanding of role requirements, decreasing stress. The creation of multiple exchanges between leaders and co-workers (co-worker exchanges) is a source of additional support, although the intricacies of these relationships are not the focus of the present study.

4.7 Antecedents of job satisfaction

4.7.1 Emotional intelligence

Job satisfaction is commonly investigated as an employee outcome of interest, and has an established basis for inclusion in studies interested in employee well-being. Job satisfaction is considered here to be related to emotional intelligence, in that both promote positive feelings (known as positive affect), in response to organisational, situation, or interpersonal prompts. Job satisfaction is used as a general measure of well-being (Grandey, 2000) and affective attitude (Fisher & Ashkanasy, 2000).

Carmeli (2003) suggest that, based on Smith et al.'s (1969) definition of job satisfaction ("feeling or affective responses to facets of the job", p. 6), job satisfaction and emotional intelligence are positively associated. The premise for this is that individuals with high EI experience continuous positive moods that generate feelings of well-being. Daus & Ashkanasy (2003) found that emotional intelligence predicted job satisfaction. Particularly, the competency of understanding emotions (Cage et al., 2004) is considered to contribute to satisfaction.

4.7.2 Leader-member exchange

Research has postulated that LMX can predict positive employee outcomes. (Liden et al, 1993; 2000; Duchon et al., 1986; Wilhelm et al., 1993; Meyer & Allen, 1997; Martin et al., 2005; Stringer, 2006;). Specifically, LMX has been linked to positive employee outcomes like job satisfaction, as the exchange of valued commodities is expected to increase satisfaction. Leader-member exchange is comprised of demands and rewards. Rewards have obvious links with satisfaction, in that as support, information, and advancement are offered by the supervisor in return for performance, individuals feel satisfied. Cropanzano et al. (2002) conducted research into interactional justice, which was found to be closely associated with LMX, and therefore the appraisal of performance (Masterson et al., 2000). An association with job satisfaction was in relation to satisfaction with one's supervisor, on the basis that performance would be rated higher by supervisors in a high quality LMX. Job satisfaction was positively related to interactional justice more than procedural justice, suggesting that perceptions of justice were stronger in relation to supervisory relationships.

Further rationalisation about the associations between LMX and job satisfaction are found in theories of empowerment and the latitude to conduct challenging work assignments alone, with the gained trust of a supervisor (Sparrow, 1994; Stringer, 2006). These freedoms promote job satisfaction and overall performance, with the existence of supervisory trust (Dirks & Ferrin, 2001)

Therefore, delegation and demands may foster satisfaction. Bass stated that "delegation implies that one has been empowered by one's superior to

take responsibility for certain activities" (1990, p.437). He also suggested that transactional leaders may delegate in exchange for subordinate support, transformational leaders will use delegation to develop subordinates, and consultative leadership styles are based on the supervisor's belief in the subordinate's competence and motivations to handle problems and tasks. Therefore, job satisfaction, even with a range of leadership styles, may develop job satisfaction and self-worth through the successful completion of the tasks asked of employees. More importantly for LMX theory, the relationship with the supervisor is crucial to satisfaction, as the supervisor would be the source of rewards. Specifically, employees in high quality LMX's will be trusted to complete tasks that will lead to supervisors positively appraising the performance. This will promote job satisfaction directly, as well as through the other rewards inherent in the leader-member exchange, such as support and attention to subordinates (Graen & Uhl-Bien, 1995; Liden et al., 1993).

Therefore, LMX is expected to be related to job satisfaction as it provides an opportunity to engage in challenging work assignments, and as a result, increases job satisfaction directly, and indirectly through the positive appraisal of performance, and the rewards of support, advancement, information, and encouragement inherent in LMX. Supervisors are also responsible for many formal rewards through performance appraisals and access to training, which may influence satisfaction (Wech, 2002).

4.8 Antecedents to organisational commitment

4.8.1 Emotional intelligence

Nikolaou and Tsaousis (2002) found a strong positive relationship between emotional intelligence and organisational commitment. Carmeli (2003) suggests that optimism, a trait of those who are highly emotionally intelligent, may promote commitment. Such individuals have tendencies to look beyond the organisational causes of problems, to the resolution. Therefore, individuals with high emotional intelligence are likely to act on problems, rather than focus attention on holding the organisation responsible. This is expected to augment higher levels of commitment to the organisation. Through focusing on how to reconcile personal feelings to organisational objectives and interests, the individual begins to invest effort in, and build attachments to organisational welfare (Carmeli, 2003; Langley, 2000). This has been particularly demonstrated in the instance of sales staff, where those with high EI have a customer-oriented attitude (Rozell et al., 2004). Service orientation is an EI dimension, identified in Chapter Two.

4.8.2 Leader-member exchange

Research attempting to find significant associations between LMX and commitment (Lee, 2005; Kacmar et al., 1999; Dansereau et al., 1975) has yielded mixed results. Those whose findings do not support a relationship (Dansereau et al., 1975) suggest that LMX and commitment may be associated through LMX's strong influence on satisfaction with the leader or other co-workers. Both lines of argument infer that commitment is fostered through relation-

ships that have evolved to maturity, like friendship, as Truckenbrodt (2002) suggests, and that members develop a sense of commitment to the organisation through a sense of attachment to the leaders and members of the organisation. Thus, commitment may be a method of demonstrating reciprocation and obligation, in order to nurture and develop the relationship. In return for formal and informal benefits, information, and support, followers would be dedicated and committed. Therefore, commitment is considered to be associated with LMX.

4.9 Antecedents to performance

4.9.1 Emotional intelligence

Much of the analysis on emotional intelligence has examined the role in the prediction of individual performance. Strong positive correlations between these two have been found (Slaski & Cartwright, 2002; Tischler, Biberman, & McKeage, 2002; Kelly & Caplan, 1993). However, performance can be measured using several different kinds of indicators, for example, organisational advancement, revenue, target achievements, levels of commitment to the organisation, and turnover rates. Dulewicz and Higgs (2000) found in a study over seven years with one hundred managers in several organisations that the competency-based scales, named intellectual intelligence (IQ), and managerial intelligence (MQ), predicted organisational advancement. However, when considered in relation to EI, performance could be predicted with much higher validity and reliability. These authors conclude that a combination of concepts is appropriate for the prediction of performance.

Similarly, there has been a large body of literature arguing that multiple intelligences predict performance, and it is this literature that has formed the basis for considering the role of emotional intelligence in performance. Specifically. Fox and Spector (2000) classify three conceptualisations of intelligence: general, practical, and emotional, and in their research, found that all three were important in predicting performance. Their research supports Schmidt & Hunter (1981) and Sternberg & Wagner (1993) about the contribution of general and practical intelligence to performance. Practical intelligence has stemmed from a broader categorisation of knowledge, namely tacit knowledge. This is considered as a practical intelligence as it alludes to an experienced-based knowledge that is "is an important factor underlying the successful performance of real-life tasks" (Sternberg et al., 2000. p.104). However, this type of knowledge is considered to be context specific, and, as Gottfredson (2003) states, the postulated links between practical intelligence and work-place performance are not consistent, and based on a selective representation of findings. Therefore, research exploring the predictors of performance now includes emotional intelligence. The benefits of this approach are now discussed.

Campbell (1990) divided performance into eight dimensions: job-specific task proficiency, non-job-specific task proficiency, communication, demonstrating effort, personal discipline, facilitating cooperation, supervision, and management/administration. Some of these components can be likened to emotional intelligence competencies; for example, communication, personal discipline, facilitating cooperation, and supervision are competencies from the relationship management cluster. Others may equate to the dimensions

necessary for a positive experience of leadership, for example, task proficiency, supervision, and management.

Self-awareness, in particular, is thought to enhance performance, as highly self aware individuals acknowledge their abilities and limitations, and seek to correct weak performance (Goleman, 1998). High performers are also considered to have attributes such as being able to assess themselves accurately (Kelley, 1998). Furthermore, individuals who perform inadequately tend to overestimate their performance, and effective performers often underestimate performance (Goleman, 1998).

Conscientiousness, adaptability and achievement drive, Goleman (1998) claims, also predict performance at all levels of the organisation, as these individuals are meticulous and self-disciplined, and are open to new information of any nature. Higgs (2004), in a specific occupational context, found a positive relationship between call centre performance and EI, and concluded that. based on the findings, competencies such as conscientiousness, emotional resilience, motivation, interpersonal sensitivity, and self-awareness may be important for call centres to include in selection criteria.

The empathy competence, Steele (1997) suggests, is imperative in modern organisations, to diversify the workforce. Individuals must understand each other correctly, to prevent stress, stereotyping, prejudice, and offence. High performers also score highly in the relationship management cluster, using influence, impressions and persuasion to achieve. The ECI model of EI provides the most compelling parallels with the abilities noted for high performance, although some research into leadership also supports the validity of EI in predicting various performance outcomes in an organisational

context.

4.9.2 Leader-member exchange

A positive association has been established between high quality leader-member exchanges and performance. This relationship has been found in relation to several measures of performance, including innovation, creativity, and other more objective measures. High quality LMX's are also known to increase performance, particularly sales performance (Van Dyne et al., 2002).

Tierney, Farmer, and Graen (1999) propose that employees who have a high quality LMX report more involvement with challenging tasks, which they state is linked to creativity. Research also indicates that subordinates who rate themselves as having a high quality LMX deem their operational environment to be supportive of innovation, and feel liked by their supervisors, and therefore engage in innovative, creative, and risk taking tasks (Dunegan, Tierney, & Duchon, 1992). Such performance behaviours are considered to be the result of an achieved level of trust and comfort within the relationship. Performance in high quality leader-member exchanges is promoted by the leaders' efforts to eradicate any obstacles to subordinate performance, and encourage opportunities to be involved with challenging and pertinent tasks (Graen & Scandura, 1987). These elements are considered important to the leader-member exchange, and to the role of a leader in general; as asserted by Uhl-Bien and Graen (1992) "leadership is employed to give people the opportunity and challenge of innovation and change" (p.228). Results of Tierney, Farmer and Graen's (1999) study indicate that, in order for organisations to generate creativity, relationship building should be integrated into

leadership training. However, these performance results are 'reported'. and are not recorded as actual, objective measures of performance.

Boyd and Taylor (1998) and Liden and Maslyn (1998) argue that the more mature the relationship, the more empathy is felt for the follower, causing the leader to rate performance favourably. Moreover, the leader is more likely to attribute the poor performance of a liked subordinate to external factors, whereas a subordinate who has a low quality LMX is more likely to be personally blamed for poor performance. This raises the possibility of measurement bias in studies of the relationships between LMX and performance. Judge and Ferris (1993) have researched rating behaviour of supervisors and suggest that performance is rated more positively when subordinates can be easily observed. However, this explanation appears to contradict the essence of high quality leader-member exchanges, where close supervision and observation are replaced with trust. Additionally, there is a general tendency for supervisors to rate more positively than objective performance measures may indicate (Klimoski & Inks, 1990; Stone, 1973; Bass, 1956; DeCotiis & Petit, 1978).

Supervisors' rating of subordinate performance are also affected by liking (Wayne & Ferris, 1990). However, Liden and Maslyn (1998) warn that when a subordinate is loyal, and willing to contribute beyond the formal job specification, a leader may rate them as superior performers. Additionally, leaders cannot directly and frequently monitor the performance of subordinates, due to limited time availability, therefore they place high importance on subordinates who are trusted not to need close monitoring (Liden & Maslyn, 1998). However, according to Klein and Kim (1998), supervisors can directly affect

performance through encouragement and assistance. This suggests that time spent liaising with a high performer, is necessary for further performance, although the subordinate may not require 'monitoring'.

Dimensions within the LMX framework have been specifically noted as having an impact on performance. For example, Leana (1987) found delegation to be directly related to performance (cited in Schriesheim, Neider, & Scandura, 1998). Leana (1987) developed an outline that identified supervisors' perceptions of subordinate capability, trustworthiness, and an interest in taking on more responsibility, as moderators of performance related to delegation. It is also proposed that better performance will lead to more delegation, which provides opportunity for further good performance, so that delegation may also be a reward for performance. However, this results from high levels of trust and demonstrated capabilities.

It has been noted that results relating LMX quality to performance are ambivalent, with some studies revealing a positive relationship (Duarte et al., 1994; Scandura & Graen, 1984), and others establishing no relationship (Vecchio & Gobdel, 1984). It has been suggested that such inconsistency in the results may be caused by performance measures that are too specific. For example, the study by Vecchio and Gobdel (1984) found no relationship between LMX and transaction accuracy (a narrowly defined performance measure). However, broader performance measures such as customer service, Klein and Kim (1998) suggest, may have yielded more substantial results.

4.10 Conclusion

This chapter has introduced stress, job satisfaction, and organisational commitment as outcomes of interest, and demonstrated how employee outcomes can be affected by emotional intelligence and leader-member exchanges. Stress is the employee outcome of most interest to this research. and has been introduced and given thorough coverage. Definitions and approaches to the common examination of stress have been introduced in the first part of this chapter. The transactional approach to stress has been considered, as well as various other models of the stress process, which may be categorised as person-environment fit models, where agency and environment interact. For example, McGrath (1976) and Ecker (1985) provide models of stress as a process where an individual attempts to cope with stressors present in their work context. Theories of control also inform these models, and provide further types of stress sources. In particular, Johnson and Hall (1988) presented a model of control which described how social support could influence the experience of stress.

The second part of this chapter is concerned with identifying theoretical associations between each outcome of interest (stress, job satisfaction, organisational commitment, and performance) and their antecedents. Particular attention is given to the effects of emotional intelligence and leader-member exchange, as key concepts in this research. For example, emotional intelligence has been used to illustrate how individuals can perceive and manage emotions in order to help cope with stress, and to experience it more positively. High emotional self awareness and management has been shown to generate more positive behaviours and emotions in response to stress (Pau

et al., 2003).

Leader-member exchange has been examined as another antecedent of stress. Leader-member exchanges of a high quality are suggested to decrease the experience of stress, through the offer of support, trust, and loyalty. Tasks are performed out of obligations, delegation, and expectations which promote stress. Moreover the effect of social support, which is presented as a facet of LMX which creates positive experiences, is highlighted in role theory. Additionally, the responsibility for individuals rather than tasks is proposed as a further element of roles that may create stress, and illustrates the impact of complex roles imposed through leader-member exchanges of low quality. The effects of the structure of LMX on stress, is demonstrated as positive when LMX quality is high, and negative, when LMX quality is low. This is presented as a result of LMX unique power structures.

Job satisfaction, organisational commitment, and performance are also examined as outcomes of EI, based on the premise and prior research that positive affect influences employee attitudes towards work. Many studies have found positive relationships between EI as a competency set, and performance, measured in many ways. Additionally, LMX informs the development of job satisfaction, organisational commitment, and performance in that the supervisor is a source of challenge and reward that influence feelings of well-being and identification with the organisation, which further promotes performance. These relationships form the theoretical basis for model development, which is the subject of the next chapter.

Chapter 5

Research Model

5.1 Introduction

The aim of this chapter is to develop a working model describing the relationships between emotional intelligence, leader-member exchange, and employee outcomes, based on the theoretical reviews of the previous chapters. Three sets of hypotheses are derived to form the foundation of the research model presented here, and reflect the areas of theory discussed previously. This in turn provides the basis for the empirical research.

Firstly, the chapter considers the direct outcomes of emotional intelligence (EI), by considering the relationships between EI and LMX, and between EI and employee outcomes (performance, attitudes, and stress). Secondly, hypotheses concerning the direct effects of LMX on performance, attitudes, and stress are derived. Thirdly, variables predicted to mediate the relationship between emotional intelligence and leader-member exchange, and leader-member exchange and stress are considered. The model identifies both social support (a long-established buffer of stress) and leader-member exchange, as

potential mediators.

Finally. some control variables that may change the effects of any construct or relationship in this model are addressed. These are perceived organisational support, liking, and demographic variables, such as age, tenure, gender, and status.

5.2 Direct outcomes of emotional intelligence

The relationship between EI and LMX

Of 25 defined and distinct LMX dimensions identified throughout many investigations, 16 of them have been presented as conceptually related to competencies identified as dimensions of emotional intelligence (EI). For example, the dimensions in the self management cluster of EI resemble the LMX dimensions of ability to manage emotions, motivation, and innovativeness. Similarly, the social awareness cluster in Goleman, et al.'s (2002) model of EI resembles understanding, consideration, and assistance and support in the LMX framework of Dienesch and Liden (1986). These examples, and the others portrayed in Chapter Three, Table 3.1, illustrate comprehensive construct relevance with LMX.

Van Dyne, Jehn, and Cummings (2002) considered that mature leader-member exchanges would encourage the supervisor to understand and adopt the subordinate's perspective. This demonstrates the empathy, one of the social competencies within the EI model, and relates to the ability to understand and take an active interest in the concerns of others. Furthermore, as noted in Chapter Three, Krishnan (2004) states that LMX requires a clear and common understanding of the other individual's value system and goals,

which clearly suggests a link with empathy.

It was further hypothesised by Van Dyne, et al. (2002) that high quality relationships between leaders and their members would promote confidence in subordinates' working habits. This ability may be likened to 'inspirational leadership' in the EI literature, where individuals are guided and encouraged by leaders. These are both competencies that are thought necessary from both the EI and the LMX literature, to enhance effective leader-member relationships.

Finlinson et al. (2001) have conducted research into the relationship between emotional intelligence and leader-member exchange, positing EI as an antecedent of LMX. Their research found that there was a positive relationship between EI and the perception of positive working relationships. This was based on a premise that mutual liking would be high, and individuals would see each other positively. However, this research was based on the Trait Meta Mood Scale (Salovey et al., 1995), which predominately measures self-orientated emotional intelligence. Although it does not account for the other-orientated facets of EI, positive relationships with LMX in self-related areas is a significant finding on which to confidently base a hypothesised relationship between emotional intelligence and leader-member exchange.

Emotional intelligence may enable the leader to extend, and the subordinate to accept offers for relationship development, that may lead to a partnership, the most effective and equal of all LMX relationships. These connections, and those demonstrated in Chapter Three between emotional intelligence and leader-member exchange, taken together suggest the following:

H1. Emotional intelligence overall is positively related to LMX quality.

The relationship between EI and social support

An increase in social support offered and accepted is more likely when the individual has greater ability to recognise and manage the social capital available to them. This social capital is utilised with an ability to empathise, communicate, be trustworthy, and express oneself appropriately. These are competencies central to the EI framework adopted for outstanding leadership (Chapter Two). The research conducted by Pau, Croucher, Muirhead, and Sohanpal (2003) supports this supposition through findings that students who had low EI levels would reject social interaction, particularly when stressed. Low levels of EI reflect an individual's inability to communicate effectively and therefore hinder the prospect of social development and gaining helping relationships. It has been suggested that non-disclosure of feelings may inhibit an individual's ability to relate with others and provide support to others (Hansson, et al., 1984), which requires skills related to the self-competence cluster of EI. This highlights the significant and influential role that EI has in establishing social support.

Personality and behavioural characteristics known as relational competencies (Hansson et al., 1984; Sarason & Sarason, 1985; Winnubst et al., 1988) are suggested in literature to affect the building, development, maintenance, conceptualisation, and employment of relationships. These social processes require relational skills that are considered to affect the "enactment of socially supportive behaviours" (Winnubst et al., 1988, p.518), and

therefore illustrate the link between social support and emotional intelligence. Therefore, it is hypothesised:

H2. Emotional intelligence is positively related to employee ratings of social support from the leader.

The relationship between EI and employee outcomes

Many of the popular management texts about EI have alluded to strong links between EI and performance, which has now been more empirically tested in organisational settings (Higgs, 2004, Dulewicz & Higgs, 2000). On an individual characteristics level, Goleman (1998) suggests that self-awareness, conscientiousness, adaptability and achievement drive predict performance, as individuals with these characteristics acknowledge their abilities and limitations, and seek to correct weak performance. However, many different organisational and individual measures of performance outcomes have been linked to EI. Dulewicz and Higgs (2000) found a positive relationship between emotional intelligence and organisational advancement when studying over one hundred managers. Steele (1997) indicated that high personal achievements and performance were linked to relationships management, by the utilisation of influence, persuasion, and creating a good impression at work.

The ECI2, the instrument of emotional intelligence adopted for this research, has been validated as an instrument which demonstrates strong links between all EI clusters and organisational profits (Boyatzis & Goleman, 1999). Furthermore, salary, organisational position, and subjective career success have been used as performance indicators in the Turkish finance sec-

tor, to validate the ECI2. All were found to be significantly correlated with EI clusters, and specifically, organisational position, as an indicator of success, was found to be linked to high social skills (Sala, 2002). Chapter Four, Section 4.9.1 presented Campbell's (1990) classification of eight performance dimensions, including task proficiency, communication, effort, and cooperation. These are all expected to form elements of the appraisal process, which taken together, provide supervisors with a method of assessing performance.

H3. Emotional intelligence is positively related to supervisor ratings of performance.

Emotional intelligence and organisational commitment have been commonly related on the basis that EI promotes positive affect towards the organisation, particularly through the dimensions service orientation and organisational awareness within the social awareness cluster of EI. These foster individuals' interests to act in alignment with organisational interests and objectives, and to focus attention beyond personal interests. Optimism is also found to encourage organisational commitment, owing to the individuals' ability to seek resolution, rather than attribute blame for problems (Carmeli, 2003). Therefore, it is hypothesised that:

H4. Emotional intelligence is positively related to organisational commitment.

Furthermore, job satisfaction is used as an additional measure of overall employee well-being, which is hypothesised to be positively related to emotional intelligence. EI may cultivate positive feelings which lead an individual to act in a manner which may create satisfaction, for example, achievement orientation. Therefore, the following hypothesis is proposed.

H5. Emotional intelligence is positively related to job satisfaction.

The main emphasis in this research is given to the relationship between EI and stress. With respect to the direct relationship, emotional intelligence has been found to affect the perception and management of stress (Pau et al., 2003; Ciarrochi et al., 2001). Research has established strong links between an individual's emotional intelligence and their ability to perceive and handle stress, leading to the following hypothesis:

H6a. Overall emotional intelligence is related to stress.

Particularly, Pau et al. (2003) found emotional intelligence to affect an individual's perception of stress. Their research with dental students found that those low in EI were inclined to place a greater emotional emphasis on stressful situations. On the other hand, individuals who were highly emotionally intelligent adopted a rationalised approach to their perceptions of stress.

Additionally, in the present research, hypotheses concerning the dimensions of EI are proposed. An accurate self-assessment (a self awareness competency), where individuals know their own strengths and limitations, will discourage individuals to engage with stressful situations. Furthermore, self confidence (also a self awareness competency) indicates a strong sense of self worth and one's own capabilities. This may assist an individual in perceiving stressful situations as within their capability to manage them, and therefore, view them less threateningly. Finally, the self-management competency of adaptability may assist in resisting negative emotional reactions. This supports a hypothesis that self awareness and self management may be positively

related to stress, as these dimensions of EI increase an individual's awareness and experience of stress. An additional hypothesis, therefore, is as follows:

H6b. The self-orientated dimensions of emotional intelligence are negatively related to stress.

However, the ability of individuals to manage stress involves the utilisation of social networks, as demonstrated by research with dental students (Pau, Croucher, Muirhead, & Sohanpal; 2003), discussed in Chapter two. Highly emotionally intelligent individuals have competencies that can create challenge in relationships. More specifically, such individuals are trusted role models, and the characteristics of taking account of others' interests and concerns (empathy), developing others, conflict management, collaboration, and team working may be activities in themselves which create stress. It is proposed here that highly emotionally intelligent individuals are those who are given, and who take, demanding roles within the organisation, and may use relationships for achievement and drive, rather than for support. This illustrates the negative role that the relationship competency dimensions of EI have in fostering stress, rather than the utilisation of relationships for personal support. Therefore, the following hypothesis is considered:

H6c. The other-oriented dimensions of emotional intelligence are positively related to stress.

The direct effects of emotional intelligence are modelled in Figure 5.1.

5.3 Direct outcomes of LMX

The second set of hypotheses relates to LMX and the employee outcomes of performance, employee attitudes, and stress. Leader-member exchange

literature has established a positive relationship between leader-member exchange quality and performance, as measured by various criteria including creativity, innovation, and various objective, task specific measures, such as sales performance (Campbell, 1990).

The measure of performance used here is from the supervisory ratings of performance based on the last appraisal conducted with the focal member. This appraisal was based mostly on task proficiency elements of performance, but also includes aspects of communication and team working.

High quality leader-member exchanges are shown to provide clear communication channels regarding expectations, greater levels of supervisor trust to achieve high results, and greater support when high performance is achieved. Thus, trust engenders obligation, obligation in turn promotes more performance, in search of the supply of support, information, and recognition, which is rewarded with still more delegation of tasks (Graen & Scandura, 1987; Graen & Uhl-Bien, 1995). This process is expected to have a significant influence on task proficiency and other performance outcomes valued in the appraisal process of the organisation. The hypothesis to be examined, therefore, is:

H7. LMX quality is positively related to supervisor ratings of performance.

Meyer and Allen (1997) and Lee (2005) suggest that LMX, categorised as work experiences, is an antecedent of organisational commitment. The high degree of mutual obligation and influence will produce commitment. Commitment is stronger among employees who are invited to participate in decision making and who treat them with consideration and fairness (Foosiri,

2002).

Schriesheim et al. (1994) propose commitment to be a perceived contribution to the quality of the exchange. Therefore, evidence suggests that LMX fosters commitment, as those in high quality exchanges, or "in-groups" go beyond that required contractually, to demonstrate allegiance to the organisations goals and objectives (Truckenbrodt, 2000). This then creates further quality in the exchange and commitment, as members feel involved, owing to their personal investment at the organisational level. Therefore, it is hypothesised that:

H8. LMX is positively related to organisational commitment.

LMX is expected to be related to job satisfaction as high quality exchanges by nature involve the provision of valued commodities, like support, information, assistance, and career development opportunities. These are positive outcomes that nurture the employee and contribute to feelings of satisfaction about the job and organisation. Therefore, as the quality of the relationship with a supervisor is a significant and central source of positive factors at work, then the more an individual is satisfied with their supervisor, the more satisfaction will be perceived generally.

Leaders also use delegation and demands, central to LMX theory, as a method of illustrating faith in the employees' abilities. Some leaders use it as a reward for subordinate support, some will use delegation to the development of employees, and some as a demonstration of trust (Schriesheim et al., 1998). Therefore, there is theoretical justification to assume that regardless of leadership style, delegation may be experienced as an empowering, rewarding experience, which is also an acknowledgement of competency and

performance. These will also have positive employee outcomes, as an individual's self-worth is recognised. Hypothesis 9, therefore, is:

H9. LMX is positively related to job satisfaction.

The final set of hypotheses is about the direct effects of work related stress. It is proposed that stress is less likely to occur for an individual who is a member of a high LMX, as the supervisor provides clear information about the expectations of the role, and if stressors do arise, support is offered. If relations between supervisor and subordinate are poor, the supervisory relationship would be an especially significant source of stress, from a lack of briefing, recognition, information, and support.

A further basis for relating LMX to stress is the unique power structure that characterises LMX theory. A partnership, which defines a high quality relationship, changes the hierarchical power structure to an equal one, where greater levels of control and autonomy are inferred.

H10a. LMX quality is negatively related to stress.

However, as shown in Chapter Four, the relationship between LMX and stress may not necessarily be linear. The main stressors typically examined are role conflict, role ambiguity, and role overload (Rice, 1987; Singh & Rhoads, 1991; Bacharach et al., 1990) Stress is the product of demands that are higher than an individual's ability to cope and to meet them, according to person-environment fit theory. A significant element of the LMX approach to leadership is the notion of delegation, through the process of leadership making. During this process, higher supervisor expectations are expected to create pressure. The anticipated non-linear relationship between LMX and stress has been found by Harris and Kacmar (2006), which also supported

by findings by Sherman (2002) and Hochwarter (2005).

To crystallise the expected curvilinear relationship: if there is a low quality leader-member exchange, or a high quality leader-member exchange, stress is expected to high. In low quality LMXs, limited amounts of support, information and encouragement, are expected. In high quality employee-supervisor relationships are characterised by higher expectations, trust, and additional responsibilities (Edwards, 1992; Sherman, 2002), which develops the relationship. However, high quality LMXs also presents the supervisor as an important source of support. It is considered here that when the higher trust and expectations are balanced with higher the supportive function of the supervisor, lower stress will result. This, taken together with the support offered by a supervisor, suggests that:

H10b. There is a non-linear relationship between LMX quality and stress.

Figure 5.1 illustrates the hypothesised relationships between emotional intelligence, leader-member exchange, and their direct relationships, as described in this section.

5.4 Explaining the relationship between EI, LMX, social support, and stress

The final group of hypotheses tested in the present research examine the role of social support and LMX in explaining the relationships between EI, LMX and stress. Stress has been chosen as the main employee outcome of interest, rather than performance or attitudes. This is because although

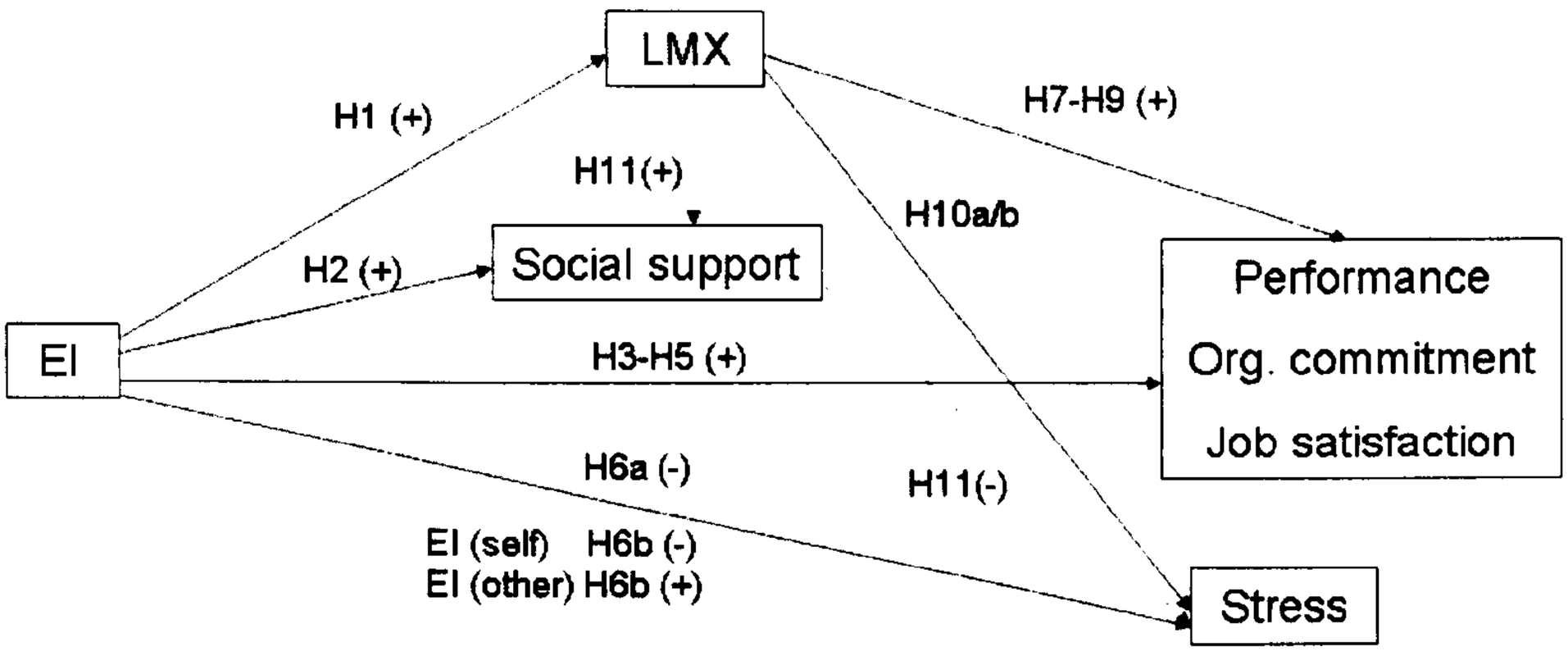

Figure 5.1: Hypothesised Model (Hypotheses 1-12)

LMX has a direct link with performance and employee attitudes, it is not considered to explain or change the effects of emotional intelligence on these other outcomes.

These hypotheses are grouped into two stages, first by testing the mediating effects of social support on the relationship between LMX and stress, and LMX to explain the effects of EI on stress, and secondly by examining the interaction between emotional intelligence and LMX and their effects on stress.

In order to test for mediation effects, there must first be a direct relationship between an independent variable and an outcome variable. A mediating variable is one which accounts of the relationship between an independent and an outcome variable. Baron and Kenny (1986) define the following conditions as necessary for mediation, and are portrayed in Figure 5.2:

a.) Variations in levels of the independent variable significantly accounts for variations in the presumed mediator (path a).

b.) Variations in the mediator significantly accounts for variations in the dependent variable (path b).

c.) when paths a and b are controlled, a previously significant relationship between the independent and the dependent variables is no longer significant, with the strongest demonstration of mediation occurring when path c is zero.

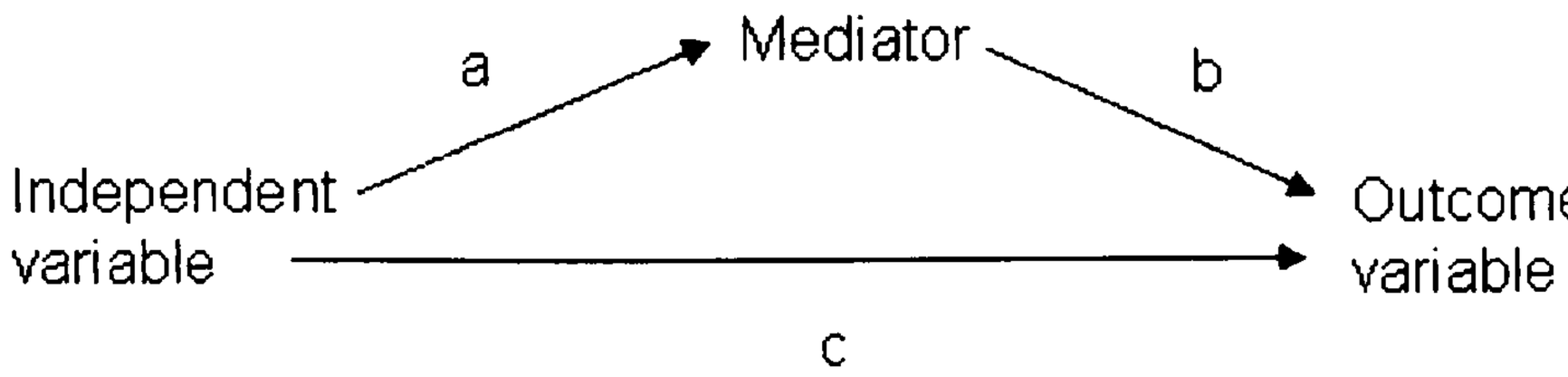

Figure 5.2: Mediation Model (Baron and Kenny, 1986)

It is proposed that social support and LMX are mediating the relationships between LMX and stress, and emotional intelligence and stress. These hypotheses are represented in turn, following the conditions set out by Baron and Kenny (1986) to illustrate how mediation may be proposed in each case.

Social support as a mediator

It is proposed that social support is the characteristic which is offered in return for, and buffers the effects of higher levels of delegation, responsibility and obligation on stress in the exchange process, which refers to the predicted effects described in H10b. This notion is expressed in the work of Graen and Ul-Bien (1995) who describe high quality exchanges as ones in which the leader reciprocates with time, resources, favourable career development, as well as the dimensions of respect and trust that are proposed to characterise high quality relationships. The effects of leader-member exchange on stress are now hypothesised to be explained by the offer and acceptance of social support.

High quality relationships are characterised by respect, trust, and obligation through delegation in the process of leadership making. Central to the theory on LMX is the notion that, as a reciprocal relationship, the offer of support and encouragement is extended by the leader to reward the completion of delegated tasks. The supervisor is a particularly significant and valuable source of support when relations are of a high quality, as studies have suggested (Kraimar, Wayne, & Jaworski, 2001; Borchgrevink & Boster, 1997; LaRocco, et al., 1980). The reciprocal nature of LMX suggests that the social support extended from the supervisor will increase as the quality of the relationship does, and high levels of social support will induce a high quality relationship. In these instances, both members benefit, as the subordinate gains support, and the leader gains through trust and high performance.

Additionally, a relationship must be established with stress. There is much theoretical support for the negative relationship between social support

and stress, popularised particularly by Johnson and Hall's (1988) addition to Karasek's (1979) demand-control model. Johnson and Hall illustrated that social support is used as a method of coping, to buffer stress, during times of high demands and low levels of control over work and the work environment. Cohen and Wills (1985) proposed a direct effect, which suggested that social support is valuable even if stress was not present (see the discussion in Chapter Four, Section 4.6.3 about social support and stress).

Thus, in accordance with the conditions of mediation, the following relationships must be present: first, as LMX quality improves, the employees perception of social support received from the leader increases; second, greater perceived social support is related to lower stress; third, LMX quality results on lower stress and; fourth, when social support is included, the relationship between LMX and stress changes. This is demonstrated in Figure 5.3. These conditions are examined in a test of the following hypothesis:

H11. The relationship between LMX and stress is mediated by social support provided by the leader

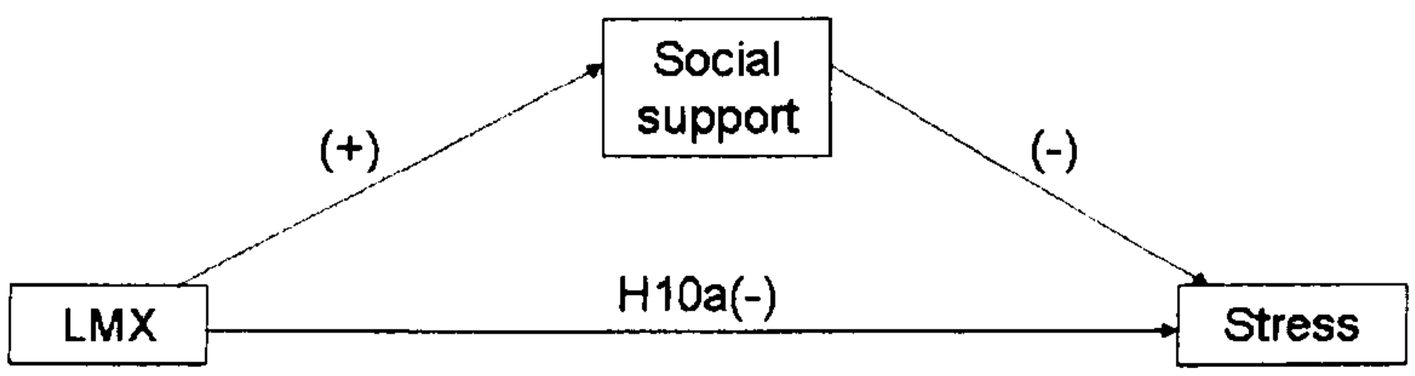

Figure 5.3: Social support as a mediator of the relationship between LMX and stress (Hypothesis 11)

LMX as a mediator

The development of high quality LMX is proposed as an explanatory factor in the link between employee EI and levels of stress. The level of emotional intelligence is predicted to directly determine the extent to which an individual can manage stress, through the development of self-awareness, self-management, social awareness, and relationship management competencies. Furthermore, emotional intelligence has been proposed as a framework of competencies that determines the extent to which relationships are conducted to a high quality through the offer and acceptance of social support, as discussed in Hypothesis Two. The influences of leader-member exchange on stress, discussed in connection with Hypothesis 10a and 10b, introduces the effects of support on stress. particularly. support offered from the supervisor. High quality relations and the acceptance of mutual benefits within the leader-member exchange are more likely for an individual who can recognise and manage the social capital offered to them. Specifically, support is hypothesised to be the valued commodity which is exchanged when leader-member relationships become high quality. Therefore, leader-member exchange is considered in this model as a particular and significant source of social support.

Hypotheses One establishes whether variations in emotional intelligence significantly account for variations in LMX. Emotional intelligence also has been related to social support (H2), of which LMX is considered here as a source. Variations in LMX significantly account for variation in stress, as suggested in Hypothesis Five, but it is also suggested that if EI results in lower levels of stress (H6a), some of this can be explained by the creation of high quality LMX, and the implied creation of social support from the

leader. Thus, it is also proposed that:

H12. The relationship between EI and stress is mediated by LMX.

The relationships between EI, LMX, and stress are depicted in Figure 5.4.

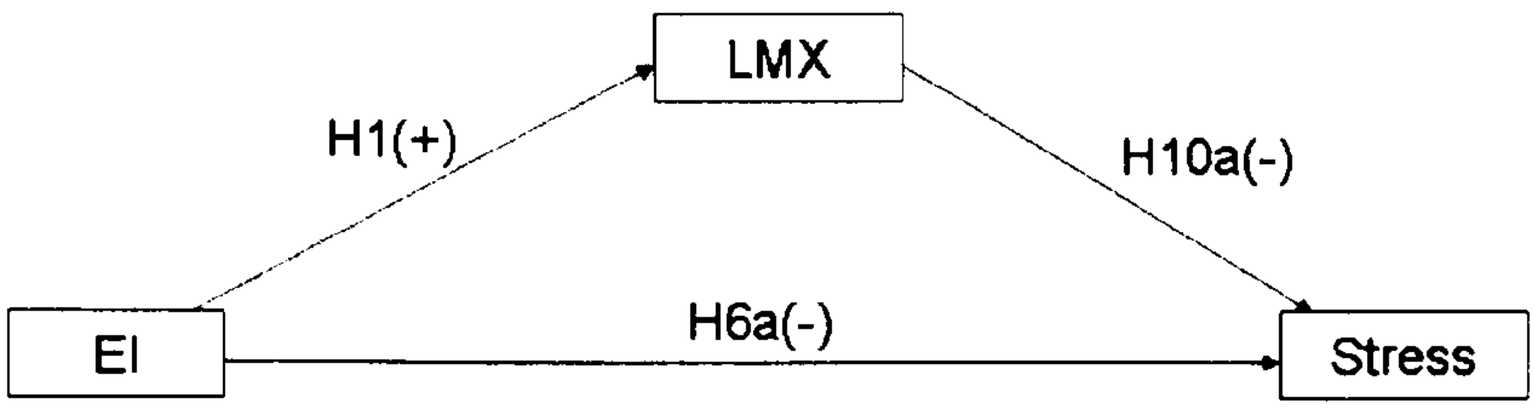

Figure 5.4: . LMX as a mediator of the relationship between EI and stress (Hypothesis 12)

The effects of the interaction between emotional intelligence and leader-member exchange.

As hypothesised in H6a, b, and c, the effects of emotional intelligence on stress are considered to be different for the self-oriented and other-oriented dimensions of EI. This is because of the role that awareness has in an individual's experience of stress. In order to examine the potential interaction of EI and LMX on stress, these earlier hypotheses are taken into account, and developed.

Individuals with high other-oriented competencies of EI are hypothesised in H6c to be positively related to stress, as these competencies mean that individuals will endeavour to develop, empathise, and account for, others. For such individuals, the absence of offers into high leader-member exchanges

would be unsatisfying and frustrating, and stress would increase (illustrated by Box A in Figure 5.5). Conversely, low quality LMX is not expected to increase stress among those with low EI, as such individuals may not rely on, or place as much importance on the helping relationship with supervisors, characterised by high quality LMX (exemplified in Box B). This notion is supported by Ciarrochi et al. (2003) who suggested that individuals high in emotion perception (EP) were likely to perceive more stress than low EP scorers, and is consistent with Simpson, Icles & Blackstone, 1995, who indicated that those low in EP may be relatively insensitive to stress.

Furthermore, those with high self-oriented competencies of EI were predicted to have lower levels of stress, because of the increased awareness of potential stressors, knowing one's own limits, and reacting with proactive behaviour. Furthermore, the effects of LMX on a high EI scorer will strengthen the negative relationship with stress, through offers of support and encouragement from the supervisor, a known effective source of support (Box C). Links between EI and supervisor-provided social support, (George, 2000; Schutte et al. 2001; Ashekanasy, Zerb, and Hartel, 2002; Wieand, 2002; Kraimar, Wayne, & Jaworski, 2001; Borchgrevink & Boster, 1997) and between social support and stress, (Tanner, Dunn, Chonko, & Source, 1993; Tanner and Castleberry, 1990; Cohen and Wills, 1985) support this postulation.

Finally, the curvilinear relationship discussed in H10b is defined in Box D of the diagram. Here, high LMX is expected to increase stress, when EI is low, as such individuals may not have sufficient self-oriented and other-oriented competencies to aid their stress management. This suggests that the

curvilinear relationship between LMX and stress may only be true for those individuals with low EI. The extent of an individual's ability to cope compared with the level of demands placed upon them is the concern of Ecker's (1985) model of employee capabilities and demands. This informs the notion that individual competencies predict the ability to cope with high demands Ashforth, 2001; Bar-On and Parker, 2000; Martinez, 1997; Abraham, 2000).

To summarise, it is expected that high EI will compound the negative relationship between LMX and stress. Therefore, the final hypothesis suggests that:

H13. Employee experiences of stress will be an interactive function of employee EI and the quality of the LMX relationship.

5.5 Control variables

Each of the dependent variables presented above (LMX, social support, stress, performance, organisational commitment, and job satisfaction) has been shown to be related to other factors which are not the direct interest of the present research, and therefore should be included as control variables. The variables identified for the present set of hypotheses were perceived organisational support, liking, and length of time in the relationship with the supervisor (relationship tenure). The demographic variables of age, and status also may have an effect on the hypothesised relationships between leader-member exchange and stress, and the interplay with emotional intelligence.

Perceived organisational support was included to establish a difference between the effects of a belief that the organisation values ones contributions, and the experience of high quality relationships in the form of LMX

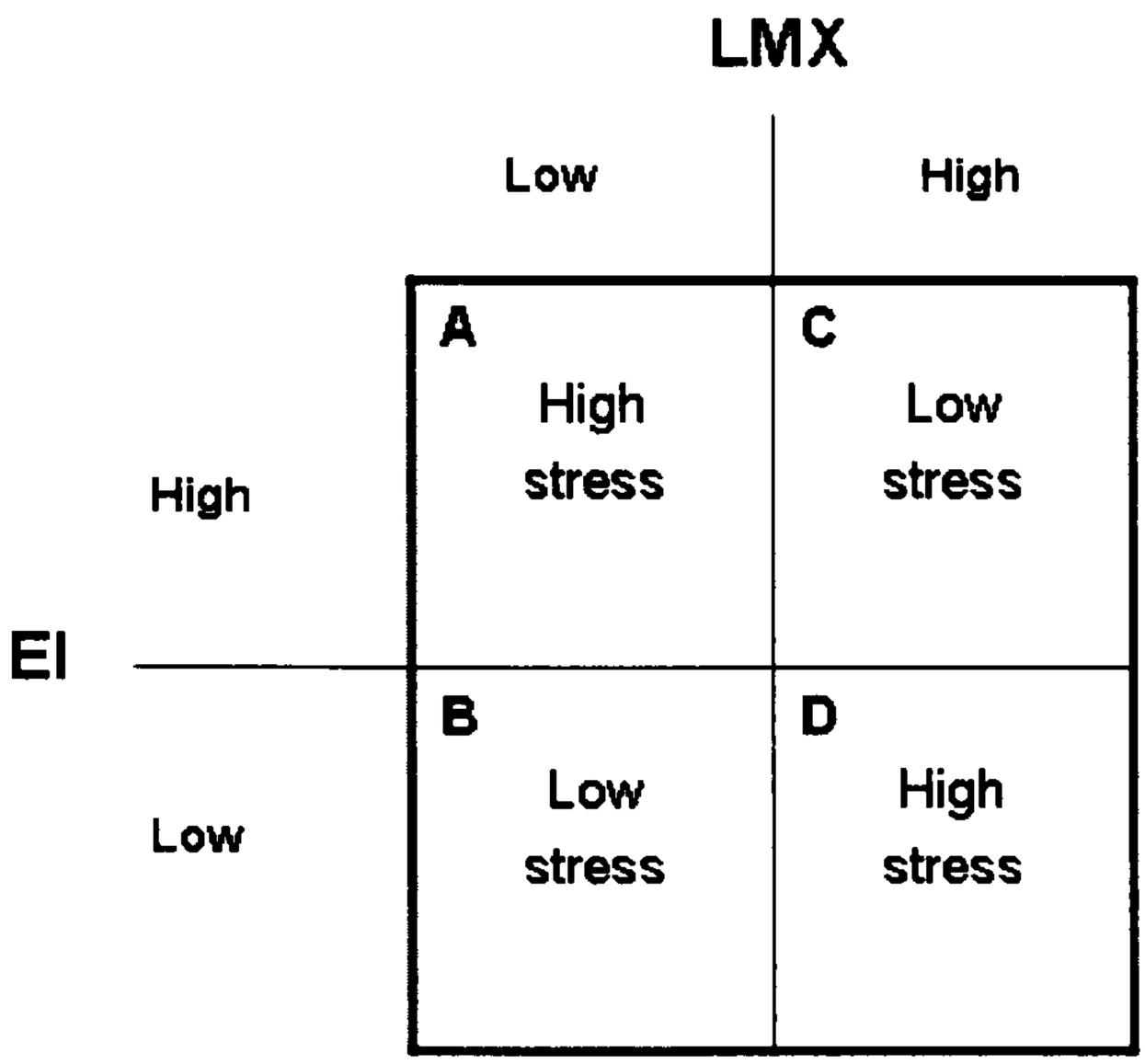

Figure 5.5: The interactive effects of EI and LMX on stress (Hypothesis 13)

and social support. Continued reciprocation of resources from the employer to employee is thought to strengthen the psychological contract. More specifically, in failing to fulfil the expected obligations created from a high quality exchange, employees become less inclined to expend effort in their work beyond that required contractually. In this way commitment and perceived organisational support are determined as dependents of the quality of the relationship with the supervisor, and the employer more generally (Smith, 2002). Perceived organisational support is a construct based on the same notion of reciprocal exchange between social members. It is proposed that, like LMX, an employee's willingness to commit increased amounts of effort,

commitment, and resources to the organisation, is dependent on their perception of the organisations commitment to their well-being (Eisenberger, et al., 1986). In short, the overlap between notions of LMX and perceived organisational support requires a full understanding of which unit support is gained from: the supervisor, or the organisation as a whole. Given that other forms of support are central to the model proposed in this research perceived organisational support was identified as an important control variable.

'Liking' establishes the degree of friendship and enjoyment from a relationship. This was included due to its impact on leader-member exchange. Wayne & Ferris (1990) found LMX quality to be higher when there were high levels of supervisor liking for the subordinate. An individual who likes their supervisor is considered more likely to experience a high quality relationship with them. Liden et al. (1993) reported that liking, based on the theory of positive affect and similarity was a predictor of LMX quality. It must therefore be considered for its effects on LMX, and also stress and performance, as distinct from EI, predicted here as the main antecedent of LMX quality.

Finally, it is expected that several demographic characteristics of the sample will have an effect on how relationships between variables are experienced. For example, the age of each participant and the tenure in a specific leader-member exchange is expected to have a bearing on how the relationship is considered by each member (Tsui and O'Reilly, 1989). Those who have been supervised by an individual for only a short period of time may have had less time to develop feelings of being supported, valued, and committed (Harris & Kacmar, 2006). Likewise, job status may affect how individuals perceive their relationships and outcomes. Therefore, the effects of age, tenure, and

job status are considered.

5.6 Healthcare context

This section provides a broad introduction to the setting in which the preceding hypotheses are tested. The British NHS is a large bureaucratic organisation, which at the time of this research, was going through a process of modernisation. Much research has been conducted in the NHS, considering broad leadership issues (Cummings et al., 2005; Stordeur et al., 2001; Snow, 2001), the causes of stress (Jenkins & Elliot, 2004; McVicar, 2003), and studies assessing the role of competencies such as emotional intelligence (Freshwater & Stickley, 2004; Cadman, 2001; Vitello-Cicciu, 2002; McQueen, 2004). The modernisation process has necessitated several changes which affect the staff groups sampled in this research. These are described in Chapter 6, Section 6.3 which describes the research setting.

The competencies described in the Goleman et al. (1999) model of EI, have much significance for healthcare settings, where many resources have been employed in developing leadership skills and delivering care to patients (McQueen, 2004). Leadership programmes have received much investment, focusing particularly on five main areas, identified by Cunningham and Kitsonn (2004) as: managing self; managing a team; patient centred care; networking; and becoming more politically aware. These are reminiscent of the EI competences or clusters: self-awareness; teamwork and collaboration; service orientation; building bonds; and organisational awareness. These similarities establish connections between competencies and leadership development as important to healthcare settings, and suggest that EI provides

a framework which could be useful to investigating such connections. Research has already established that negative employee outcomes are evident in nursing staff who face organisational restructuring. which in an American healthcare model, has necessitated job loses (Cummings et al., 2005).

Cadman and Brewer (2001) and Morrison (1993) identified that people who can communicate effectively, motivate others, and manage conflict are important for clinical work, and suggest that such individuals are lacking in healthcare. Additionally, Reynolds (1998) found the same for individuals with empathy. Evans and Allen (2002) stated that the integration of emotional intelligence into training curriculum for nurses would provide nurses with enhanced opportunities to create relationships.

An overarching Leadership Plan was prompted by the process of transformation in the NHS, used to manage organisational development and the change process. The theoretical background to the proposals included the effects of emotional intelligence competencies within management teams. A focus on developing leadership behaviours had allowed the current research to be met with interest. The NHS Scotland ambitions, involving 360 degree diagnostic tools about personal behaviours, and this synergy with the present investigation, presented NHS hospitals as very appropriate settings.

It has been suggested that emotionally intelligent people are more likely to cope with the demands of clinical work, specifically nursing (Mayer & Kilpatrick, 1994). The Health and Safety Executive (HSE) have developed a set of management standards to address the problem of stress in the public sector, and specifically targeted their standards at the NHS. Six key areas were identified as requiring management in order to create a health and

well-being in the workforce. The management standards cover: demands; control; support; relationships; role; and change as contributory factors to stress. Research conducted with hospital nursing staff has revealed that the effects of the various physical, psychological and social demands presented in their work, are not always experienced negatively. Hay and Oken (1972), and Tyler and Cushway (1992) have found that some nursing staff say that feeling stress "maintains alertness and ability to respond to pressure" (cited in Simmons and Nelson, 2001, p.8).

Williams et al. (1998) and McVicar (2003) have both confirmed that the most common sources of stress in nursing staff. that have been consistent for many years are workload, leadership and management issues, and the emotional demands of caring for others. McVicar (2003) suggested that administrative support may be one method of addressing workload on nursing staff, by alleviating paperwork. Furthermore, Bakker et al. (2000) suggested that lead staff nurses could buffer the effects of high job demands by adopting a supportive leadership style.

Some research has used the theory of emotional labour to explain how hospital staff cope with the demands in healthcare (Bellack, 1999). A move towards a more involved and participatory model of healthcare brings nursing staff closer to patient experiences through open communication, mutual understanding, and empathy, reminiscent of EI dimensions. "I am not suggesting that EI and emotional labour are similar concepts, but rather that emotional labour calls upon and engages interpersonal and intrapersonal intelligences" (McQueen, 2004, p.103). This generates an investment and commitment in the work that is considered richer than the more formal

nurse-patient relationship model (McQueen, 2004).

The public sector trade union UNISON have also adopted a stance on stress. Concerns about stress levels have prompted research into the causes. From a literature review carried out by UNISON, it was found in more than 20 reports that between a quarter and half of all NHS staff had higher levels of stress than employees of other public sector UK employees, and that the causes were specific to the healthcare setting (UNISON, 2004). Particularly, senior nurses were stressed about staffing concerns, and by concerns about the competencies of their agency staff. To compound the stress problem, the Royal College of Nursing found that 11% of staff reported, through psychometric testing, that their stress levels were high enough to require psychological therapies. However, only half of these individuals were receiving help in the form of counselling or other treatment (UNISON, 2004). This research, however, does not provide an explanation for a limited uptake of help. It is not clear whether individuals do not opt for help because they do not recognise their need, or whether they do not perceive that help is available to them.

It is important to note that while the Department of Health, and the Health and Safety Executive recommend that local assistance and support is in place, individuals are not fully utilising facilities. This may reflect an inadequacy in stress management interventions available to them, or reflect a lack of individual awareness for help. This context highlights the pertinence of the current research, which is aiming to establish the role of awareness, and use of social support in contributing to the management of stress.

All of these themes have congruence with the aims of this research. For

example, the standard for managing support is that employees receive encouragement and resources, and receive adequate support from colleagues and supervisors. The HSE recommend that structures be locally in place for the provision of support and systems are devised for managers to support and encourage staff. Relationships, also acknowledged as a source of stress, include promoting positive working, and aims to avoid conflict and bullying. This standard can be achieved, according to the HSE by sharing relevant information and promoting positive behaviours. Emotional intelligence includes competencies that relate to positive attitudes and working with conflict.

Finally, change is an area which is important for the NHS (Cummings et al., 2005; Burke, 2003). HSE aim to ensure that organisational change is managed and communicated to all employees, and that there are systems in place for employees to respond with their concerns about change. It is also recommended that employees are consulted about how change will affect them, and that they are given a full explanation about how change will affect their roles. These recommendations address some of the stressors this research is interested in. This therefore confirms that the concerns are organisation wide, and substantiates the importance of the relevance of the investigation.

5.7 Conclusion

This chapter has presented three sets of hypotheses, to demonstrate the predicted structure of how the variables of interest relate to each other. The hypotheses have been grouped into outcomes of emotional intelligence, out-

comes of leader-member exchange, and the moderating effects of social support and leader-member exchange on employee outcomes. The outcomes of choice are employee attitudes (job satisfaction and organisational commitment) and performance.

The first set of hypotheses propose that EI helps to build interpersonal relations through the discovery of linked relational dimensions with LMX, and is an influencing factor on the development of high and low quality exchanges. The second set deals with the direct outcomes of LMX, illustrating links with stress and performance. The third set of hypotheses demonstrates the expected mediating effects of social support between LMX and stress, and of LMX in the relationship between EI and stress. In the first prediction of mediation, social support is offered and received as a mutually beneficial exchange between a leader and a member, which mediates the effects of obligation, high expectations, and trust on stress. In the second, LMX is predicted to contribute to an explanation of how emotional intelligence can reduce stress, by the utilisation of better relationships with the most important source of support: the supervisor. Support is offered in return for trust, obligation, delegation, demands, and performance, and is likely to be utilised well if an individual has high levels of EI.

Chapter 6

Methodology

6.1 Introduction

This chapter describes the research philosophy, methodology, and methods that were employed to test the research hypotheses outlined in Chapter Five. The aim of the study was to assess the relationships between emotional intelligence (EI), LMX, and employee outcomes: stress, job satisfaction, and organisational commitment. The data collection method that has been chosen for the purposes of this investigation is survey methods, through the use of questionnaires. The analysis method used is multiple and hierarchical regression analysis.

The first section examines the research philosophy and assumptions on which the study was based. The next section describes the research design and the rationale for the choice of a cross sectional survey design, using multiple sources. Section 6.3 provides an account of the organisational context in which the study took place. Section 6.4 describes the research design and the use of multi source data, before describing the sample in Section 6.5.

Section 6.6 describes the measures for each of the variables included in turn. The final section describes the procedures used, including pre-investigation preparation, data collection, and data analysis. Here, the analytical strategy of hierarchical regression analysis is presented.

6.2 Research philosophy

The main methodological approach to this research has a positivist influence, as it adopts a deductive hypothesis testing approach using surveys. However, the importance of the contextual environment from which participants sampled is informed by a critical realist epistemological position. This research therefore investigates individuals' experiences of these structural influences using interviews, which account for differences in participants' articulation of being part of a large system and organisational structure. The ontology and epistemology are considered in more detail now, to provide a rationale for the positivist methodology adopted.

The ontological position from which the study is developed is based on the assumptions of an objective philosophy about reality. The epistemological critical realist position holds that events and objects exist independently of individual knowledge of its existence. However, individuals' values and conceptions of the world render the knowledge imperfect. Furthermore, owing to the differentiation of this knowledge, it is acknowledged that there are varying degrees of reliable and valid methods of acquiring this knowledge (Ackroyd & Fleetwood, 2000). This suggests that knowledge can be generated through the testing of theories. This notion makes the explication of the philosophical position very important for the research project, which aims to

test a model, derived from theory.

The central premise of a critical realism, which is therefore a very important focus for this research, is that structures (organisational structures, in the present case) have a great influence over events. "Organisations... have form, structures, boundaries, purposes and goals, resources, and members whose behaviours result from structured relations among them" (Dubin, 1982, p.372). However, it is believed that these structures are manipulated into existence by the individuals they now shape. This explains in part the open systems ontology, suggesting that individuals are constantly subject to environmental factors. Additionally, hypotheses are used to generate patterns or regularities in causal mechanisms, or processes that may describe effects that are visible for investigation. Critical realism, then, does not privilege any particular methodologies or forms of data. Rather, this approach requires that the data adequately answers the research questions. In this research, a quantitative form of data is gathered using surveys, in keeping with the hypotheses-testing, deductive approach. However, quantitative data has been gathered to objectively identify features of the context and structures in which the research takes place.

In the current study, the mechanisms and processes investigated are bound in working relationships between individuals, and the leader-member exchanges are regarded as the structures within which phenomena are investigated. Therefore, "the powers of a supervisor derive from his or her interdependent relations with subordinates, colleagues, superiors, and so forth" (Tsang & Kwan, 1999, p.762). It is these relationships which are the hypothesised mechanisms with 'explanatory power'. This research has compat-

ibility with the notion of structure-agency interaction (Cruickshank, 2002), when considering person-environment fit, the implications for stress, and the interactions of individual characteristics on relationship structures. These interactions exemplify the influence of contextual and organisational factors on individuals, with data generated from interviews.

Although such interactions and behaviours are in constant flux, the aim is to persistently find similar events, rather than constant or permanent ones. This can be achieved through gathering high volumes of data about the same variables, if the context remains stable. For this reason, the selection of the organisations for research is important, and is preferable in the current research, to have similar structural and governance features. If the effects taking place within one dyadic structure are repeated in many other dyadic structures, as hypothesised in the previous chapter, then a model of explanatory value may be created. Background and unobserved effects can be tested, allowing variables of interest to be isolated for examination. This provides a quasi-closed system for identifying mechanisms (Pratschke, 2003). The next section of this chapter acknowledges several structural variables, and the effects they may have on forming a model which reliably represents the interaction of mechanisms and individuals.

6.3 Research setting

The research settings were five hospitals within the UK National Health Service (NHS), in Greater Glasgow Health Board. As one the largest UK employers, the NHS organisational structure lends itself to large numbers of varying positions and vertical dyads. The selection of a setting was based

on the existence of several conditions, which were necessary for testing the research model. Specifically, the proposed model required responses from leaders and members, so an organisation with large numbers of managers in a low level of the hierarchy was required. The organisation had to be very large in order to achieve an acceptable sample from appropriate dyads. Additionally, it was appropriate for the setting and work roles to have common stressors, in order to validate the inclusion and focus on the stress outcome.

Large numbers of responses were preferred, from one organisation, as more than one lends itself more to a comparative study, which was not the aim of the investigation. Furthermore, by choosing one organisation, control was more likely over confounding factors like culture, organisational size and structure. The importance of gaining this control was discussed in Sections 3.1 and 3.2, although it has specific implications for the choice of organisation. For example, by selecting an organisation which is of a large size, and has a rigid structure (for the purposes of attaining vertical dyads), the researcher could attribute results from the study to the variables central to the research model. Unit size was considered important because as unit size increases, managers change their leadership style, and there are fewer opportunities for exchanges between managers and employees (Yukl, 1994; Green, Anderson, & Shivers, 1996). Through early discussions with Training and Organisational Development Managers, the researcher was able to assess whether or not the organisation had those characteristics, and therefore, make judgements about the suitability of the organisation.

Additionally, the researcher was able to achieve access to several sites. Four hospitals in Greater Glasgow NHS Trust and one in Argyle and Clyde

NHS Trust were accessed. At the time of the study, all of these had been through three major recent changes as part of NHS Scotland's process of modernisation in response to the White Paper in delivering patient care. Firstly, complete restructuring and merging of health boards had created job uncertainty. Secondly, "Agenda for Change", which had been designed to streamline conditions of service, such as pay and hours, required all staff to do a job evaluation and job description to inform new pay bands. This created further uncertainty about contractual conditions. Thirdly, a Knowledge and Skills Framework (KSF) had been developed in order that each job description addressed skills and knowledge needed to conduct each job. This consists of 64 'competencies', six of which were considered core: communication; personal and people development; health, safety, and security; service development; quality; and equality, diversity, and rights. These six core competencies related to all jobs. Specific dimensions that were particularly relevant to the topic under investigation here were: addressing individuals' health and well-being needs; improvement of health and well-being; partnership; leadership; and management of people.

6.3.1 Description of hospitals

Hospital 1

Participants from Hospital 1 suffered from "low morale", poor personal development, and fear of job losses. This hospital is a specialist hospital which is scheduled to be re-located in the next three years. A section of it will be closed down altogether. Staff in this specialist area were concerned about their ability to find work in Scotland, and have felt betrayed. The in-

terviewee, a human resource manager, commented that "staff feel let down, and have always fought really hard for [Hospital 1], and now it is closing, people have a strong identity to it". Also, the interviewee described the feeling of belonging to a "family". The training and development programmes do not have large uptake, and the interviewee stated that attendance at training programmes are not mandatory, and are each individual's responsibility. The sample was chosen completely randomly from computer databases of managers throughout the hospital. Therefore, a mixture of job types was expected.

Hospital 2

From the interview carried out with the HR manager of Hospital 2, the general mood of staff was described as "unsettled" as a result of changes actioned under the NHS Agenda for Change. It was estimated by the interviewee that 40-50% of managers would be affected by the re-organisation of jobs and would experience a change in their role. The interviewee, a training and development manager for the hospital said that this had lead to "resentment from those who wanted to change but didn't, and lack of trust. Morale is not high". However, it was noted that "there is a lot of energy too, about the changes, [particularly among] those who are happy about the changes, and want to do well in their new roles". Due to changes in management, the interviewee thought that staff "do not know yet how to behave" and "have issues of learning to communicate with new managers...so stress is slightly raised".

The interviewee selected managers for participation in this research, "who

have not yet been involved in changes, but would be soon". This was to capture a sense of expectation about change, however, the interviewee indicated that changes such as relocations, "realignment of jobs", and changes to salaries would increase paperwork, so it was felt that conducting the current research would be more effective before the changes took place, to maximise participation. The interviewee suggested that it would be "very interesting to go back to the sample and do it again six months on, and see how painful the process [of change] was".

Hospital 3

Hospital 3 was also in a period of "uncertainty" but it was felt by the interviewee (the hospital's learning and development advisor) that this would affect only limited numbers of staff. It was noted, however, that although "there is unlikely to be change, people want to know there is no change". This suggests that staff were seeking reassurance. Given this setting was largely unaffected by change, the interviewee concluded that "relationships remain stable". However, as with all interviewees, it had been acknowledged that in the NHS "change is commonplace, so stress is a given". This hospital has conducted half day training sessions about emotional intelligence, and the sample had been selected from individuals who registered on management or leadership development programmes, and therefore have had exposure to EI concepts. However, there has been no stress management element to either of the courses provided.

Hospital 4

Potential interviewees from contacts with Hospital 4 did not feel suitably informed to talk about the impact from restructuring or Agenda for Change, therefore, no interviews have been carried out.

Hospital 5

From the interview with the team leader for the smaller sample in Hospital 5, it was highlighted that this setting was unique in several ways compared to the other sites for this research. Firstly, it is a small team made entirely of clinical nursing staff. Secondly, the unit deals with a specialist nursing area, which has a special needs, residential, client base. This has implications for the skills used in the work, and for the relationships among team members. The interviewee described periods with demanding clients as ones of "higher stress". Nonetheless, this sample was still subject to overarching organisational changes under NHS Scotland Agenda for Change. In this setting, there was "anxiety surrounding change, uncertainty, staff movement, [and a tendency] to lose staff to community teams because of the nature of the job these specialist nurses have". They are in high demand. Staff development at this site was emphasised more than at other sites, because of the nature of the work, and a module on emotional intelligence had been developed. A very unsettled period recent to this research participation had meant that some staff had left. This period involved experiences with a particularly challenging client base. However, although the sample participants from this site are "new starts [who] don't have that experience or background, the current staff had heard about it, and are on the look out for these experiences". This highlighted the need for personal development of staff and an attempt

to "instil a culture of being risk aware, without instilling fear". The unique nature of this unit, and previous negative staff experiences had "become a bit of a legend for new staff. It all affects the care [we] deliver". The nature of this setting has significant implications for the impact of leader-member relations and stress on participants.

The interviewee commented on the close communication and personal relationships that are built between staff members. and between staff and managers. Re-arrangement of roles at management level indicates that staff were not familiar with their supervisors. This may explain the short term relationships reported in the next chapter, where all the participants have been in their current leader-member relationship less than 5 years. This is the only hospital in the sample which does not have leader-member dyads older than 5 years.

6.4 Research design

6.4.1 Cross-sectional survey design

A cross-sectional research design was employed to carry out the present research. This approach is a correlational design and requires the collection of data at one time. A cross-sectional design is powerful as it allows the analysis of large numbers of participants and variables. A longitudinal design, although it produces results more attuned to establishing causality, is inappropriate, due to time constraints. Additionally, the author considers that, due to the abstract nature of the data for this study (specifically stress)

Hospital	Description of setting and sample
1	**A.** Teaching hospital for sick children, specialist services include speech and hearing therapy, immunisation for schools. Clients: newborn-13 years **B.** 266 inpatient beds, 12 day-case beds, 90,000 outpatients, 15,000 in-patients, 7,500 day-cases, 35,00 accident and emergency attendances per annum. **C.** 200 dyads **D.** Relocation by 2010. Specialist antenatal clinicians fear job loss.
2	**A.** Teaching hospital, Accident and emergency unit, full range of specialist clinics including The Institute of Neurological Sciences **B.** Large acute bed operation: 900 beds. Largest critical care complex in Scotland **C.** 200 dyads **D.** Interviewee estimated 40-50% of managers would change their jobs as a result of re-organisation of jobs.
3	**A.** In-patient services for mental health in Renfrewshire, specialists in psychiatry and psychology for all ages. **B.** Unknown **C.** 200 dyads **D.** Only a limited number of staff expected to be affected by changes from modernisation, and these were expected to be relocations.
4	**A.** General Hospital with a range of acute surgical services **B.** Unknown. Serves North Glasgow and part of east Dumbartonshire (population = 200,000 people) **C.** 200 dyads **D.** Unknown
5	**A.** Unit within large Hospital. Unit for Adolescent Mental Health Services for 12-17 year olds with psychiatric disorders **B.** 16 in-patient beds **C.** 15 dyads (whole unit) **D.** Very demanding clients, specialist clinician base in high demand, therefore unit has high turn-over, as staff move.

Note. A: Type of Hospital; B: Size of Hospital; C: Number sampled;
D: Special features / effects of modernisation process

Table 6.1: Description of hospitals

'snap shot' measurements of these variables are adequate to find relationships between them. The experience of stress may change frequently over time.

A survey approach was adopted in this research. Analytical surveys are

essential for the prediction of cause-effect relationships, and especially for designing multivariate analysis, as is the nature of this research. For the purposes of this research, the questionnaires are paired, one survey for a supervisor, and one for an employee within a dyadic relationships. The population and sample referred to are discussed in more detail in Section 6.4.6 of this Chapter. Surveys are used to generalise from a sample to a population so that inferences can be made about characteristics, and behaviour, and the relationships between them.

In this instance, a survey approach was thought to be the most effective method for responding to the research questions and testing the hypotheses proposed in Chapter Five. The following discussion gives an explanation for this assertion. Other methods, which may have value in addressing the issues of this research, are discussed in the next section, with reasons for the decision not to utilise them.

The first reason for choosing survey methods is that it allows high degrees of researcher control over the situation being studied. Questionnaires are utilized in this study to find data that describes and explains similarities or differences in the levels of the variables. The questionnaires allow variables to be operationalised using closed-ended, scaled measures. When examining the characteristics of supervisors and their roles, the researcher should be aware of the amount of time the individual has to commit to participating in the study. The disadvantage of closed questioning is that is provides relatively basic data, unless the questionnaire has a large number of items. The expectation is that closed questions will require less time from the participant to answer each item, as the answers are anchored on a scale,

and therefore each individual may be more likely to respond to all items.

This addresses the second rationale for the use of surveys. Questionnaires allow large amounts of data to be collected, and the information is in a form that is more easily analysed. The third reason for proposing survey methods as the most appropriate method of gathering data, is the existence of previously published and validated scales for the variables this study intends to measure. The surveys and scales used are covered in detail in section 5 of this chapter.

There are, however, complications in using questionnaires as a research method. For example, questionnaires produce vast amounts of data that require statistical analysis. This process could be time consuming and has potential for error, as some questions may not be answered, due to the fact that respondents may feel that the limited options of an anchored scale like the Likert scale are insufficient to represent their answers. However, errors such as these can be accounted for with the multivariate statistical analytical method adopted for this research.

6.4.2 Evaluation of alternative methods

Alternative methods were considered, and rejected for several reasons. Observation would allow access to data of a specific, although qualitative nature, and may serve as a way to ensure the correct establishment of confounding factors, for example, assessing differences in behaviour between mixed gender dyads, or between younger and older individuals, or those in senior and junior positions.

However, observation would be particularly challenging in a study of

leader-member relationships, where the researcher should ideally be in close proximity to, and have direct relationships with the individuals involved. In the low probability that access would be attained at this level of observation, leaders may experience investigation into their relationship behaviours as threatening and may feel judged about their leadership style. This highlights another disadvantage of covert observation; that participants have no knowledge of your research aims, or are misguided about them. There are few, if any, ethical reasons for conducting covert observation that would be acceptable by organisational leaders, when studying such a sensitive issue like relationship management. Additionally, emotional intelligence is not a construct that has been designed for reliable observational data. Finally, the analysis of qualitative data is not within the scope of the hypotheses-testing technique chosen, and there would be time constraints involved in obtaining data of this nature from many participants.

A third approach considered was an experiment is a study that is conducted under highly controlled conditions. During the design of the project, the sample would need to be stratified into chosen control groups based on differing characteristics, for example, gender. length of service with the supervisor/employee in question, or age. Participants with one type of characteristic would act as a control group for those of another. However, experimentation in this capacity may also involve more than one experiment being conducted, which could pose inconvenience to the researcher and the participants, as more data are required. Additionally, the research involves constructs where intervention is not appropriate. For example, the researcher cannot easily intervene to change the level of an individuals' emotional in-

telligence or LMX quality, without a longitudinal design. However, as a method of substantiating results, the statistical regression approach adopted for analysing the findings of this research does allow the examination of data by controlling any variable, and reconsidering the model without the effects of that variable, which is the essence of experimental methods. Analytical methods are described later in this chapter.

6.4.3 Multiple source methods

Methodologies exploring LMX require clear statements about the level of unit analysis (House, Rousseau, & Thomas-Hunt, 1995; Klein, Dansereau, & Hall, 1994; Schriesheim, et al., 1999; Dansereau, Alutto, & Yammarino, 1984; Rousseau, 1985). The unit of analysis for this research is the employee, rather than the supervisor. There are a variety of approaches to the unit of analysis in previous LMX research. For example, some authors have used the employee only, as the unit of analysis (Lagace, Castleberry, & Ridnour, 1993). Others have used both employee and supervisor ratings, although the research was concerned with employee outcomes of LMX, for example, employee performance and satisfaction (Yrie, Hartman, & Galle, 2003), sales performance and creativity (Van Dyne, Jehn, & Cummings, 2002), and motivation (Tierney, Farmer, & Graen, 1999). Although the present research is also focusing on the employee level outcomes, many of the variables of interest are rated by employees and leaders. This has been done in other studies, (Tierney, Farmer, & Graen, 1999), although not many studies into LMX have achieved dyadic responses, where each dyad has a different supervisor. The present research has achieved this, which contributes considerable

strength to the research. Where most studies have used supervisor for up to 14 employees (Schriesheim, Neider, & Scandura, 1998), this research has one supervisor for one employee, so that testing of the dyads is not compounded by the ratings of one supervisor.

The decision for an employee focus in this research was made for several reasons. Firstly, employee individual differences are considered to contribute to the development of a relationship. More specifically, according to LMX theory, members can develop into partners. This theory places an emphasis on member development, rather than leader development. Therefore, it is most necessary to determine the individual differences of the employees that contribute to this partnership.

Secondly, theory determines that individuals with people-orientated responsibilities experience more stress (Ivancevich & Matteson: 1980; Sutton & Kahn: 1987), as their roles involve making difficult interpersonal decisions. Particularly, healthcare staff communicate with patients and their families about complex, painful, and difficult issues, and are responsible for the care of a patient during their working day. As it could not be foreseen what the precise makeup of a voluntary sample would be, it was decided that focusing on employees may yield more participants with these kind of people-oriented roles. Supervisors were expected to more likely have management roles.

Thirdly, the use of a multiple rated tool to measure emotional intelligence, which required that more than one rating of emotional intelligence, limited the necessity to request self-ratings from employees and supervisors. Multiple ratings of both focal individuals would have required that the number of questions asked of participants would have doubled. It was imperative for

maximum participation that the supervisors were given as few questions as possible. Finally, a multiple rating of LMX was also obtained contributing significant strength to this research. Although the employee experiences are the focus of this research, a multiple rating of LMX quality would establish more reliability of the rating.

Multiple source methodology involves the collection of data with reports from more than one participant (e.g., the supervisor and his/her subordinate) in each case. This method has a significant advantage over the highly utilised self-report methodology, in that it reduces the likelihood of percept-percept bias, which tends to inflate the identified relationships between variables (e.g., Crampton & Wagner, 1994; Schmitt, 1994; Spector, 1994). Thus, obtaining data from multiple sources should produce more reliable results.

6.4.4 Interviews

Interviewing provides an opportunity for the researcher to ascertain whether the participating organisation and the researcher can be of mutual benefit to each other. In this instance, preliminary interviews with a representative of the organisation served as an introduction for the researcher, to the sample and the appropriateness of the issues. More specifically, it helped in the determination of whether the composition of the organisation and sample were suitable to the theory identified.

In additional to the preliminary interviews for access, a second, semi-structured interview was conducted in each organisation, and provided a source of essential information about the organisational context from which the sample was taken. The semi-structured approach was adopted to estab-

lish some consistency and standardisation of content. This was achieved as saturation of themes was achieved from four interviews. The purpose of these interviews was to explore any perceived confounding factors that could affect the responses of participants. Additional questions established the extent to which participant groups had been exposed to the notions of emotional intelligence through training courses or seminars because was considered that prior understanding of the concepts contained in the survey may by reflected in responses. Also, the interviewee was asked about how they perceived the organisational environment at the time, and how this was affecting working relationships. Appendix 1 presents the interview schedule.

6.4.5 Controlling for structural factors

The focus of this research is on the characteristics of individuals and their relationships with their supervisors, rather than on organisational, economic or societal factors. However, these structural factors can have confounding effects on research. In order to identify the variables in the proposed model, potential explanatory effects of the structural factors must be controlled. This way, their effects are accounted for, although they do not impinge on the explanatory power and validity of the variables of interest.

Control of confounding structural variables may be achieved by conducting research in a standardized environment or setting. This means that the research takes place in the same organisation, with participants who have the same roles in the workplace, or where differences in the roles can be identified. This is accounted for by the uniformity of industry, organisational culture, size, structure, geography, history, and employment polices. The disadvan-

tage of this homogeneous type of design is that it may be more challenging for the external validity of the conclusions, although validity is enhanced if related to similar settings, industries, and cultures. The results can to some extent be generalised to similar organisations as, when confounding variables are identified, the results are of individual characteristics which may be as similar or dissimilar between individuals from a variety of settings. On the other hand, it is considered that samples from more diverse organisational sizes and structures (heterogeneous samples) may produce inconsistencies about relationship patterns (Aryee, et al., 1996) and results may be more attributable to the confounding effects of the structural factors, than the variables of interest. The sampling of different types of organisations to achieve a more heterogeneous sample may be an appropriate methodology for further investigation, once relationships and effects of variables have been established.

6.4.6 Controlling for other confounding variables

Although not all variables can be accounted for reliably in any research investigation, several other factors can be taken into account, based on their impact in similar studies. These are at the individual level of inquiry, and include perceived organisational support, and liking. The scales for these variables are discussed in a later section of this chapter. Demographic factors, however, were also controlled for, as they are known to affect outcomes and processes important to this research. Based on previous research, information on gender, age, ethnicity, education, and length of time with the current supervisor was sought (Varma & Stroh, 2001; Kim & George, 2005;

Yrle, Hartman & Galle, 2002). The rationale for the selection of these variables specifically is given in Section 5.2 of Chapter Five.

6.5 Sample

The selection of a sample was based to some extent on judgement sampling (Sekaran, 2000). This means that the choice was made by identifying a section of individuals who were situated in the most appropriate place to give the most reliable information. It was considered that, for the purposes of ascertaining leader-member exchange quality, immediate subordinates were most suitable.

Supervisors were selected by the Training and Development managers at each hospital, based on their contacts from a staff database. This was in order to ensure that no section of the hospital population was excluded from the opportunity to participate. The supervisors were instructed to select the corresponding employee. The criterion for this selection was the employee who arrived first on the supervisor's next shift. This was an attempt to ensure that the employer was not choosing his or her most or least preferred employee, and also guarantee that the employee was an individual with whom the supervisor worked directly. This was essential for responding to the questions in the survey. Most supervisor and employee respondents came from top grade nursing roles. Although no inclusion or exclusion criteria were imposed on the sampled population, certain staff groups did not respond, the most notable being ancillary staff. It is considered that the sampling approach naturally excluded this staff group because managers were contacted from a database of email and other contact details perhaps not held for this

group.

6.6 Measures

In order to further enhance reliability, existing validated scales were used. The measures covered in the following section make up the questionnaire for the purposes of this study and are discussed in the order of dependent, independent, and control variables (see Appendices 2 and 3 for employee and supervisor versions of the full questionnaire). The questionnaires were divided into four parts. The first part enquired about different aspects of how the job was experienced, and comprised items about job satisfaction, organisational commitment, perceived organisational support, and performance. The second section was about relationships at work, referring to social support, leader-member exchange, liking, and emotional intelligence. The third part asked about the extent to which individuals experienced stress, and which parts of work were most stressful. The final part of the questionnaire established demographic characteristics. By organising the survey in this way, it was felt that respondents would be guided in a logical manner through the issues they were being asked about. The personal, demographic detail was placed at the end of the questionnaire in order that the respondent would not feel intimidated by the intimacy of the questions too early, and therefore not continue to complete the remainder of the survey.

6.6.1 Stress

Stress acts as a dependent variable in the research model. Items 141-200 were composed of questions from The Job Stress Survey (JSS; Spielberger & Vagg, 1999) which is used to assess stress levels. It consists of three scales: Job Stress Severity (JS-S) represents an individual's average intensity rating for the 30 stressors; Job Stress Frequency (JS-F) indicates the average frequency of occurrence for the 30 stressors within the past 6 months; and the Job Stress Index (JS-X) is a measure of overall stress, measured by the sum of the preceding two indices (Rick & Briner et al., 2001). The Cronbach alpha for the stress index is .97. There are additionally six subscales for stress, assessing job pressure on the severity and frequency scales (JP-S, JP-F) as well as an overall index for job pressure, which combines the severity and frequency scores (JP-X; Cronbach alpha = .96). A final dimension of stress measures the lack of organisational support perceived by respondents, on severity and frequency scales (LS-S, LS-F), and on an overall measure of this stressor (LS-X). The Cronbach alpha for the lack of organisational support index is .94. These are very acceptable reliabilities for the stress dimensions. For the reliabilities of all the subscales, refer to Table 6.2.

The rate of severity was measured on a 9 point scale by comparing it to an event perceived as producing an average amount of stress. Research using this instrument has purported that the item "having to perform disagreeable duties" produces an average amount of stress, and this item has been assigned the midpoint value of 5. Participants were asked to respond by comparing their experience about each item with that of having to perform disagreeable duties. Then, respondents report on a scale of 0 to 9+ days how often each

stressor has occurred in the past 6 months.

This instrument is particularly favourable as it includes items measuring both qualitative and quantitative job overload, by dividing the ratings into severity and frequency of experienced stressors. For this reason, and the scales' high reliabilities, the survey is used with confidence without exploratory factor analysis. It was considered that, as the subscales are composed of items already used in the larger indices of the survey, exploratory factor analysis would not extract unique components of stress.

6.6.2 Performance

Subjective measures of performance are frequently used in organisational behaviour research, and meta-analysis often treat these as substitutable or interchangeable with objective measures (see for example Bommer et al., 1995). Although there has been some debate about the reliability of supervisory ratings (Campbell, 1990; Feldman, 1981), they have been acknowledged as capturing a wider range of employee behaviours than objective measures (Rotundo & Sackett, 2000).

It is known from previous research that the quality of the leader-member exchange can bias performance measures. For example, the supervisor from a high quality exchange may perceive the performance of his or her employee as good. However, poor quality exchanges may produce performance measurements that are poor (Vecchio, 1998; Swift & Campbell, 1995). Additionally, Tanner, Ridnour, and Castleberry (1997) found from their research into sales people, that in high quality relationships, managers attribute high performance to the sales person. If performance is high in a poor relation-

ship, performance is attributed to external forces. Three items related to both the employees' and supervisors' rating of the most recent appraisal outcome were used. The performance measure was represented by items 44-46, which were assessed on a five point scale from "poor" to "excellent".

6.6.3 Organisational commitment

Items 21-35 measured organisational commitment using the Organisational Commitment Questionnaire (Mowday, Steers & Porter, 1979). This questionnaire had 15 items and required an anchored 7 point rating scale ranging from "strongly disagree" to "strongly agree". The questionnaire had been validated using data collated from a range of organizations and work roles (Robinson, Simourd, & Porporino, 1990). Organizational commitment has been used to refer to three aspects of employee attitudes, according to Mowday, Steers and Porter (1979). First, is the extent to which an employee exhibits a strong desire to stay in the organization. This is addressed in questions 22, 27, 29-31, and 34-35; second, refers to their readiness to exert high levels of effort for the organization, measured by questions 21, 24, and 28 and finally, the questionnaire measures the individuals' belief in and acceptance of values and goals of the organization in questions 23, 25-26, and 32-33 (Robinson, Simourd & Porporino, 1990). The Cronbach alpha for organisational commitment is .83.

The Organisational Commitment Questionnaire (OCQ) developed by Allen and Meyer (1990) was an alternative considered for the measurement of this variable. This instrument measured affective commitment, continuous commitment (which measures the perceived cost of leaving the organisation), and

normative commitment (which refered to the individuals' feeling of obligation to remain in the organisation). However, confirmatory analysis established a high correlation between affective and normative commitment, and fuelled doubt and debate about whether they were distinguishable dimensions of commitment (Dockel, 2003).

6.6.4 Job satisfaction

Questions 1-20 measured job satisfaction using a short form of the Minnesota Satisfaction Questionnaire (MSQ; Weiss, et al., 1967). This questionnaire is derived from the normal version, which has 100 items, with 5 questions asked about 20 identified facets of satisfaction. These are: Ability Utilization, Achievement, Activity, Advancement, Authority, Company Polices and Practices, Compensation, Co-workers, Creativity, Independence, Moral Values, Recognition, Responsibility, Security, Social Service, Social Status, Supervision - Human Relations Supervision - Technical, Variety, and Working Conditions (Thomas, 2004). For the short version, the item that correlated highest with the facet score was selected. The items were rated on a scale from 1 (not satisfied) to 5 (extremely satisfied). The short version was chosen to decrease the length of the full survey and had a Cronbach alpha of .92.

6.6.5 Leader-member exchange

LMX is an independent variable in the model developed in this research. Item numbers 59-65 refer to LMX in the survey. LMX scales consisting two items (Dansereau, et al., 1975), four items (Graen & Schiemann, 1978; Liden & Graen, 1980), five items (Graen, Liden, & Hoel, 1982), six items, Schriesheim

et al. (1992), seven items (Graen, Novak, & Sommerkamp, 1982; Seers & Graen, 1984), twelve items (Wakabayashi & Graen, 1984), and sixteen items (Wakabayashi, Graen, & Uhl-Bien, 1990; Uhl-Bien, et al., 1990) have been used in research. The large amount of variation in the item numbers in scales reflects differences in opinion regarding the dimensionality of LMX.

Graen and Uhl-Bien (1995) concluded that a version of the 7-item LMX was the most appropriate and a recommended measure of LMX (Graen & Uhl-Bien, 1995, p. 235), with the principal item of "how effective is your working relationship with your leader?" However, the LMX-7, despite its frequent use, has been criticised for a lack of published construct validation (Liden & Maslyn, 1998; Schrieseim & Gardiner, 1992). Moreover, Graen and Uhl-Bien (1995), regardless of their greatly respected and extensive contribution to LMX research, gave no indication of evidence on which they based their recommendation (Schriesheim, et al., 1999).

However, for the present research, the LMX-7 was chosen. It has six items that measure the three dimensions outlined by Graen and Uhl-Bien (1995): respect, trust and obligation. Six items addressed these dimensions. An additional global item "how would you characterise your working relationship with your leader?" was included. This was included as an assessment of relationship quality. Gerstner and Day (1997) found the LMX-7 scale to demonstrate above average reliability scores. The Cronbach alpha for LMX was .94 for employee ratings, and .86 for supervisor ratings of LMX. Exploratory factor analysis confirmed that the LMX-7 measures LMX with one principal component (see Appendix 4).

6.6.6 Social support

Questions 47-48 related to social support. which has a hypothesised mediator in the proposed model. Four kinds of support were assessed by the Social Support Scale (Caplan, et al., 1975). These were emotional, appraisal, informational, and instrumental, and were provided by three social groups: friends and family, peers at work, and the manager. Caplan, et al. (1975) composed the instrument to measure perceived emotional social support on a 5-point Likert scale and each set of 4 kinds of support was summed into an index of support from each source. The possible range of scores was from 1 to 5 with higher scores indicating stronger perceptions of support. The Cronbach alpha for social support was .90.

Exploratory factor analysis of the 12 items extracted two dimensions. which loaded social support from friends and family together. and social support from co-workers and supervisors together (see Appendix 5). This establishes that social support is measured by a non-work-oriented source and a work oriented source. Cronbach alpha's for these scales were .84. and .94. Therefore, two new variables were created for analysis: non-work-related social support and work-related social support (supervisor and co-worker sources combined).

6.6.7 Emotional intelligence

Boyatzis, Goleman and Rhee (1999) propose that 360-degree survey instruments that measure EI in the workplace have higher validity. as they provide feedback on the discrepancy between an individual's self-perception and how they are perceived and consequently rated by others. It was appropriate for

this study to use a multi-source approach, as it draws information on any given focal individual from more than one source, by using the evaluations of others to measure emotional intelligence. Gratuitous use of the instrument for this study was accepted by The Hay Group, who have the publishing rights to the scale.

Designed to predict workplace behaviours, The Emotional Competence Inventory 2, a 360 degree version of the survey, was based on self report research into leadership competencies, and addressed the theoretical probability that competencies function in clusters, as discussed in Chapter Two. The competencies measured, within their respective clusters, were as follows: (1) in the self-awareness cluster: emotional self-awareness, accurate self-assessment, self-confidence; (2) in the social awareness cluster: empathy, organizational awareness, service orientation; (3) in the self-management cluster: self-control, trustworthiness, conscientiousness, adaptability, achievement orientation, initiative; and (4) in the social skills cluster: developing others, leadership, influence, communication, change catalyst, conflict management, building bonds, teamwork & collaboration. This survey allowed for the hypothesised relationships to be tested between the individual competencies and social support, outcome variables of LMX, as described in the research model presented in Chapter Five. Questions 69-140 refer to this measure of emotional intelligence. The reliability for the composite score of EI rated by employees is .93, and rated by supervisors, is .96 (see Table 6.2 for the reliabilities for each EI cluster).

Additionally, and significant to this investigation, research has been conducted into how individuals respond to ECI2 questions, depending on their

position in the organisational echelons. Sala (2003) has reported that there are larger discrepancies between a manager's self-assessment of EI and other individual's ratings of the manager, if the manager is at a high level in the organisation. These managers self-inflate their ratings to an extent that the rating is not congruent with others' assessment of him or her. However, Sala (2003) also acknowledges a wider scholarly opinion that 360 degree feedback enhances self-knowledge, and poses the possibility that individuals who are higher in the hierarchy will have less self-knowledge. For these reasons, this research will take account of each individual's job status by including an item in the questionnaire asking the participants job title.

Mayer, Salovey, and Caruso (2000) recognized four components of emotional intelligence. These were: the accurate perception of and adaptive expression of emotion; emotional facilitation of thinking; understanding emotions and employing emotional knowledge; and the regulation of emotion to enhance mental growth. In their test, the focal person's EI is tested by their ability to identify and read the emotions of a person in a story or photograph. The person views a picture on a screen, then is asked several questions that assess the degree to which the person has correctly analyzed the feelings of the people viewed. Additionally, the correct answer is judged in accordance with cultural and normative consistencies, suggesting high external validity (Robins, 2002). Sternberg (1999) argues that this measure is more appropriate to organizational settings, in that organizations are clearly emotionally charged, and therefore require specific competencies that allow one to deal with demands of such an environment. Here, Sternberg claims, the broad ECI model would become redundant.

Another alternative considered was the Emotional Quotient Inventory, the EQ-i scale (Bar-On, 1997), which was a 133 item self-report instrument and has been tested over 19 years on over 33,000 subjects. The reason for interest in this scale was the focus on stress. The instrument, which is divided into five sub-scales, had stress management devoted to the third sub-scale, including "stress tolerance, the ability to withstand adverse events, stressful situations, and strong emotions without 'falling apart' by actively and positively coping with stress" (Thomas, 2004). However, the ECI was chosen rather than the EQ-i for several reasons. Firstly, stress would be included from a separate scale anyway, so it was not necessary for stress to be accounted for in an EI scale. Secondly, the ECI had the advantages of multi-source feedback and the approach of analysing the constructs in 'clusters', which has strong theoretical grounding.

These definitions and models illustrate the complex nature of emotional intelligence, and how the construct is perceived. It has been establishing the construct validity of emotional intelligence that has driven much of the criticism about the topic, and still leaves unresolved the issue of measurement (Goleman, 1996, 1997; Steiner, 1997; Hein, 1997). Rahim (2003) observes several measurement related drawbacks, including the unreliable use of self-report measures; common method variance, the vulnerability of some measurement items to social desirability responding, and the "self-other" rating gap. However, the ECI addresses these issues.

6.6.8 Percieved organisational support

Perceived organisational support is included in this study as a control variable. An 8-item Survey of Perceived Organizational Support by Eisenberger, et al. (1986) formed questions 36-43. This measure was designed by the authors to assess the extent to which employees perceive that the organization values their contributions and cares for their well-being. It was used in this research as a control variable, to assess and provide a distinction between perceived organisational support and other types of support, measured as social support. Respondents answered on a 7 point scale (0 - strongly disagree, 6 - strongly agree). The reliability for this scale is acceptable at .70 (see Nunnally, 1994 for a discussion of an acceptable cut-off value for the Cronbach alpha coefficient).

6.6.9 Liking

Item numbers 66-68 question the degree of liking between two dyadic members, which is regarded as a control variable in the present research model. Liking is indicated by the response to four questions on a scale designed by Wayne and Ferris (1990). The first question asks how much the respondent likes their subordinate. This item was dropped from the questionnaire in this research, as it was considered by the researcher to be too sensitive. The responses from which the individual must indicate the degree of liking on the other three items are on a scale which is anchored as follows: (1) strongly disagree to (5) strongly agree, in response to questions regarding how they enjoy the relationship. Liking has been found to influence the ratings of supervisors about subordinates' performance (Wayne & Ferris, 1990; Liden &

Maslyn, 1998; Boyd & Taylor, 1998; Duchon, Green, & Taber, 1986), and is thought to explain good informal relations (Liden, Wayne, & Stilwell, 1993). It is therefore an important control variable. Reliability for liking as rated by both employee and supervisor is .92.

6.6.10 Demographic information

Tsui et al. (1994) found that gender (item 201), age (item 202), ethnicity (item 203), job tenure (items 206 and 207), and education (item 208) in leader-member exchanges had implications for the development of the relationship, emotional intelligence, and performance outcomes. Given the hospital setting for this study and the range of roles that participants were expected to have, the researcher sought information about job role and employment status. These were considered to have a possible effect on the ratings of variables, and would allow categorisation of types of roles. Therefore, items 204 and 205 were included to identify job title and employment status. All of these were addressed in the current survey as control variables.

6.7 Procedure

6.7.1 Pre-data collection work

During questionnaire development, potential participating organisations were approached. A pilot study was carried out with a small sample (n = 12) of dyads in a power company. Surveys were distributed to team leaders in a call centre of the organisation. Comments about the usability of the survey were invited. No comments were made. This survey, although users did not

Variable	Alpha
Job stress index	**.97**
Job stress severity	.97
Job stress frequency	.96
Job pressure index	**.96**
Job pressure severity	.96
Job pressure frequency	.95
Lack of organisational support index	**.94**
Lack of organisational support severity	.93
Lack of organisational support frequency	.92
Performance	
Organisational commitment	**.83**
Job satisfaction	**.92**
LMX (employee)	**.94**
LMX (supervisor)	**.86**
Social support (non-work-related)	**.94**
Social support (work-related)	**.84**
Emotional intelligence composite (employee)	**.93**
EI self awareness	.66
EI self management	.83
EI social awareness	.68
EI relationship management	.84
Emotional intelligence composite (supervisor)	**.95**
EI self awareness	.78
EI self management	.86
EI social awareness	.77
EI relationship management	.86
Perceived organisational support	.70
Liking	.92

Table 6.2: Cronbach Alpha coefficients for multi-item scales

deem it necessary, was altered from an A5 size to an A4 size, for clarity.

A coding system was devised by the researcher for the surveys, in order to achieve anonymity. The code was arranged from 1 to 812, for each ques-

tionnaire, with the supervisor version prefixed with "SUP" and the employee version prefixed with "EMP". This arrangement ensured that no name was required, while still providing the researcher with information about which supervisor survey corresponded to which employee survey.

6.7.2 Data collection procedure

400 surveys were distributed within each participating hospital - 200 supervisor and 200 team member versions, except in the case of Hospital 5, in which surveys were distributed to 12 dyads. All hospital gatekeepers selected their own staff for sampling, from a staff database. The ethics board requested that the researcher not be exposed to staff names. This also ensured that all surveys were received, and that participants were protected with anonymity.

Questionnaires were administered to 200 supervisors through the internal mail system by Training and Development Managers at each hospital, except hospital 5, where a team leader administered 12 surveys, one for each supervisor. In hospital 1, surveys were administered through the internal mail system of the hospital. However, it was felt by the gatekeeper that internal mail may be overwhelmed with a bulk of extra mail. Therefore, it was arranged that a collection box, marked 'University of Strathclyde' would be provided in the mail room, for respondents to return sealed and completed surveys. Hospitals 2, 3, and 4 all used internal mail for the dissemination and return of completed surveys. Participants in Hospital 5 were members of a smaller team, and therefore, it was agreed with the team leader that all staff would be sampled.

The corresponding employee questionnaires were included in the envelope

with a further envelope for the employee to seal their completed surveys into. Each of these envelopes was addressed to the researcher. This guaranteed and assured the employees that their supervisors could not gain access to their responses. A cover letter briefly describing the aims of the research. the contribution of participation and the promise of feedback was included, as well as instructions for how to complete the survey. Supervisors were instructed to pass the enclosed questionnaire coded "EMP" followed by a number to the employee who arrived first on their next shift. Both participants of each dyad were instructed to return via internal mail to the researcher. A time limit of three weeks was imposed for the convenience of both the participating hospital and the researcher.

One significant limitation of this approach to data collection is the lack of researcher input and influence on the participants. There were no opportunities, other than a limited explanation of the importance of the research on a cover letter. to promote the significance and value of participation. One possible approach to overcome this issue, although not possible in the present access conditions, may be an email to all individuals listed by the Training and Development Manager for participation. This was not agreed as not all possible respondents had email access at work. However. when the first phase of data collection was complete, a follow-up email was composed by the researcher, and sent to all who did have email access and had been administered a questionnaire, from the Training and Development Manager. It was considered that after the initial research had been completed, and the email being sent from an internal source, respondents who did not respond. may feel less compromised.

On return of the questionnaires, the researcher proceeded to input the data from them, as they arrived in the interests of time.

6.7.3 Data analysis procedure

The main analysis technique used to examine the hypothesised relationships is regression. Multiple regression analysis is a statistical technique used to assess relationships between a single dependent variable and several independent variables. Using this analysis, the researcher can analyse the strength of a relationship by assessing the significance of change in the dependent variable when the independent variable changes. Correlations helped to inform what regression analysis to perform.

Statistical analysis was conducted for both a complete dataset, and a dyadic dataset, where missing respondents could not provide complete dyads. This analysis provided a description of the dataset and presented the demographic outline of the hospitals in relation to descriptive variables, namely, by relationship type (manager-manager, or manager-non-manager dyads) and employee job type. Supervisor ratings were used as measures of emotional intelligence and leader-member exchange, except in the assessment of stress and attitudinal outcomes.

Hypothesis One to Six was analysed together as direct outcomes of emotional intelligence, using stepwise multiple regression analysis. This involved testing the effects of the control variables and adding on each variable of interest to the equation to assess the independent effects of EI on the outcome variables. The same analysis was performed for Hypotheses Seven to Eleven, which tested the effects of LMX on the dependent variables.

Hierarchical regression analysis was conducted to test mediation and moderation, in Hypotheses Eleven to Thirteen. Here, each dependent variable is added to assess differences in the influence of each variable.

6.8 Conclusion

This chapter has presented the methods used in the present research, beginning with an overview and explanation of the philosophical approach adopted for the research. The organisations involved in this research are broadly described, identifying features of the NHS hospitals, including their tall, large organisational structures, large in size, and with some synergy in interests. The sample is described as representing a broad range of roles in the hospital setting. These findings are taken into consideration in the analysis of the survey data, which is presented in the next chapter.

The research adopts a cross sectional design, which is powerful in analysing large amounts of data, although only at one time. Particularly, this research generates large amounts of data of an abstract. Survey methods are used as the approach to data collection, particularly as close questioned surveys allow large amounts of data to be collected which help establish cause-effect relationships. Although the data collected may be limited by closed questions, many items are included to gather as much information as possible and closed questions require less time from the participants. Multi-source data also contributes strength to this approach.

Interviews were also used in this research, to establish a broader and more in depth understanding of the perceptions about the organisational environment in which the research was taking place. The training and development

managers provided their views about how the organisational climate may affect the participants' responses. This data provided some very important information about the structure of each organisation, and how current change initiatives were affecting staff.

The research design has included an investigation of the effects of confounding variables, which are perceived organisational support, liking and demographical factors. These factors are highlighted for statistical control when establishing which variables of interest in the research have influence over events.

The instruments used to measure all the constructs in this research were presented and described, with their reliability coefficients provided. The data gathering and analytical procedure were also detailed, in order to introduce how analysis was conducted. The results of this analysis are presented in the next chapter.

Chapter 7

Results

This chapter presents the results from the survey data in three main sections. First, the data is described in detail, presenting the demographic profile of the sample and for each hospital. Here, results are presented for two sets of survey data: complete data for all respondents; and data for which there was a matched dyadic (employee and supervisor) pair. Although all subsequent analysis was conducted on matched pairs, it was important to establish that data lost from surveys not returned with a paired responder, was represented in the dyadic data set. A comparison of this data established that there were no significant differences. Demographic characteristics such as age, gender, education, and job status are discussed. Also, a profile of participants' roles are presented, involving the identification of those in clinical and administrative roles, and those employees who themselves, had management responsibilities.

Second, ratings for each study variable are presented. All data were presented for the whole dyadic sample, and by job type, and relationship type (whether they are in a manager-manger leader-member exchange or

a subordinate-manager leader-member exchange). Again, this examination revealed no evidence that these variables affected ratings of the study variables. Means, standard deviations, and paired t-tests between supervisor and employee ratings of multi-rated variables are presented.

Finally, the results of the regression analyses used to test the research hypotheses are presented. This examines the relationships between variables based on the ratings of dyads. Supervisor ratings of variables were used, except in the case of variables that were only employee rated (organisational commitment, job satisfaction, perceived organisational support, and stress). The exception to this was performance, for which a supervisory rating was used in analysis. Supervisor ratings of emotional intelligence and liking were used. The rating of LMX depended on the particular equation, which is explained at each stage of the regression analysis. Each hypothesis is taken in turn, in accordance with the structure presented in Chapter Five, where the hypotheses are examined.

7.1 Data description

7.1.1 Demographic variables

The analysis used dyad (i.e., employee and supervisor) data for which there was a complete set of matched pairs, as the hypotheses involved constructs based on interactions between employees and supervisors. However, descriptive statistics are presented here for four main groups: all responding employees, all responding supervisors, employees who responded as members of a dyad, and supervisors who responded as members of a dyad. Each of these

was examined to determine any demographic differences between, firstly, the total sample of individual respondents (those who did not have a partner respondent) and the sample of dyad members for employees and supervisors; secondly, between the five hospitals; and thirdly, between different types of employee-supervisor relationships and jobs.

Surveys were distributed to 200 employees and supervisors in each hospital, except Hospital 5, where a small team participated, and 12 employee and supervisor surveys were distributed. Of 815 questionnaires administered, 126 employees responded (15.5% response rate): 27.5% from Hospital 1, 21.7% from Hospital 2, 33.3% from Hospital 3, and 9 of 12 (75%) from hospital 5. Hospital 4 represented the smallest number of respondents, with 9 replies out of 200. The response rates are thought to be slightly higher than response rates to NHS administered surveys generally. It is not clear whether any bias was introduced by the non-rersponders. It is possible that participants were already more satisfied with their relationships, therefore are more inclined to expose their perceptions about issues that this research raises.

Table 7.1 presents a profile of the descriptive statistics for the total sample of all employees. Of all employees, 88% were female, over 75% were full time permanent staff, and most of the rest were part time permanent. Nearly 42% of employees were qualified with a bachelor or higher degree. However, 80% of the individuals with other qualifications had a clinical role, therefore suggesting that their qualifications were likely of a clinical nature. Ninety six percent of employees belonged to the 'white' ethnic group.

Table 7.2 provides descriptive data for all responding supervisors. Of the total number of 122 supervisors who replied, responses were relatively evenly

distributed across Hospitals 1, 2, and 3, with smaller proportions for Hospitals 4 and 5. The majority of supervisors were full time permanent, female, described themselves as white, and over 30 years old. Only one individual was over 60 years old. The supervisor sample was therefore slightly older than the employee sample. Generally, supervisors were more highly qualified with 25% possessing higher degrees. compared with 16% of employees. Of those with bachelor degrees, 35% were supervisors, compared with 26% employees.

There were 122 complete employee-supervisor dyads the descriptive detail for which is presented in Tables 7.3 and 7.4 for employees and supervisors, respectively. The distribution of responses is the same for employees as supervisors across hospitals and the characteristics of employees and supervisors were almost identical to those described in Tables 7.1 and 7.2.

Hospitals 1 and 5 had younger employees than the other hospitals. Although most employees over all hospitals were full time (77%), Hospitals 2 and 3 had significantly more part time employees. It is possible, as these two settings had more employees over 50 years old than the other hospitals, that this explains why Hospitals 2 and 3 also had more part time staff. Hospital 4 had a higher percentage of employees with Bachelor degrees (42%), although this only represents six individuals, so is not likely to influence results. Of those employees who responded as members of a dyad, 23% were also categorised from their job titles to have management roles (i.e., they had individuals report to them). The majority were categorised as non-management or non-supervisory therefore the type of dyadic relationship was one of manager to non-manager. Both dyad tables have exactly the same statistics for this.

as they relate to a relationship characteristic, not an individual one. Nearly 75% of employees were in clinical roles, as opposed to administrative roles, while 84% of supervisors reported being in a clinical role. This suggests a 9% difference in role types between employees and supervisors. In Hospital 4, for example, there were only four employees in clinical roles, compared with seven supervisors. One dyad in each of Hospitals 1 and 3 had mixed roles, that is, one member in a clinical role, and one in an administrative role. Also, in Hospital 5, 100% of the roles from the whole sample were clinical. This is expected, due to the strong nursing content of their job, described in Chapter 6, Section 6.3.

7.1.2 Description of study variables

The main employee outcome variables of interest were employee perceptions of job-related stress, employee attitudes (job satisfaction and organisational commitment) and employee performance. The predictor variables of interest were the employees' emotional intelligence (EI), the quality of the leader-member exchange (LMX) and the employees' perceived social support. Also measured, as control variables in subsequent multivariate analysis, were the employees' perceived organisational support, liking between supervisor and employee, and the duration of the supervisory relationship under examination.

An important methodological feature of this study was the use of multi-source data - that is, ratings from both the supervisor and employee of certain measures - in order to prevent common-method bias in the testing of some hypotheses. This applied to the measurement of employee performance, dyad

LMX and employee EI. Table 7.5 shows the ratings obtained from either or both employees and supervisors for each of the outcome, predictor and control variables, and lists these for both the matched dyad dataset and the full dataset. Paired t-tests (shown only for the dyad dataset) were used to test the significance of the differences between employee and supervisor ratings for the relevant variables. These indicated that there were no significant differences between ratings for any variables, suggesting a high level of agreement between the employees and their supervisors. This shows that these were homogeneous measures of each variable, and provides further evidence for the validity and reliablity of the scales.

Although the overall ratings for each of the study variables are provided in Table 7.5, it was also important to examine the ratings across hospitals and different types of employee-supervisor relationships and job types in order to understand the nature of this dataset better. From Tables 7.3 and 7.4 it was evident that some dyads were made up of two managers rather than a manager and subordinate, and that employees and supervisors described their jobs as either clinical or administrative. The data, therefore, was examined for any variations in the main study variables across hospitals, dyad types and job types. Table 7.6 presents the means and standard deviations for each study variable by hospital. Tables 7.7 and 7.8 do the same by relationship type and job type, respectively, although it is clear from these tables that only 24 of the dyads could be categorised as manager-manager relationships, and 28 employees described their jobs as administrative rather than clinical. This data is used to further describe each set of variables.

Stress

The measure of employee perceptions of stress used in this study, as described in Chapter Six. Section 6.6.1. is composed of three general scales and six subscales. These are: an overall job stress index (JS-X), overall job stress severity (JS-S), overall job stress frequency (JS-F), an overall job pressure index (JP-X), job pressure severity (JP-S), job pressure frequency (JP-F), an overall lack of organizational support index (LS-X), lack of organizational support severity (LS-S), and lack of organizational support frequency (LS-F). Each of these was compared across the five hospitals, across types of employee-supervisor relationship and across employee job types.

As shown in Table 7.6, oneway analysis of variance of the differences between hospital means was not significant at the 95% level of confidence for any of the stress scales. Thus, all hospitals seemed to indicate comparable levels of stress. Overall, stress severity, which was rated around the mid-point of the scale at 4.29, was higher than stress frequency (mean = 3.32) for all hospitals ($t = 5.73$, $p<0.000$). Expressed in terms of proportions, 39% of employees rated their level of stress severity above the mid-point of 5 on a 9 point scale, and 22% rated the frequency above the mid-point of 5 on the same scale.

Employees who themselves had a management role and whose dyad relationship could be categorised as management-to-management experienced stress significantly more frequently than those whose relationship was one of subordinate-to-manager (JS-F M = 4.35 compared with 3.28, as seen in Table 7.7). This also was evident in the two subscales, JP-F and LS-F, which were used to make up the overall measure of job stress frequency. Job type,

though. did not have any effect on the experience of stress as can be seen from the lack of any statistically significant differences between clinical and administrative roles (see Table 7.8).

Performance

Employee performance, whether self-rated or supervisory rating, was generally rated above the midpoint of the five-point scale provided. The mean employee self-rating was 3.77 and the mean supervisory rating was 3.92 (see Table 7.5). As noted above, over all hospitals, employee and supervisor mean ratings of performance did not differ significantly, and hence were essentially the same. Similarly, there were no differences in the performance levels by relationship type or job type, whether rated by the employee themselves or the supervisor (see Tables 7.7 and 7.8).

When broken down by hospital (see Table 7.6), it is evident that Hospital 5's supervisory rating of performance was lower than the equivalent employee rating, while in the other hospitals the employee rating tended to be higher or comparable. However, given the small number of dyads representing Hospital 5 (n=9), these differences cannot be established statistically.

Organisational commitment

The overall mean rating for organisational commitment was 4.32 which is at the midpoint of the eight point scale from 0-7. This suggests a low to moderate level of employee commitment. Comparisons across hospitals indicate Hospital 1 had the highest and Hospital 3 the lowest levels of commitment. The oneway analysis of variance for these differences, based only on Hospi-

tals 1-4 because of the low numbers in Hospital 5, showed that this was not statistically significant (see Table 7.6). Hospital 1 had the highest number of staff in leader-member dyads over five years old, but the nature of the nursing care in this unit was only provided by a few hospitals in Scotland. This is likely to increase the affective attachment with this unit and/or organisation and hence desire to stay in the organisation. Organisational commitment was stable across manager-subordinate and manager-manager relationships, as shown by the lack of statistical differences in Tables 7.7 and 7.8.

Job satisfaction

Ratings of job satisfaction were generally around the midpoint of the five-point scale with an overall mean of 3.39 in the dyad dataset (see Table 7.5). Overall, 76% said they were satisfied, and 14% said they were very or extremely satisfied. There were no statistically significant differences in these ratings across hospitals, relationship type, or employee job type.

LMX

The quality of the LMX relationship was generally high, with an average rating above the midpoint of the five-point scale, both for the employee rating (M = 3.72) and the supervisor rating (M = 3.83), although the difference between employee and supervisor ratings was not statistically significant (t = 1.108; see Table 7.5). The ratings were not correlated (r = .06) which suggests that the distribution is different between employees and supervisors. This, and the fact that both means were clustered around the mid-point, illustrates that there was a restriction in the range of the ratings; that is, both dyad

members reponded similarly within their groups. Hospital 5 is the only setting where employees rated LMX more highly than supervisors, similar to the ratings of performance in the same hospital. Supervisor ratings in this hospital were the lowest of all LMX ratings (M = 3.20), but once again, statistical examination of this was not possible because of the low number of participants from Hospital 5.

Social support

Three measures of social support are shown in Tables 7.5 - 7.8: an overall composite measure of social support and the two subdimensions of social support from friends and family and work-related social support. Overall, the mean rating for social support was 3.11, which is above the midpoint of the five point scale from 0-4. Support from friends and family was rated slightly higher than work-related support in all cases, and in Hospital 1 this difference was also statistically significant. There were no significant differences. however. in any ratings of social support across hospitals, relationship types or job type.

Emotional intelligence

Using the 95% confidence level to test the differences between means, Table 7.5 shows no significant differences between employee and supervisor ratings of EI. suggesting that these are comparable. The mean employee rating was 3.85 and the mean supervisor rating 3.84, which is just above the midpoint of the six-point scale on which EI items were measured.

There were no differences across hospitals in employee ratings of their own

EI. Based on Hospitals 1-4. supervisor ratings of employee EI were found to be the same ($F = 1.96$. df = 4,75). These patterns remained unchanged by job type. although employee ratings in the manager-to-manager relationships seemed to be significantly higher than in the manager-to-subordinate relationships (see Table 7.7). This difference may be explained by previous evidence suggesting that the higher an individual is in an organisation hierarchy. the more likely it is that they will report self-inflated perceptions of self-reports of EI.

Control variables

Ratings of perceived organisational support and liking did not differ significantly across hospitals. relationship type or job type. Perceived organisational support was rated around the midpoint of the seven-point scale (M = 4.27) and liking generally high on the five-point scale (M = 3.93). The length of time supervised by the current supervisor was an important variable. The re-organisation of hospital staff resulting from health board mergers. described in Chapter 6. indicated that employees may have responded to the surveys since a change in their supervision. If dyadic relationships were young. respondents may not be positioned to be reliable raters of LMX. From supervisor replies about length of time working with the employee, most were evenly distributed from one to over 20 years, and supervisors perceived they had supervised for longer than the employees reported being supervised (M = 48.33 and 57 respectively). However. no significant differences were demonstrated by the t-test of this difference. Over half of all dyads in Hospital 2 had been established for 5 years or more. and had the highest mean

for relationship tenure (M = 86). However, in Hospital 5, a small specialist nursing team, all employee-supervisor relationships had been in existence for less than five years, and two dyads, for less than one year (M = 20.3).

7.1.3 Summary of sample description

Overall, stress severity was higher than stress frequency, with 39% of employees rating their stress severity above the mid-point. However, those employees with management roles experienced stress significantly more frequently. For the other outcomes, employees had high levels of performance and job satisfaction, but organisational commitment was rated as being low to moderate. Relationships and support were generally considered of a good qualilty, with LMX, liking, and social support, rated highly. Employees rated social support from friends and family slightly higher. Percieved organisational support was slightly higher than the mid-point, as was emotional intelligence.

7.2 Tests of Research Hypotheses

7.2.1 Overview

This section examines the relationships among variables with respect to the hypotheses specified in Chapter 5 and summarised in Figures 7.1 to 7.3. The main dependent variables of interest were the employee work outcomes of stress (both severity and frequency dimensions), supervisor rated performance, job satisfaction (including measures of extrinsic and intrinsic satisfaction) and organisational commitment. The primary hypothesised independent variables were emotional intelligence (EI) and the quality of leader-

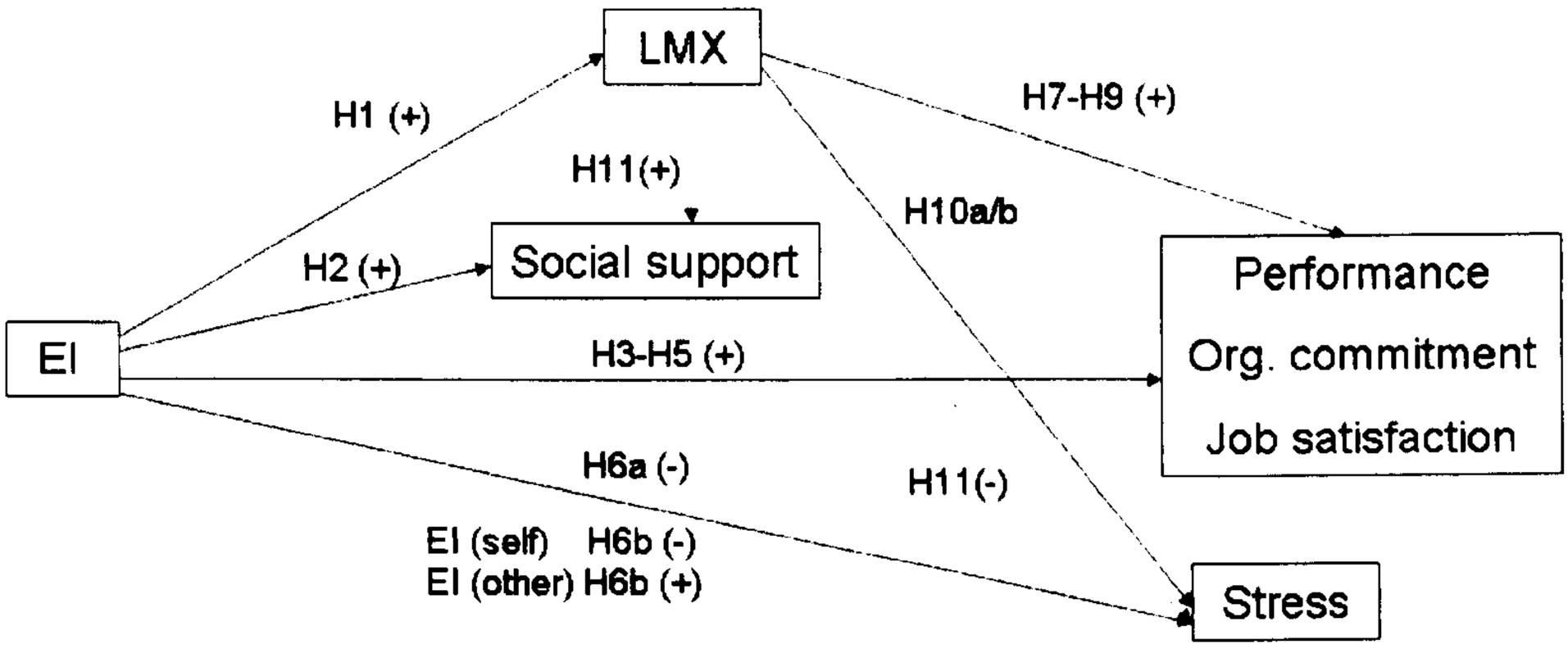

Figure 7.1: Hypothesised Model (Hypotheses 1-12)

member exchange (LMX). LMX was also a hypothesised mediating variable, as was social support, as well as a dependent variable thought to be influenced by employee EI. In addition, the moderating effects of EI on the relationship between LMX and employee outcomes also were considered.

For ease of presentation, these hypotheses are logically grouped here into five sets of analysis: the direct outcomes of EI; the direct outcomes of LMX; the mediating effects of social support; the mediating effects of LMX; and the effects of the interaction between EI and LMX. The main analytical technique used was stepwise multiple regression for the tests of direct outcomes, and hierarchical regression for the tests of mediation and moderation. In most of the hypothesis tests, supervisor ratings were used as measures of EI, LMX and performance, and employee self-report measures were used for stress, job satisfaction, and organisational commitment. Only where the hypotheses

being tested were for the mediating effect of social support between LMX and employee outcomes were employee LMX ratings used, as the hypothesised relationships were all between employee-level perceptions. The sources of ratings in each hypothesis are summarised in Table 7.9.

Several control variables were included in the regression analyses. As discussed in Chapter 6, the duration of the employee-supervisor relationship is thought to have an effect on the development and quality of leader-member relationships. The measure of relationship tenure was based on the supervisor questionnaire for consistency. Similarly, liking, also as rated by the supervisor, was controlled, as this also affects the quality of the leader-member relationship. The employee's rating of perceived organisational support was included as a control variable because it was important to differentiate employees' perceptions of support from their leader, as distinct from their experience of support resulting from the organisation at large.

Although age has been shown to influence LMX relationships and employee attitudes (see Chapter 6, Section 6.6.10), the descriptive statistics described earlier in this chapter showed that employees were clustered around the ages of 30-49, with a significantly smaller number of respondents outside this range. Age, therefore, could not be included as a control variable because of the relatively narrow spread in this sample. Similarly, gender was not controlled as 75% of participants were female.

Bivariate correlations between the control and main dependent variables (see Table 7.10) confirm the significant relationship between the supervisors' rating of liking and performance ($r=.56$, $p<.001$), but show no relationship between liking and employee job satisfaction, organisational commitment or

stress. Perceived organisational support (POS) was strongly positively related to organisational commitment (r=.70, p<.001) and all measures of job satisfaction (the coefficient for the composite measure was r=.55, p<.001) and negatively related to all measures of stress (see Table 7.11). There were no significant effects on any of the variables, of tenure. The strong relationships between the control variables and dependent variables confirm the importance of controlling for these factors in order to isolate the effects of the independent variables of interest (i.e., EI, LMX and social support).

Table 7.11 describes the intercorrelations between the control and independent variables, that is, the full set of predictor variables in this study. This shows significant positive relationships between employee rated liking and work-based social support (r = .71, p<.001) and supervisor rated liking and supervisor rated EI (r = .48 p< .01). There are also significant positive relationships between perceived organisational support and LMX, and perceived organisational support and work-based social support (r = .20 p< .01, r = .44 p< .01 respectively). Relationship tenure has no significant relationship with any of the independent variables. Perceived organisational support is positively related to LMX (r=.20, p<.01), work-related social support (r=.44, p<.01), and liking (r=.23, p<.01). Liking, similarly, is positively related to supervisor-rated LMX (r=67, p<.001) and all measures of supervisor-rated EI (for the EI composite, r=48, p<.001).

Finally, an examination of the intercorrelations between the dependent and independent variables (Table 7.12) showed that EI has a strong positive relationship with performance. LMX has a negative relationship with all stress dimensions, although the frequency of job pressure has the strongest

relationship (r = -.21, p<.01). Work-related social support has a significant negative relationship with all the stress dimensions, and a significant positive relationship with performance, job satisfaction, and organisational commitment.

Although many of the independent variables were moderately to highly correlated, these did not satisfy the criterion for multicollinearity of r>.80 suggested in various sources (e.g., Lewis-Beck, 1980). The largest intercorrelation, excluding those between the sub-dimensions of EI and stress which we would expect to be high, is .67 (between LMX and liking). This shows that multicollinearity is not an issue in these regression models as the independent variables are not more highly correlated with other predictors than with the dependent variables.

7.2.2 The direct effects of EI (H1-H6)

Hypotheses 1 to 6 relate to the direct effects of EI, either on the outcome variables or on the mediating variables of LMX and social support. The results for these hypotheses are represented by Equations 1 and 2 in Tables 7.13 and 7.14. These equations include only the effects of EI and the control variables on each dependent variable. From Table 7.13, it can be seen that supervisor ratings of employee EI were positively related with supervisor ratings of LMX (β= .351, p<.001) when controlling for liking, relationship tenure, and perceived organisational support. This equation also had reasonable goodness of fit (R^2 =.503) and explained variation in LMX well beyond the effects of the controlled variables (F Δ R^2 = 22.16 p<.001). This provided support for Hypothesis 1: *Emotional intelligence overall is positively related to LMX*

quality.

Work-related social support was regressed on EI and the control variables as a test of Hypothesis 2 (*H2: Emotional intelligence overall is positively related to employee ratings of social support from leader and coworkers*). EI played no role in the prediction of social support, as suggested earlier by the bivariate correlations, thus, Hypothesis 2 was not supported.

With respect to Hypothesis 3 (*H3: Emotional intelligence is positively related to supervisor ratings of performance*). Equation 1 in Table 7.13 for the dependent variable of performance shows a positive beta coefficient for EI (β= .376) suggesting that the higher the supervisor's rating of their employee's EI the higher their rating of performance. It may be that supervisors rate both these variables high because of a third related factor, such as their liking of the individual. This effect can be seen by the high correlation between supervisor liking and the supervisor rating of performance in Table 7.10 (r=.56) and with the supervisor rating of EI in Table 7.11 (r=.48). Liking may explain both the ratings of EI and performance, and indeed liking did also have a positive beta coefficient in Equation 1 for the prediction of performance (β= .351, see Appendix 6). However, the effects of EI surpassed the effects of the control variables, including liking, as shown by the ΔR^2 of .11 (F ΔR^2 = 20.354 p<.001), thus providing support for the contribution of EI to the supervisor's rating of performance and for Hypothesis 3. Further regressions breaking down EI into its subdimensions are also shown in Table 7.13. These show that only the relationship management dimension of EI was positively related to the supervisor's rating of performance (β= .297).

The regressions for the prediction of organisational commitment show no

effect of EI (β=.09) and the same is also the case in the prediction of job satisfaction (β=.04). Organisational commitment and job satisfaction are explained here by the effects of control variables (F = 30.129, p <.001 and F = 12.69, p <.001, respectively). Percieved organisational support explains most of the variance for commitment and satisfaction (β=.758 and β=0.498, respectively, see Appendix 6). Thus, neither Hypotheses 4 nor 5, that EI is positively related to organisational commitment and to job satisfaction, are supported.

The final predicted direct outcome of EI was stress (*H6a: Overall emotional intelligence is related to stress*). Equation 1 in Table 7.13 refers to four separate regression equations which regress the four unique stress measures relating to severity and frequency of the experiences (JP-S, JP-F, LS-S, LS-F) on EI and the control variables. Equation 1 shows that there were no significant relationships found between the EI composite and any of the stress dependent variables, thus providing no support for Hypothesis 6a.

Breaking the EI measure into its sub-dimensions, two further hypotheses relating to the relationship with stress were examined - H6b: *The self-orientated dimensions of emotional intelligence are negatively related to stress* and H6c: *The other-oriented dimensions of emotional intelligence are positively related to stress.* EI (self-management) was found to be negatively related to all four measures of stress, but the only significant relationship was that for the prediction of lack of support frequency (β = -.343, p<.10). Therefore, individuals with high self-management competency perceive lack of organisation support less frequently than those with low self-management competency.

Similarly, although the regression results demonstrate that the other-oriented EI dimension of relationship management and stress are positively related, the only significant coefficient is in the prediction of job pressure frequency (β = .291, p<.10). This implies that employees with high relationship management competency experience job pressure more frequently. However, given the non-significant F test for the change in R^2 when EI is added to these equations, percieved orgasiational support seems to be accounting for most of the explained variance in stress severity and frequency (JP-S = β=-.328, JP-F = β=-.257, LS-S = β=-.336, LS-F = β=-.368, see Equation 2, Appendix 6). Thus, H6b and H6c are not fully supported.

7.2.3 The direct effects of LMX (H7-H10)

Hypotheses 7-10 predict that a better quality LMX relationship will be associated with higher supervisor ratings of performance (H7), higher employee organisational commitment (H8), higher employee job satisfaction (H9), and lower employee stress (H10a). Hypothesis 10b examines the possibility of a non-linear relationship between LMX and stress. Equation 3a in Table 7.15 provides the results for regressions testing the relationships between LMX and social support, performance, organisational commitment, and job satisfaction. Equation 3b and 3c in Table 7.16 provides the results of tests for the four stress dimensions by regressing each dependent variable on LMX along with the control variables (perceived organisational support, liking and relationship tenure).

These regressions demonstrate that LMX adds significant explanatory value to the prediction of performance (β =.452). The contribution of LMX

to understanding variance in performance is significant in addition to the control variables (F(1,111) =21.57, p<.001). This provides support for Hypothesis 7 *(H7:LMX quality is positively related to supervisor ratings of performance).*

However, the quality of the LMX relationship (as rated by the supervisor) is not a significant predictor of either organisational commitment or job satisfaction, indicating no support for either Hypothesis 8 or 9.

With regard to the relationship between LMX and stress, presented in Table 7.17, supervisor ratings of LMX were significantly inversely related to employees' perceptions of job pressure frequency (β =-.225) but not to any of the other stress dependent variables. The employee rating of LMX (as shown in Table 7.17) indicated a more pronounced relationship, with inverse relationships between LMX and stress severity variables. Thus, when the employees perceived a better quality LMX they were less likely to experience severe job pressure and lack of organisational support, although the frequency with which they felt pressured was not affected by LMX quality. Hypothesis 10a, therefore, regarding a linear relationship between LMX and stress, was partially supported using employees' perceptions of LMX quality.

Further hierarchical regressions of stress on employee ratings of LMX were performed in order to examine Hypothesis 10b. These are presented in Table 7.20. Step 1 refers to the linear relationship that was established between employee ratings of LMX and stress. Given that the frequency of stress was unaffected linearly by LMX in Step 1, a squared LMX term was added to test a curvilinear relationship (Step 2). Only job pressure frequency was significantly affected by LMX^2, (β =-1.551, p<.10). This suggests that

the relationship between LMX and job pressure frequency is curvilinear. At this stage, all stress variables were affected by either the linear LMX term or LMX^2, except for lack of support frequency. Finally, LMX was cubed, to test for a more complex curvilinear relationship, and added in Step 3. Job pressure severity was the only stress dimension affected by LMX^3 (β =8.721, p<.05). The F test for the change in R^2 (5.184, p<.05) was significant, meaning that the cubed LMX term explained more variance of job pressure severity beyond that accounted for by a linear or curvilinear relationship. Taken together, these regressions support a non-linear relationship between LMX and stress as predicted by Hypothesis 10b when job pressure frequency is used as the measure of stress. Appendix 7 presents a scatterplot to demonstrate the non-linear relationship.

To confirm non-linearity, scatterplots of all the stress dimensions were examined. These depicted any violations in the basic assumptions related to regression analysis. The most important assumption is that of normal distribution and linearity. This assumes that data has equal variance and is dispersed evenly. Scatterplots from this dataset indicated that the distribution was not normal, and specifically, showed signs of hetroscedasticity. To test the normality of the residuals, histograms and normal probability plots of the residuals established normal distribution (a bell-shaped curve), and that data did not deviate from the normal distribution line. This confirmed that the data was normally distributed (see Appendix 8).

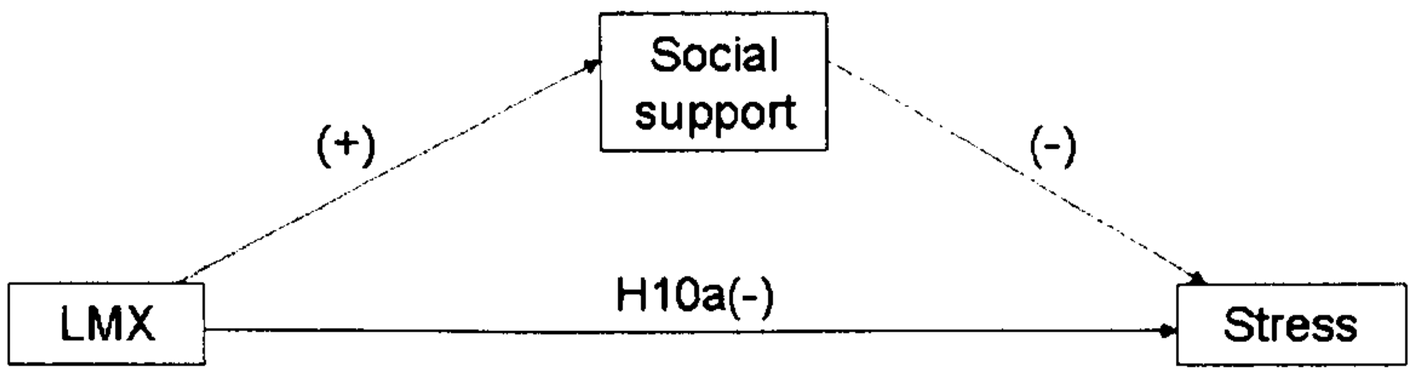

Figure 7.2: Social support as a mediator of the relationship between LMX and stress (Hypothesis 11)

7.2.4 The mediating effects of social support (H11)

Hypothesis 11 (*The relationship between LMX and stress is mediated by social support provided by the leader*) attempts to provide an explanation for why a high quality LMX relationship would have a diminishing effect on employee perceived stress based on the perception of greater social support in the workplace. This is illustrated in Figure 7.2. In this account, social support is presumed to be a by-product of the positive employee-supervisor relationship and hence accounts for the employees' reduced stress. It is more logical, therefore, to use the employee, rather than supervisory, rating of LMX quality as it is this, specifically, which is the focus of explanation - how the employee perceives the relationship and the support provided. Therefore, for the test of Hypothesis 11, employee ratings of LMX were used.

In order to test Hypothesis 11 at least four conditions must be met: there should be a direct relationship between LMX and stress; there should be a direct relationship between LMX and social support; there should be a direct relationship between social support and stress; and finally, there should be

significant incremental variance after the introduction of social support with a decline in the coefficient for LMX.

Table 7.18 provides the regression equations necessary for testing whether social support mediates the relationship between employee ratings of LMX and stress. The regressions represented by Equation 4 show weak or no relationship between employee ratings of LMX and stress, with only a significant inverse relationship between LMX and the severity of perceived lack of organisational support (β =-.293). The regression of social support on LMX shows a significant coefficient for employee rated LMX (β =.608). Furthermore, Equation 5 shows that social support was negatively related to lack of organisation support severity and frequency (β =-.195 and β =-.238). This fulfils the first three conditions for the test of mediation, but only for the variable representing severity of perceived lack of organisation support.

Equation 6 includes all relevant variables, namely employee rated LMX, social support and the control variables. The mediating effect of social support was examined by the change in R^2 from Equation 4 and the value of the beta coefficients for LMX and social support. Focusing only on the equation for severity of lack of organisation support (as this was the only one for which the mediation conditions were satisfied), the coefficient for LMX declined and became non-significant; however, the incremental variance represented by the change in R^2 was not statistically significant (F(5,76) =.974). Thus, Hypothesis 11 was not supported.

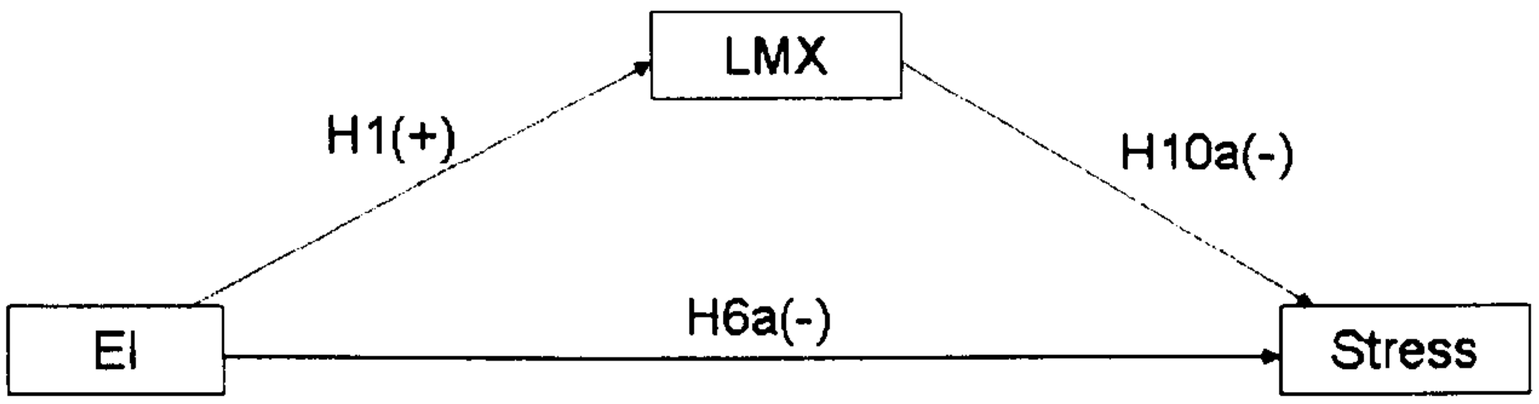

Figure 7.3: . LMX as a mediator of the relationship between EI and stress (Hypothesis 12)

7.2.5 The mediating effects of LMX (H12)

Hypothesis 12 (*The relationship between EI and stress is mediated by LMX*) required the following conditions to be met: there should be a direct relationship between EI and LMX; between EI and stress; between LMX and stress; and significant incremental variance when LMX is introduced into the equation with EI. The first three relationships have already been shown in tests of previous hypotheses, and summarised in Figure 7.3. EI was positively related to LMX (see Table 7.13) and LMX was positively related to stress (see Table 7.17); however, there was no relationship between overall EI and stress (see Table 7.14). Only when broken down into sub-dimensions was EI (self-management) inversely related to perceived lack of support frequency, and EI (relationship management) positively related to job pressure frequency (see Table 7.14). Equation 7 in Table 7.18, therefore, shows the change in R^2 when LMX was added to the equation with the EI subdimensions only for the prediction of the two frequency measures of stress. Only for job pressure frequency can it be shown that LMX adds significantly to the prediction over

and above the EI dimensions. However, as the coefficient for EI (relationship management) increased from .291 to .351, this cannot be interpreted as a mediation effect. The interaction between EI and LMX is explored further below. In the case of lack of organisation support frequency, the addition of LMX did not result in a significant change in R^2 . Thus, Hypothesis 12 was not supported.

7.2.6 The interaction between EI and LMX (H13)

Hypothesis 13 states: *employee experiences of stress will be an interactive function of employee emotional intelligence (EI) and the quality of the LMX relationship.* Following Aiken and West (1991), the nature of the interaction between EI and LMX (i.e., whether LMX affected stress differently for high and low EI employees) was examined by testing the simple slopes for respondents with higher EI (i.e., 1 SD above the mean) and respondents with lower EI (i.e., 1 SD below the mean). Table 7.20 presents these equations. Interaction was not tested with lack of support frequency, as LMX was not related to this dimension in any form. The interaction term (EIxLMX) was added only to regression equations where LMX was shown to have a significant main effect. Therefore, to test this interaction on changes to job pressure severity, the interaction was added to Step 4 ($EIxLMX^3$); for job pressure frequency, it was added to Step 2 ($EIxLMX^2$); and for lack of support severity, the interaction was tested with Step 1 (the interaction between EI and the linear LMX term). None of the interaction terms (Step 4 in Table 7.20) were significant. Therefore, Hypothesis 13 was not supported.

The influence of EI on the LMX-stress relationship can be understood

visually by examining the slopes suggested by Aiken and West (1991), even though the regression coefficients were not significant. Figure 7.4 illustrates the interaction of EI and LMX on job pressure severity. This illustrates that there is little difference in how LMX impacts stress for individuals with high EI and low EI, as shown by the lack of significant incremental variance when the interaction term was added. Figure 7.5 demonstrates that those with low EI and high LMX are more reactive to stress, in that their stress reduces in a more pronounced way than those with high EI. This suggests that high EI individuals, although they experience lower stress with high LMX, also experience slightly lower stress when their LMX is lower, suggesting that EI assists in moderating the experience of stress in low quality leader-member exchanges, i.e., the negative relationship between LMX and stress is weaker for high EI people. Finally, Figure 7.6 illustrates that those with high emotional intelligence experience a greater difference in lack of organisational support when LMX is low, than those with low EI. Therefore, as with JPF, the relationship between LMX and perceptions of lack of organsiational support is slightly weaker for high EI individuals. Lack of support frequency was not tested, as LMX was not a significant indicator of this stress dimension. Appendix 7 presents the residual plots describing the distribution of the stress dimentions.

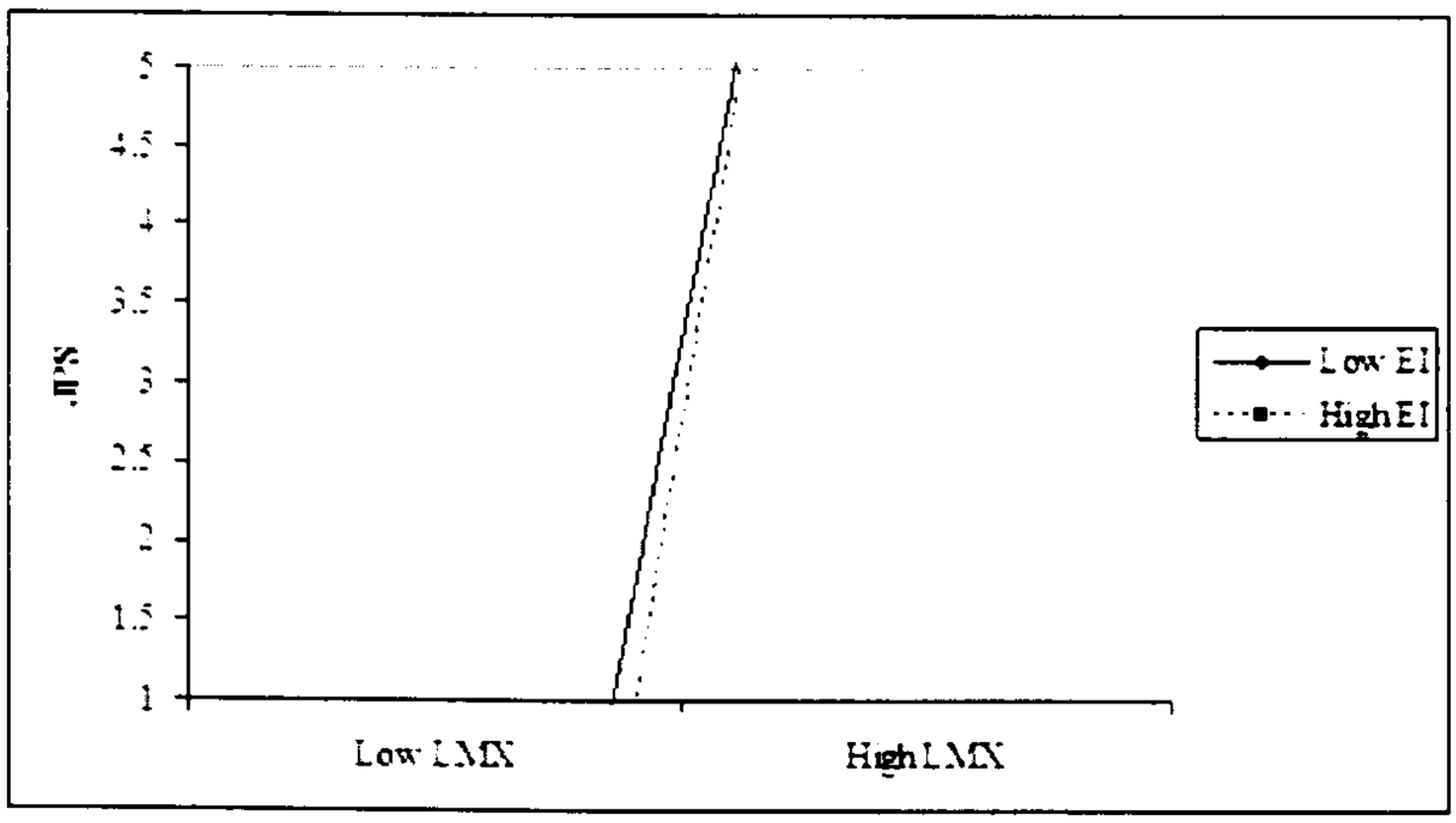

Figure 7.4: EIxLMX on job pressure severity.

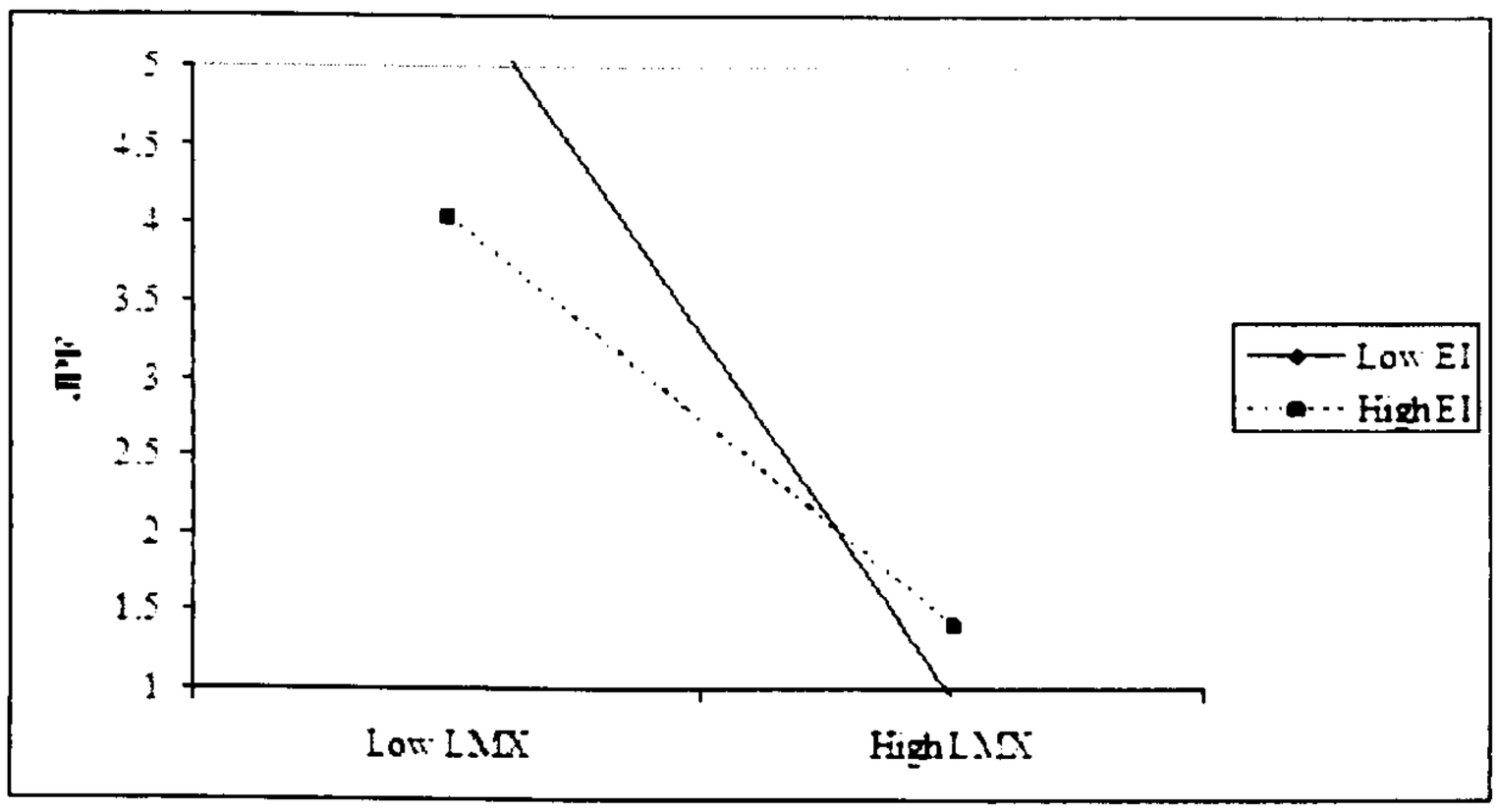

Figure 7.5: EIxLMX on job pressure frequency.

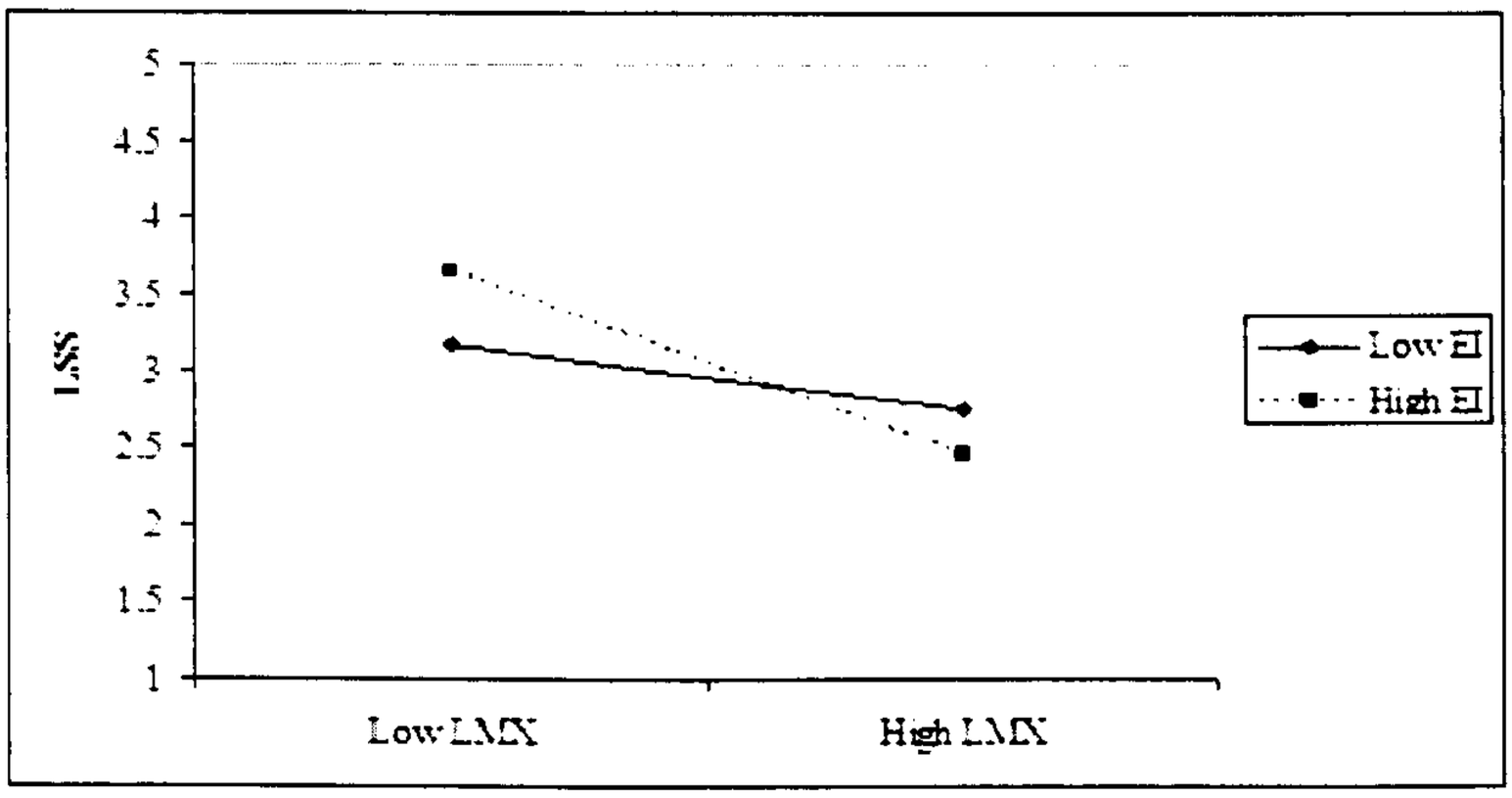

Figure 7.6: EIxLMX on lack of support severity.

7.3 Conclusions

This chapter has presented the results from the survey data, by an examination of the descriptive composition of the sample, a description of the ratings of each study variable, and finally, the results of analysis of the research hypotheses. Firstly, the descriptive data was analysed for congruence between the data set including all respondents, and the data set including only matched employee-supervisor data. No significant differences were found, illustrating that the dyad set was sufficient in representing those lost from not having a pair. Variables that were rated by both employees and supervisors were presented for each type of respondent, and paired t-tests established no significant differences in ratings. This provided justification for analysis using only one rater. For most analysis, supervisor ratings of multi-rated variables were used, unless otherwise specified. Data for each study variable was also compared for each hospital, and showed consistency across the different hospitals. These differences may be explained by qualitative data, and

will be discussed in the next chapter.

Testing the research hypotheses involved a series of multiple and hierarchical regression equations. The regressions established that some hypotheses were supported and some were not. Specifically, emotional intelligence (EI) was found to be related in the predicted way to leader-member exchange (LMX) and performance. It was not related to social support, organisational commitment, or job satisfaction. Hypotheses asserting a direct relationship between EI and stress, were only partially supported. Particularly, although these relationships were predicted in the correct way, only the EI dimensions of self-management and relationship-management were significant, on some dimensions of stress.

LMX was found to be related to performance, supporting those hypotheses. However, regressions did not confirm hypothesised relationships between organisational commitment, job satisfaction, or social support. No direct relationship between EI and stress was found, therefore the mediating role of LMX could not be supported. However, as hypothesised, the relationship between LMX and stress is complex, and not necessarily linear. Although results did not confirm a moderating effect of EI on the LMX-stress relationship, non-linearity was confirmed. This is a specific contribution of this research project that is explored in more detail in the next chapter. No explanation for non-linearity is provided by the role of variables included in the survey. Therefore, other sources of explanation are examined to assess the experience of stress in this sample. This, and a discussion of all the other findings from this analysis, is the objective of the next chapter.

		Hospital 1		*Hospital 2*		*Hospital 3*		*Hospital 4*		*Hospital 5*		Total	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender	Male	3	9	1	4	5	12	4	27	2	22	**15**	**12**
	Female	30	91	25	96	38	89	11	73	7	78	**111**	**88**
Age	20-24	7	21	2	8	3	7	0	0	0	0	**12**	**10**
	25-29	4	12	3	12	5	12	1	7	2	22	**15**	**12**
	30-39	14	42	5	20	10	23	2	13	6	67	**37**	**30**
	40-49	6	18	11	44	14	33	9	60	1	11	**41**	**33**
	50-59	2	6	3	12	10	23	3	20	0	0	**18**	**14**
	60 >	0	0	1	4	1	2	0	0	0	0	**2**	**2**
Employment status	FT perm	27	82	18	69	27	63	15	100	8	89	**95**	**75**
	FT temp	1	3	0	0	1	2	0	0	0	0	**2**	**2**
	PT perm	4	12	8	31	15	35	0	0	1	11	**28**	**22**
	PT temp	1	3	0	0	0	0	0	0	0	0	**1**	**1**
Qualification	Higher	6	18	5	20	7	17	1	7	1	11	**20**	**16**
	Bachelor	5	15	9	36	9	21	7	47	2	22	**32**	**26**
	Higher grades	12	36	9	36	15	36	5	33	2	22	**43**	**35**
	Standard grade A-C	6	18	1	4	5	12	1	7	3	33	**16**	**13**
	Standard grade D<	0	0	0	0	0	0	0	0	1	11	**1**	**1**
	None of above	4	12	1	4	6	14	1	7	0	0	**12**	**10**
	Total	**33**	**28**	**26**	**22**	**40**	**33**	**9**	**8**	**12**	**8**	**126**	**100**

Table 7.1: Employee sample characteristics (total sample).

		Hospital 1		*Hospital 2*		*Hospital 3*		*Hospital 4*		*Hospital 5*		Total	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender	Male	6	18	2	8	8	20	3	23	1	11	**20**	**17**
	Female	27	82	24	92	32	80	10	77	8	89	**101**	**84**
Age	20-24	2	6	2	8	0	0	1	8	0	0	**5**	**4**
	25-29	3	9	0	0	0	0	0	0	1	11	**4**	**3**
	30-39	8	24	6	23	16	40	2	15	5	56	**37**	**31**
	40-49	12	36	14	54	17	43	5	39	3	33	**51**	**42**
	50-59	8	24	4	15	7	18	4	31	0	0	**23**	**19**
	60 or more	0	0	0	0	0	0	1	8	0	0	**1**	**1**
Employment status	FT perm	33	100	24	92	33	85	11	79	6	67	**107**	**88**
	FT temp	0	0	0	0	1	3	0	0	0	0	**1**	**1**
	PT perm	0	0	2	8	4	10	3	21	2	22	**11**	**9**
	PT temp	0	0	0	0	0	0	0	0	1	11	**1**	**1**
Qualification	Higher	10	30	4	15	11	30	4	29	1	11	**30**	**25**
	Bachelor	7	21	9	35	15	41	4	29	6	67	**41**	**35**
	Higher grades	8	24	9	35	9	24	4	29	0	0	**30**	**25**
	Standard grade A-C	5	15	3	12	1	3	1	7	0	0	**10**	**8**
	Standard grade D<	1	100	0	0	0	0	0	0	0	0	**1**	**1**
	None of above	2	6	1	4	1	3	1	7	2	22	**7**	**6**
	Total	33	27	26	21	40	33	14	12	9	7	**122**	**100**

Table 7.2: Supervisor sample characteristics (total sample).

		Hospital 1		*Hospital 2*		*Hospital 3*		*Hospital 4*		*Hospital 5*		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Gender	Male	3	9	1	4	5	13	4	29	2	22	**15**	**12**
	Female	30	91	25	96	35	88	10	71	7	78	**107**	**88**
Age	20-24	7	21	2	8	3	8	0	0	0	0	**12**	**10**
	25-29	4	12	3	12	5	13	1	7	2	22	**15**	**12**
	30-39	14	42	5	20	10	25	2	14	6	67	**37**	**31**
	40-49	6	18	11	44	12	30	9	64	1	11	**39**	**32**
	50-59	2	6	3	12	9	23	2	14	0	0	**16**	**13**
	60 or more	0	0	1	4	1	3	0	0	0	0	**2**	**2**
Employment status	FT perm	27	82	18	69	25	63	14	100	8	89	**92**	**75**
	FT temp	1	3	0	0	1	3	0	0	0	0	**2**	**2**
	PT perm	4	12	8	31	14	35	0	0	1	11	**27**	**22**
	PT temp	1	3	0	0	0	0	0	0	0	0	**1**	**1**
Qualification	Higher	6	18	5	20	7	18	1	7	1	11	**20**	**17**
	Bachelor	5	15	9	36	7	18	6	43	2	22	**29**	**24**
	Higher grades	12	36	9	36	15	39	5	36	2	22	**43**	**36**
	Standard grade A-C	6	18	1	4	5	13	1	7	3	33	**16**	**13**
	Standard grade D<	0	0	0	0	0	0	0	0	1	11	**1**	**1**
	None of above	4	12	1	4	5	13	1	7	0	0	**11**	**9**
Relationship type	Non-manager	25	75	18	78	33	83	10	71	6	67	**82**	**77**
	Manager-manager	5	25	5	22	7	18	4	29	3	33	**24**	**23**
Job type	Administrative	6	30	4	15	8	20	10	71	0	0	**28**	**26**
	Clinical	14	70	22	85	32	80	4	29	9	100	**81**	**74**
	Total	33	27	26	21	40	33	14	12	9	7	**122**	**100**

Table 7.3: Employee characteristics (Dyad Dataset).

		Hospital 1		*Hospital 2*		*Hospital 3*		*Hospital 4*		*Hospital 5*		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Gender	Male	6	18	2	8	8	20	3	23	1	11	**20**	**17**
	Female	27	82	24	92	32	80	10	77	8	89	**101**	**84**
Age	20-24	2	6	2	8	0	0	1	8	0	0	**5**	**4**
	25-29	3	9	0	0	0	0	0	0	1	11	**4**	**3**
	30-39	8	24	6	23	16	40	2	15	5	56	**37**	**31**
	40-49	12	36	14	54	17	43	5	39	3	33	**51**	**42**
	50-59	8	24	4	15	7	18	4	31	0	0	**23**	**19**
	60 or more	0	0	0	0	0	0	1	8	0	0	**1**	**1**
Employment status	FT perm	33	100	24	92	33	85	11	79	6	67	**107**	**88**
	FT temp	0	0	0	0	1	3	0	0	0	0	**1**	**1**
	PT perm	0	0	2	8	4	10	3	21	2	22	**11**	**9**
	PT temp	0	0	0	0	0	0	0	0	1	11	**1**	**1**
Qualification	Higher	10	30	4	15	11	30	4	29	1	11	**30**	**25**
	Bachelor	7	21	9	35	15	41	4	29	6	67	**41**	**35**
	Higher grades	8	24	9	35	9	24	4	29	0	0	**30**	**25**
	Standard grade A-C	5	15	3	12	1	3	1	7	0	0	**10**	**8**
	Standard grade D<	1	3	0	0	0	0	0	0	0	0	**1**	**1**
	None of above	2	6	1	4	1	3	1	7	2	22	**7**	**6**
Relationship Type	Non-manager	25	75	18	78	33	83	10	71	6	67	**82**	**77**
	Manager-manager	5	25	5	22	7	18	4	29	3	33	**24**	**23**
Job Type	Administrative	8	35	1	4	9	23	7	50	0	0	**25**	**23**
	Clinical	15	65	22	96	31	78	7	50	9	100	**84**	77
	Total	33	27	26	21	40	33	14	12	9	7	**122**	**100**

Table 7.4: Supervisor characteristics (Dyad Dataset).

	Matched employee-supervisor dyads						*All data*			
	Employee (n = 122)		**Supervisor (n=122)**				**Employee (n=126)**		**Supervisor (n=146)**	
	M	**SD**	**M**	**SD**	**Paired t-Test**	**Sig. Level**	**M**	**SD**	**M**	**SD**
Stress										
JS-X	**3.80**	1.56					**3.82**	1.57		
JS-S	**4.29**	1.60					**4.30**	1.60		
JS-F	**3.32**	2.01					**3.33**	2.01		
JP-X	**4.01**	1.67					**4.03**	1.67		
JP-S	**4.35**	1.65					**4.37**	1.64		
JP-F	**3.67**	2.26					**3.67**	2.26		
LS-X	**3.59**	1.63					**3.62**	1.64		
LS-S	**4.22**	1.74					**4.24**	1.72		
LS-F	**2.96**	2.00					**2.99**	2.00		
Performance	**3.77**	.81	**3.92**	.75	-1.367	.174	**3.76**	.81	**3.92**	.76
Org commitment	**4.32**	.83					**4.32**	.83		
Job satisfaction	**2.60**	.61					**2.61**	.61		
LMX composite	**3.72**	.94	**3.83**	.64	-1.108	.270	**3.68**	.96	**3.85**	.63
Social support comp.	**3.11**	.65					**3.09**	.67		
Friends and family	**3.17**	.79					**3.16**	.80		
Work-related support	**3.08**	.79					**3.09**	.71		
EI composite	**3.85**	.38	**3.91**	.48	-1.108	.270	**3.84**	.38	**3.90**	.47
Self awareness	**3.91**	.44	**3.89**	.45	-1.065	.289	**3.89**	.44	**3.90**	.44
Self management	**3.83**	.38	**3.91**	.51	.346	.730	**3.82**	.38	**3.90**	.50
Social awareness	**4.04**	.43	**4.14**	.50	-1.480	.142	**4.04**	.42	**4.15**	.50
Relationship mgt.	**3.76**	.48	**3.88**	.57	-1.689	.094	**3.74**	.49	**3.79**	.57
POS	**4.27**	.89					**4.26**	.89		
Liking	**3.93**	1.02	**4.11**	.87	-1.506	.135	**3.91**	1.05		
Relationship tenure	**48.33**	53.30	**57.00**	68.37	1.843	.068				

Note. JS-X = job stress index, JS-S = job stress severity, JS-F = job stress frequency, JP-X = job pressure index, JP-S = job pressure severity, JP-F = job pressure frequency, LS-X = lack of organizational support index, LS-S = lack of organizational support severity, LS-F = lack of organizational support frequency POS = Perceived organizational support Stress is measured on a scale of 0-9. Performance, LMX, liking, and job satisfaction are measured on 5-point scales, from 1-5. Social support is measured on a scale from 0-4, EI, from 1-6, organisational commitment from 1-7, and perceived organisational support from 0-6

Table 7.5: Comparison between employee and supervisor ratings: matched employee-supervisor dyad dataset and total dataset.

Table 7.6: Means and standard deviations for paired dyad data within hospitals.

	Hospital 1		*Hospital 2*		*Hospital 3*		*Hospital 4*		*Hospital 5*			
	M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***F****	***Sig.***
Stress												
JS-X	**3.72**	1.55	**4.04**	1.73	**3.66**	1.43	**3.90**	1.81	**3.92**	1.61	.35	.788
JS-S	**4.28**	1.73	**4.54**	1.72	**4.11**	1.41	**4.53**	1.90	**4.82**	1.29	45	.717
JS-F	**3.14**	1.88	**3.55**	2.13	**3.22**	1.98	**3.27**	1.99	**3.82**	2.54	.22	.882
JP-X	**3.72**	1.70	**4.28**	1.83	**4.01**	1.58	**3.85**	1.63	**4.13**	1.79	.38	.767
JP-S	**4.28**	1.70	**4.65**	1.75	**4.27**	1.66	**4.34**	1.61	**4.26**	1.37	.34	.797
JP-F	**3.14**	2.24	**3.91**	2.28	**3.76**	2.23	**3.37**	2.11	**4.00**	2.95	.34	.797
LS-X	**3.59**	1.56	**3.81**	1.75	**3.31**	1.48	**3.94**	2.10	**3.71**	1.58	.72	.543
LS-S	**4.31**	1.87	**4.43**	1.85	**3.94**	1.43	**4.71**	2.25	**3.78**	1.31	.79	.503
LS-F	**2.86**	1.78	**3.19**	2.16	**2.68**	1.98	**3.18**	2.12	**3.64**	2.30	.43	.729
Perf. (emp)	**3.69**	.97	**3.96**	.81	**3.74**	.75	**3.64**	.745	**3.89**	.60	.63	.594
Perf. (sup)	**4.06**	.72	**3.88**	.77	**3.97**	.71	**3.93**	.730	**3.22**	.83	.63	.594
Org. commitment	**4.61**	.80	**4.45**	1.00	**4.83**	.86	**4.29**	.52	**4.26**	.32	3.30	.023
Job satisfaction	**2.57**	.50	**2.64**	.73	**2.54**	.67	**2.60**	.42	**2.93**	.69	1.3	.943
LMX (emp)	**3.79**	.78	**3.56**	.90	**3.86**	1.1	**3.63**	1.14	**3.42**	.81	.60	.618
LMX (sup)	**3.87**	.61	**3.89**	.62	**3.83**	.66	**4.02**	.28	**3.20**	.86	.33	.803
Social support	**3.23**	.58	**3.00**	.73	**3.12**	.74	**2.96**	.58	**3.19**	.49	.82	.486
SS friends/family	**3.30**	.79	**3.02**	.95	**3.10**	.81	**3.16**	.57	**3.47**	.48	.66	.580
SS work related	**3.19**	.70	**2.98**	.80	**3.13**	.87	**2.87**	.89	**3.84**	.56	.73	.537
EI (emp)	**3.87**	.33	**3.98**	.44	**3.83**	.35	**3.88**	.32	**3.85**	.38	.56	.639
Self-awareness	**3.98**	.45	**3.96**	.46	**3.92**	.41	**3.79**	.33	**3.61**	.52	.44	.725
Self-management	**3.84**	.37	**3.94**	.42	**3.81**	.34	**3.78**	.35	**3.63**	.47	.55	.651
Social awareness	**4.12**	.39	**4.07**	.48	**3.96**	.42	**4.10**	.38	**3.93**	.51	.45	.716
Relationship mgt	**3.73**	.39	**3.97**	.57	**3.73**	.45	**3.67**	.45	**3.60**	.58	1.37	.255
EI (sup)	**3.86**	.43	**4.14**	.44	**3.93**	.48	**3.85**	.32	**3.42**	.58	1.96	.125
Self-awareness	**3.86**	.38	**4.09**	.45	**3.90**	.47	**3.83**	.31	**3.60**	.61	2.10	.104
Self-management	**3.88**	.48	**4.17**	.49	**3.92**	.50	**3.82**	.33	**3.41**	.56	1.74	.164
Social awareness	**4.03**	.46	**4.32**	.42	**4.20**	.49	**4.16**	.49	**3.75**	.64	1.89	.135
Relationship mgt	**3.77**	.53	**4.03**	.53	**3.83**	.58	**3.74**	.40	**3.23**	.64	1.37	.256
POS	**4.41**	.92	**4.45**	.86	**4.23**	1.00	**4.13**	.73	**3.72**	.32	.69	.563
Liking (emp)	**4.11**	.94	**3.58**	1.13	**4.19**	.97	**3.67**	1.28	**3.63**	.42	2.40	.072
Liking (sup)	**4.88**	.92	**4.36**	.77	**4.86**	.91	**4.33**	.55	**3.44**	.90	96	412
Relationship tenure	**56.0**	94.2	**86.0**	74.4	**56.2**	45.5	**31.9**	24.7	**28.3**	14.8	2.03	.114

Note. *The ANOVA test was based only on Hospitals 1-4 because of insufficient sample size for Hospital 5 (n=9)
POS = Perceived organizational support. Stress is measured on a scale of 0-9. JS-X = job stress index, JS-S = job stress severity, JS-F = job stress frequency, JP-X = job pressure index, JP-S = job pressure severity, JP-F = job pressure frequency, LS-X = lack of organizational support index, LS-S = lack of organizational support severity, LS-F = lack of organizational support frequency.

Table 7.7: Means and standard deviations for dyad data by relationship type.

	Manager–subordinate (n=82)			*Manager–manager (n= 24)*				
	M	**SD**		**M**	**SD**		**t**	**Sig.**
Stress								
JS-X	**3.81**	1.55		**4.45**	1.38		1.80	.075
JS-S	**4.34**	1.56		**4.54**	1.51		.56	.579
JS-F	**3.28**	1.98		**4.35**	1.77		2.38	.019
JP-X	**4.03**	1.70		**4.76**	1.24		1.95	.054
JP-S	**4.44**	1.67		**4.56**	1.42		.33	.745
JP-F	**3.62**	2.25		**4.95**	1.79		2.67	.009
LS-X	**3.59**	1.57		**4.13**	1.73		1.44	.154
LS-S	**4.24**	1.63		**4.52**	1.82		1.80	.484
LS-F	**3.81**	1.55		**4.45**	1.38		1.80	.075
Performance (emp)	**3.84**	.72		**3.68**	.84		-.87	.388
Performance (sup)	**3.94**	.72		**3.83**	.92		-.58	.561
Org commitment	**4.26**	.78		**4.22**	1.00		-.24	.807
Job satisfaction	**2.66**	.63		**2.56**	.64		.64	.522
LMX (emp)	**3.70**	.94		**3.64**	1.14		-.29	.771
LMX (sup)	**3.83**	.62		**3.71**	.70		-.79	.433
Social support	**3.07**	.65		**3.08**	.81		.11	.911
SS friends/family	**3.13**	.80		**3.23**	.86		.54	.587
SS work related	**3.03**	.79		**3.01**	.95		-.13	.900
EI (emp)	**3.79**	.37		**4.01**	.38		2.52	.013
Self-awareness	**3.85**	.43		**4.01**	.45		1.66	.101
Self-management	**3.77**	.38		**4.00**	.36		2.42	.017
Social awareness	**4.01**	.46		**4.13**	.35		1.18	.240
Relationship mgt	**3.68**	.46		**3.99**	.50		2.77	.007
EI (sup)	**3.91**	.48		**3.87**	.51		-.28	.782
Self-awareness	**3.89**	.46		**3.85**	.42		-.41	.691
Self-management	**3.90**	.51		**3.81**	.54		-.80	.425
Social awareness	**4.16**	.50		**4.09**	.54		-.58	.562
Relationship mgt	**3.79**	.58		**3.84**	.58		.43	.671
POS	**4.24**	.89		**4.08**	.88		-.81	.426
Liking (emp)	**3.92**	1.04		**3.72**	1.15		-.79	.433
Liking (sup)	**4.09**	4.09		**4.10**	4.10		.04	.970
Relationship tenure	**64.88**	68.87		**60.80**	80.07		-.29	.7 93

Table 7.8: Means and standard deviations for dyad data by employee job type.

	Clinical job type (n = 80)		*Administrative job type (n = 28)*			
	M	**SD**	**M**	**SD**	**t**	**Sig.**
Stress						
JS-X	**4.07**	1.53	**3.55**	1.49	-1.57	.119
JS-S	**4.52**	1.48	**3.96**	1.70	-1.67	.097
JS-F	**3.62**	2.09	**3.13**	1.65	-1.11	.270
JP-X	**4.33**	1.62	**3.73**	1.58	-1.70	.092
JP-S	**4.62**	1.56	**3.98**	1.67	-1.84	.068
JP-F	**4.03**	2.29	**3.48**	2.02	-1.14	.257
LS-X	**3.81**	1.62	**3.37**	1.60	-1.26	.210
LS-S	**4.42**	1.61	**3.94**	1.88	-1.32	.190
LS-F	**3.20**	2.14	**2.79**	1.58	-.94	.352
Performance (emp)	**3.83**	.75	**3.82**	.77	-.06	.954
Performance (sup)	**3.93**	.76	**3.89**	.80	-.21	.833
Org commitment	**4.23**	.84	**4.34**	.78	.60	.550
Job satisfaction	**2.63**	.68	**2.61**	.46	-.18	.857
LMX (emp)	**3.81**	.64	**3.85**	.64	.23	.817
LMX (sup)	**3.10**	.70	**3.01**	.65	-.56	.574
Social support	**3.17**	.82	**3.13**	.79	-.23	.819
SS friends/family	**3.07**	.82	**2.96**	.84	-.59	.556
SS work related	**3.85**	.41	**3.89**	.32	.51	.609
EI (emp)	**3.89**	.47	**3.91**	.35	.19	.852
Self-awareness	**3.82**	.40	**3.87**	.36	.54	.591
Self-management	**4.01**	.45	**4.15**	.41	1.48	.142
Social awareness	**3.77**	.50	**3.77**	.47	.03	.973
Relationship mgt	**3.95**	.50	**3.84**	.47	-.94	.347
EI (sup)	**3.91**	.47	**3.87**	.47	-.41	.683
Self-awareness	**3.94**	.54	**3.83**	.51	-.91	.364
Self-management	**4.18**	.51	**4.14**	.55	-.34	.736
Social awareness	**3.86**	.60	**3.70**	.51	-1.28	.203
Relationship mgt	**4.25**	.90	**4.16**	.84	-.44	.663
POS	**3.87**	1.04	**3.88**	1.12	.05	.964
Liking (emp)	**4.16**	.80	**3.98**	1.05	-.98	.328
Liking (sup)	**4.07**	1.53	**3.55**	1.49	-1.6	.119
Relationship tenure	**68.73**	77.543	**45.19**	40.088	-1.507	.135

Table 7.9: The sources of ratings for study variables.

Hypothesis	*Supervisor rating*	*Employee rating*
1	EI LMX	
2	EI	Social support
3	EI Performance	
4	EI	Organisational commitment
5	EI	Job satisfaction
6a/6b/6c	EI	Stress
7	LMX Performance	
8	LMX	Organisational commitment
9	LMX	Job satisfaction
10a/10b		LMX Stress
11		LMX Social support Stress
12	EI	LMX Stress
13	EI	LMX Stress
All	Liking	Perceived organisational support

Table 7.10: Pearson correlation coefficients between control and dependent variables .

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	1.00																		
2	.16	1.00																	
3	-.07	.08	1.00																
4	.08	.23	.36	1.00															
5	.12	-.02	-.51	-.47	1.00														
6	.06	.07	-.43	-.40	.83	1.00													
7	.13	-.08	-.45	-.41	.89	.49	1.00												
8	.03	-.04	-.58	-.50	.95	.83	.81	1.00											
9	.00	.03	-.46	-.42	.78	.95	.45	.86	1.00										
10	.04	-.09	-.56	-.46	.87	.52	.94	.89	.53	1.00									
11	.20	.00	-.38	-.39	.95	.75	.88	.79	.62	.76	1.00								
12	.12	.09	-.35	-.34	.80	.95	.48	.71	.80	.46	.80	1.00							
13	.20	-.07	-.31	-.33	.82	.41	.95	.65	.34	.78	.90	.44	1.00						
14	.10	.56	.05	.18	-.11	-.06	-.13	-.12	-.07	-.15	-.09	-.04	-.10	1.00					
15	.04	.14	.47	.55	-.51	-.43	-.45	-.53	-.43	-.49	-.43	-.38	-.37	.17	1.00				
16	.05	.16	.71	.44	-.52	-.44	-.46	-.58	-.47	-.55	-.40	-.35	-.34	.14	.62	1.00			
17	.04	.14	.84	.47	-.51	-.47	-.42	-.61	-.51	-.55	-.36	-.38	-.26	.03	.61	.78	1.00		
18	.03	.67	.09	.20	-.16	-.07	-.20	-.14	-.07	-.16	-.17	-.06	-.21	.62	.14	.08	.10	1.00	
19	.07	.15	.30	.70	-.30	-.30	-.22	-.34	-.32	-.28	-.22	-.26	-.14	.15	.41	.30	.33	.06	1.00

Notes. Correlation coefficients above .20 are statistically significant at $p<.05$
1 = relationship tenure, 2 = liking (supervisor), 3 = liking (employee), 4 = perceived organisational support; 5 = job stress index; 6 = job stress severity; 7 = job stress frequency; 8 = lack of support index; 9 = lack of support severity; 10 = lack of support frequency; 11 = job pressure index; 12 = job pressure severity; 13 = job pressure frequency; 14 = performance (supervisor); 15 = job satisfaction (composite); 16 = social support (work-related); 17 = LMX (employee); 18 LMX (supervisor); 19 = organisational commitment

Table 7.11: Pearson correlation coefficients between control and independent variables .

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	**Dyad tenure**	1.00												
2	**Liking (supervisor)**	.16	1.00											
3	**Liking (employee)**	-.07	.08	1.00										
4	**POS**	.08	.23	.36	1.00									
5	**EI(comp)**	.12	.48	.03	.09	1.00								
6	**EI self awareness**	.18	.49	-.03	.06	.88	1.00							
7	**EI self mgt**	.09	.49	.06	.09	.95	.81	1.00						
8	**EI social awareness**	.10	.46	.12	.06	.86	.72	.80	1.00					
9	**EI rel. mgt**	.09	.37	-.02	.08	.93	.76	.81	.72	1.00				
10	**LMX (superviser)**	.03	.67	.09	.20	.58	.56	.56	.52	.49	1.00			
11	**LMX (employee)**	.04	.14	.84	.47	.06	-.01	.07	.10	.04	.10	1.00		
12	**Social support (work)**	-.05	.16	.71	.44	.06	-.01	.07	.07	06	08	78	1.00	
13	**Social support (non work)**	-.11	-.04	.23	.15	.06	.05	.09	.07	.02	.00	.17	.32	1.00

Table 7.12: Pearson correlation coefficients between dependent and independent variables.

		Independent variables							
		EI (comp)	**EI self-awareness**	**EI self-mgt**	**EI social awareness**	**EI rel mgt**	**LMX(S)**	**Social support (work)**	**Social support (non-work)**
1	**JS-X**	.03	.05	-.03	.04	.08	-.16	-.52	-.25
2	**JS-S**	.10	.11	.05	.11	.11	-.07	-.44	-.15
3	**JS-F**	-.03	-.02	-.09	-.02	.03	-.20	-.46	-.28
4	**LS-X**	.01	.02	-.05	.01	.06	-.14	-.58	-.22
5	**LS-S**	.06	.06	.01	.06	.10	-.07	-.47	-.13
6	**LS-F**	-.04	-.02	-.09	-.03	.01	-.16	-.55	-.25
7	**JP-X**	.05	.06	-.01	.07	.09	-.17	-.40	-.26
8	**JP-S**	.13	.14	.08	.15	.12	-.06	-.35	-.15
9	**JP-F**	-.01	-.01	-.07	-.01	.04	-.21	-.34	-.26
10	**Perf. (S)**	.55	.49	.51	.47	.51	.62	.14	.05
11	**JS (comp)**	.09	.00	.09	.06	.12	.14	.62	.25
12	**JS (int)**	.09	.02	.09	.05	.12	.13	.44	.18
13	**JS (ext)**	.03	-.05	.04	.01	.06	.10	.73	.31
14	**OC**	.13	.09	.12	.07	.15	.06	.30	.10

Notes. JS-X = job stress index; JS-S = job stress severity; JS-F = job stress frequency; LS-X = lack of support index; LS-S = lack of support severity; LS-S = lack of support frequency; JP-X = job pressure index; JP-S = job pressure severity; JP-F = job pressure frequency; JS (comp) = job satisfaction (composite); JS (int) = job satisfaction (intrinsic); JS (ext) = job satisfaction (extrinsic); OC = organisational commitment

Table 7.13: Direct effects of emotional intelligence (prediction of LMX, social support, performance and employee attitudes).

	LMX (employee)		LMX (supervisor)		Social Support (work)		Performance (supervisor ratings)		Org'l commitment		Job satisfaction	
Equation 1 (control variables + EI):												
EI	.091	*	.351	***	.005		.376	***	.092		.038	
Adjusted R^2	.753		.503		.181		.380		.499		.286	
F (4, 75)	90.005	***	30.579	***	7.426		18.607	***	30.129	***	12.690	***
ΔR^2 from control variables only	.008		.094		.000		.110		.006		.001	
F for ΔR^2 (df)	3.909 (1, 71)	*	22.160 (1, 72)	***	.003 (1, 71)		20.354 (1, 70)	***	1.508 (1, 71)		.180 (1, 70)	
Equation 2 (control variables + EI dimensions):												
EI: self-awareness	-.003		.144		-.154		.043		.013		-.231	
EI: self-management	.174	*	.106		.020		.024		-.008		.064	
EI: social awareness	.024		.038		.111		.034		-.078		.003	
EI: relationship management	-.093		.101		.024		.297	*	.158		.174	
Adjusted R^2	.754		.492		.170		.371		.492		.286	
F (7, 75)	52.121	***	17.172	***	4.383	***	10.704	***	17.216	***	7.688	***
ΔR^2 from control variables only	.016		.097		.010		.118		.013		.020	
F for ΔR^2 (df)	1.840 (4, 68)		5.556 (4, 69)	***	.351 (4, 68)		5.396 (4, 67)	***	.758 (4, 68)		.805 (4, 67)	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the supervisor rating of liking. † p<.10 * p<.05 ** p<.01 *** p<.001

Table 7.14: Direct effects of emotional intelligence (prediction of stress severity and stress frequency)

	Job pressure severity (JP-S)		**Job pressure frequency (JP-F)**		**Lack of organization support severity (LS-S)**		**Lack of organization support frequency (LS-F)**	
Equation 1 (control variables + EI):								
EI	.074		-.028		.046		-.013	
Adjusted R^2	.145		.129		.169		.187	
F(4, 75)	5.933	***	5.280	***	6.914	***	7.681	***
ΔR^2 from control variables only	.004		.001		.002		.000	
F for ΔR^2 (df)	.571 (1, 71)		.078 (1, 71)		.232 (1, 71)		.018 (1, 71)	
Equation 2 (control variables + EI dimensions):								
EI: self-awareness	.141		-.057		.048		.054	
EI: self-management	-.273		-.326		-.273		-.343	†
EI: social awareness	.164		.047		.028		.021	
EI: relationship management	.073		.291	†	.242		.248	
Adjusted R^2	.144		.143		.172		.199	
F(7, 75)	3.790	***	3.766	***	4.446	***	5.113	***
ΔR^2 from control variables only	.025		.037		.026		.032	
F for ΔR^2 (df)	.851 (4, 68)		1.241 (4, 68)		.901 (3, 68)		1.160 (4, 68)	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the supervisor rating of liking † p< 10 * p<.05 ** p<.01 *** p<.001

Table 7.15: Direct effects of LMX (prediction of social support, performance, employee attitudes)

	Social Support (work)		**Performance (supervisor ratings)**		**Org'l commitment**		**Job satisfaction**	
Equation 3a. (control variables + LMX):								
LMX (supervisor)	-.091		.452	***	-.131		.055	
Adjusted R^2	.186		.386		.502		.286	
F (df)	7.640 (4, 76)		19.037 (4, 75)	***	30.534 (4, 76)	***	12.729 (4, 75)	***
ΔR^2 from control variables only	.005		.115		.010		.002	
F for ΔR^2 (df)	.680 (1, 72)		21.574 (1, 71)	***	2.302 (1, 72)		.288 (1, 71)	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the supervisor rating of liking. † p<.10 * p<.05 ** p<.01 *** p<.001

Table 7.16: Direct effects of emotional intelligence (prediction of stress severity and stress frequency)

	Job pressure severity (JP-S)		**Job pressure frequency (JP-F)**		**Lack of organisation support severity (LS-S)**		**Lack of organisation support frequency (LS-F)**	
Equation 1 (control variables + EI):								
EI	.074		-.028		.046		-.013	
Adjusted R^2	.145		.129		.169		.187	
F(4, 75)	5.933	***	5.280	***	6.914	***	7.681	***
ΔR^2 from control variables only	.004		.001		.002		.000	
F for ΔR^2 (df)	.571 (1, 71)		.078 (1, 71)		.232 (1, 71)		.018 (1, 71)	
Equation 2 (control variables + EI dimensions):								
EI: self-awareness	.141		-.057		.048		.054	
EI: self-management	-.273		-.326		-.273		-.343	†
EI: social awareness	.164		.047		.028		.021	
EI: relationship management	.073		.291	†	.242		.248	
Adjusted R^2	.144		.143		.172		.199	
F(7, 75)	3.790	***	3.766	***	4.446	***	5.113	***
ΔR^2 from control variables only	.025		.037		.026		.032	
F for ΔR^2 (df)	.851 (4, 68)		1.241 (4, 68)		.901 (3, 68)		1.160 (4, 68)	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the supervisor rating of liking.
† p< .10 * p<.05 ** p< .01 *** p<.001

Table 7.17: Direct effects of LMX (prediction of stress)

	Job pressure severity (JP-S)		*Job pressure frequency (JP-F)*		*Lack of organisation support severity (LS-S)*		*Lack of organisation support frequency (LS-F)*	
Equation 3b. (control variables + LMX):								
LMX (employee)	-.247		.172		-.407	*	-.119	
Adjusted R^2	.138		.068		.202		.254	
F (4, 76)	4.03	*	2.380	†	5.819	***	7.467	***
ΔR^2 from control variables only	.019		.009		.051		.004	
F for ΔR^2 (1, 72)	1.649		.742		4.844	*	.443	
	Job pressure severity (JP-S)		**Job pressure frequency (JP-F)**		**Lack of organisation support severity (LS-S)**		**Lack of organisation support frequency (LS-F)**	
Equation 3c. (control variables + LMX):								
LMX (supervisor)	-.143		-.225	*	-.086		-.148	
Adjusted R^2	.153		.158		.172		.200	
F (4, 76)	6.249	***	6.444	***	7.026	***	8.257	***
ΔR^2 from control variables only	.012		.029		.004		.013	
F for ΔR^2 (df)	1.619 (1, 72)		3.999 (1, 72)	*	.592 (1, 72)		1.825 (1, 72)	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the supervisor rating of liking. † p<.10 * p<.05 ** p<.01 *** p<.001

Table 7.18: Test of social support as a mediator of the relationship between LMX and stress (H11)

	Social support		Job pressure severity (JP-S)		Job pressure frequency (JP-F)		Lack of organization support severity (LS-S)		Lack of organization support frequency (LS-F)	
Equation 4 (control variables + employee rated LMX):										
LMX (employee)	.608	***	-.176		.132		-.294	†	-.074	
Adjusted R^2	.629		.171		.169		.284		.386	
F(4, 76)	50.105	***	6.965	***	6.884	***	12.507	***	19.258	***
Equation 5 (control variables + social support):										
Social support			-.132		-.164		-.195	†	-.238	*
Adjusted R^2			.179		.175		.296		.411	
F(4, 76)			7.286	***	7.094	***	13.077	***	21.020	***
Equation 6 (control variables + LMX + social support):										
LMX (employee)			-.103		.287		-.199		.090	
Social support			-.098		-.260	†	-.129		-.268	*
Adjusted R^2			.174		.184		.298		.407	
F(5, 76)			5.849	***	6.201	***	10.742	***	16.773	***
ΔR^2 from Eq 4			.003		.024		.006		.026	
F for ΔR^2 (df)			.479 (1, 71)		3.433 (1, 71)	†	.974 (1, 71)		4.996 (1, 71)	*

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the employee rating of liking † p< 10 * p< 05 ** p< 01 *** p< 001

Table 7.19: Test of LMX as a mediator of the relationship between EI and stress (H12)

	Job pressure frequency (JP-F)		*Lack of organisation support frequency (LS-F)*	
Equation 7 (control variables + EI + LMX):				
EI: self-awareness	-.022		.078	
EI: self-management	-.299		-.324	†
EI: social awareness	.057		.028	
EI: relationship management	.315	*	.265	†
LMX	-.249	*	-.170	
Adjusted R^2	.167		.206	
F(8, 75)	3.905	***	4.769	***
ΔR^2 from Eq 2 (Table 7.13)	.030		.014	
F for ΔR^2 (df)	4.123 (5, 67)	*	2.023 (5, 67)	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the supervisor rating of liking. † p<.10 * p<.05 ** p<.01 *** p<.001

Table 7.20: Test of the relationship between LMX and stress (using employee ratings)

	Job pressure severity (JP-S)		Job pressure frequency (JP-F)		Lack of organisation support severity (LS-S)		Lack of organisation support frequency (LS-F)	
Step 1 (controls + LMX):								
LMX (employee)	-.247		.172		-.407	*	-.119	
Adjusted R^2	.138		.068		.202		.254	
F (4, 76)	4.03	*	2.380	†	5.819	***	7.467	***
Step 2 (controls + LMX + LMX^2):								
LMX (employee)	-.382		1.774	*	-.890		-.041	
LMX (employee)^2	.131		-1.551	†	.468		-.076	
Adjusted R^2	.126		.101		.195		.244	
F (5, 76)	3.190		2.708	*	4.689	***	5.894	***
ΔR^2 from Step 1	.000		.043		.004		.000	
F for ΔR^2 (1, 71)	.027		3.668	†	.373		.010	
Step 3 (controls + LMX + LMX^2 + LMX^3):								
LMX (employee)	6.604	*	3.918		2.577		1.587	
LMX (employee)^2	-15.451	*	-6.332		-7.266		-3.706	
LMX (employee)^3	8.721	*	2.676		4.329		2.032	
Adjusted R^2	.175		.094		.199		.236	
F (6, 76)	3.679	**	2.313	*	4.145	***	4.914	***
ΔR^2 from Step 2	.056		.005		.014		.003	
F for ΔR^2 (1, 70)	5.184	*	.445		1.316		.304	
Step 4 (controls + LMX + LMX^2 + LMX^3 + interaction):								
LMX (employee)	6.444	*	1.803	†	-.403		--	
LMX (employee)^2	-15.340	*	-1.828	†	---		--	
LMX (employee)^3	8.700	*	---		---		--	
EIxLMX	.062		.517		-.019		--	
Adjusted R^2	.162		.082		.190		--	
F (7, 75)	3.067	**	2.111 (6, 75)	†	4.514 (5, 75)	***	--	
ΔR^2 from Step 2	.001		.003		.000		--	
F for ΔR^2 (1, 68)	.069		.267 (1, 69)		.007 (1, 70)		--	

Note. Coefficients are standardized beta coefficient. All regressions controlled for perceived organizational support, length of time with current supervisor, and the employee rating of liking. † p<.10 * p<.05 ** p<.01 *** p<.001

Chapter 8

Discussion

8.1 Introduction

This chapter examines the results presented in Chapter Seven with respect to the proposed research hypotheses. The role of individual differences in shaping leader-member relations and, in turn, employee outcomes such as the experience of stress, is an issue which has been identified as requiring further study (see, for example Liden, et al., 1997; Hochwarter & Byrne; 2005, Martin et al., 1995; Harris & Kacmar, 2006). In the present study, employee emotional intelligence was proposed as influential in shaping the way individuals managed hierarchical relationships in the workplace, with subsequent consequences for outcomes, such as job satisfaction, organisational commitment, performance, and, particularly, stress.

A hospital-based setting was chosen to test the proposed hypotheses, as it presented a unique organisational context, where the themes raised in this research are very relevant to current organisational and staff interests. Particularly, employee-supervisor dyads are used as a framework to exam-

ine the antecedents to relationship development, stress and other outcomes relevant to organisational behaviour (performance, job satisfaction, and organisational commitment). Healthcare, and the people-oriented nature of the work, are known areas of strain. This, and the tall organisational structure, means that the hospital environment is a particularly relevant place to examine the dynamics and consequences of hierarchical relationships. Supervisor-subordinate dyads were drawn from five different hospitals in the west of Scotland and provided data on both employee and dyad-level variables. As discussed in detail in this chapter, some hypotheses were supported, some partially supported, and some not supported at all. All of these results, nevertheless, have implications for management in healthcare settings, and for the theories that first informed this research.

The chapter first discusses the overall characteristics of the participating hospitals, in order to assess how such context may have affected, and in some areas, explained results. A review of qualitative and quantitative descriptive data will demonstrate the importance of context and broader organisational issues, specifically, changes to jobs and contractual conditions. The assessment of this impact informs discussion about the results of hypothesis testing. This starts with an examination of the contribution that emotional intelligence has made to the theory of leadership making, a central concept in leader-member exchange literature. As these hypotheses are supported, propositions about the choice of emotional intelligence theory to inform this research are upheld and discussed. The other main area of contribution, from the results presented in Chapter 7, is the role that leader-member exchange has in the experience of stress. These two sections, alluding to the roles of

emotional intelligence (EI) and leader-member exchange (LMX) refer to the main relationships postulated in this research.

However, as implied throughout this thesis. results confirm that the impact of LMX on stress is complex. Therefore, this relationship is examined more closely in the context of healthcare, with the expectation that hospital staff experience hierarchical relationships and stress in a unique way. The various organisational and structural facets of the setting are explored, as well as the distinctive nature of the clinical roles that the majority of the sample had. The findings of the study are used to inform understanding of how leadership impacts employee stress.

Finally, the more straightforward effects of EI and LMX on other tested employee outcomes, and performance are considered. Although the effects of EI and LMX on outcomes such as job satisfaction and organisational commitment are well-established in literature. this research confirms the validity of instruments measuring emotional intelligence and stress in establishing these relationships, and confirms that these relationships exist in a healthcare setting. Finally, the practical implications for management within healthcare, and other organisational contexts, are discussed.

8.2 The nature of a hospital setting and sample

The descriptions of context, provided in Chapter Six, have important implications for how results are interpreted. but also how individuals may have responded to surveys. Some features are more important than others in

their inferred effects. This section examines these effects, by a consideration of context and organisational characteristics.

8.2.1 Broad organisational characteristics

The five participating hospitals were all affected by the current NHS context which had implications for broader organisational agendas and, hence, potentially, the mood of the workforce. The wider structures that preside over each organisation, meant that culture, structure, and governance are all determined at a wider national level. Interviews with human resource managers, and training and development managers highlighted that hospitals are affected by changes imposed by the 'Agenda for Change'. This 'process of modernisation' affects job roles, salary structures, and other contractual conditions, and had, according to interviewees, meant that staff has felt uncertain about their jobs at the time of the study (Department of Health 2004; 2005; NHS Pay, 2003). Agenda for Change, in the process of modernising the NHS and its workforce, has made significant changes, which affect staff directly. For example, some hospitals, and Hospital 1 in this research particularly, have faced mergers with other hospitals, through an endeavour to simplify the Scottish healthcare infrastructure. Secondly, the modernisation of pay and conditions required that all staff complete a job evaluation, which was structured around a selection of competencies, in order to inform new pay bands, which participants had completed at the time of this research.

This is important to this research for two distinct reasons. Firstly, it highlights the pertinence of competencies to current concerns about performance and reward. This suggests that emotional intelligence may inform

the National Health Service (NHS) agenda, as a way of evaluating jobs, informing reward systems, and also development opportunities for employees. Secondly, it illustrates that, as an organisation-wide policy, all participants in the present survey already had exposure to the notion of competencies, and were considering their skills set. This heightened awareness may have impacted on their style of response. However, it is not clear whether this means that they responded more or less honestly than if competency-based reflection were not an immediate part of their job. The only participants that the KSF was not applicable to were the few temporary staff.

Furthermore, large restructuring and change within the NHS prompted a 'National Leadership and Development Plan', to outline how employees could be guided through the changes they face. This plan set out a range of personal governance competencies for managers, such as integrity, acceptance of responsibility and accountability, and developing self and their team. Additionally, Health and Safety Executive standards have been developed, providing guidelines on how employee well-being can be enhanced. The standards which managers are expected to achieve employee well-being are clustered around six areas of stress. These are demands, control, support, reminiscent of the demand-control-support model of stress (Karasek, 1979; Johnson & Hall, 1988), relationships, role, and change. Some of these are facets are considered in this research, for example support and relationships. Moreover, the recommendation was that these standards should be adopted at a local level, with implications for managers in individual hospitals or units who would be expected to provide encouragement and support to all employees, although there is no way of knowing that these standards were communi-

cated to staff. These initiatives and developments within the NHS highlight the importance of stress management, and all place an emphasis on the role of leadership, and developing leadership competencies.

This research informs that assumption. As discussed in Chapter Six, where the research philosophy was described, the levels of analysis chosen for this study were both the dyadic relationship between supervisors and subordinates and the individual employee. The hierarchical relationship with a supervisor was considered to be the structure within which individuals operated in the workplace. Therefore, this research looks to the leader-member exchange for explanations of stress, and other outcomes (job satisfaction, commitment, and performance). As shown in Chapter Seven, however, the findings only partially support the expected link between leader-member relations and these outcomes. The reasons for this may be structural inadequacies, or individual level restrictions, imposed by the NHS or hospital sample.

It was stated in Chapter Six, that controlling for structural factors was important, and that data collection from more than one setting could produce patterns in data that may be more attributable to context factors, than those variables of central interest to the research. The effects of confounding variables have been established in this research as strong and therefore, very important to the nature of the data.

8.2.2 The profile of the sample hospitals

This section identifies a selection of unique characteristics that were evident in the hospitals and may be significant in interpreting the results. Interviews

with human resource managers and training development managers, who were also gatekeepers to the research participants for each hospital (except Hospital 4), provided an overview of the sample. They were asked about the "mood" of the organisation, and what factors could affect the responses. Several themes arose from this. Specifically, each interview participant perceived Agenda for Change (the modernisation process undertaken by the National Health Service) to have significant effects on participants. These effects can be understood when comparing the descriptions in interviews with the ratings of the study variables.

Some demographic differences could not be analysed because of small numbers. For example, only 24 of 122 employees who responded were managers themselves, and only 28 had administrative roles. This means that results were mainly from individuals in clinical roles (81 employees and 84 supervisors). This is an important distinction to make, as this highlights the contribution that people-oriented responsibilities have in explaining stress in these types of roles (Sutton & Kahn, 1987), and is discussed in Section 8.8.1. Most of the job titles for employees were very similar to the job titles of supervisors, and included a range of clinical posts, most of which were nursing, or specialist nursing roles. For example, participants consisted of sisters, ward managers, staff nurses, speech therapy nurses, physiotherapy assistants, and midwives. These roles are mainly ward-based, and some, it can be inferred, would be laboratory-based, for example, retinal screening nurses.

The main independent and dependent variables in the study (i.e., emotional intelligence, leader-member exchange, and stress) were experienced

similarly by employees in each of the five hospitals (i.e., mean differences were not significant) and so the hospital setting was not directly influential in the tests of the study hypotheses.

8.3 Methodological decisions

During the discussion of the philosophical position adopted for this research in Chapter 6, it was stated that phenomena, within the critical realist paradigm, exist within structures that are created and influenced by individuals, and that those structures then provide boundaries for behaviour (Dubin, 1982). The position taken in this research is that the structure considered to perform this role is that of leader-member exchange. It is a structured relationship that affects employee outcomes, through mechanisms or processes that are governed by changing amounts of power and control. Power and control are important elements of employment relationships and will be considered later in relation to the organisational contributions to stress. However, the present study's focus was on the role of emotional intelligence in successfully managing LMX as a relational structure.

The employee was chosen as the unit of analysis in the analysis, and supervisor ratings of emotional intelligence were ratings of the employee's EI. It was considered methodologically more acceptable to gather large quantities of data on employees, rather than managers, in the interests of saving managers time. It was expected that participation would appeal to managers more, if they were asked fewer questions. This (along with ethical approval restrictions) dictated that only employee-focused data would be collected, although rated by both members. Additionally, the instrument used to mea-

sure LMX (LMX-7) is considered to be designed to most accurately represent the exchange from the point of view of the employee (Schyns. 2002). However, this research has collected both supervisor and employee ratings, and found non-significant differences. The supervisor rating was used to reduce common-source bias and non-objective assessments of LMX and performance.

8.4 The role of emotional intelligence in leadership making

Results confirm a direct relationship between emotional intelligence and leader-member exchange quality as presented in Hypothesis One. In Chapter Three, it was proposed that similarities existed between dimensions of the model of EI which predicts outstanding performance, and all six of the dimensions included in the two most commonly accepted models of LMX (Graen & Uhl-Bien, 1995; Dienesch & Liden, 1986). For the LMX model tested in this study (consisting of respect, trust, and obligation recommended by Graen & Uhl-Bien, 1995) it was found that supervisor ratings of LMX were more closely related to EI than employee ratings which was perhaps to be expected as EI was measured as a supervisor rating in order to account for employees' potentially subjective self-appraisals of competence. It is also possible that the extent to which a supervisor liked the employee contributed to the significant relationship, although the explained variance in LMX was significant beyond the effects of all control variables, including liking. No single cluster of EI was found to predict LMX alone.

Graen and Uhl-Bien (1995) proposed that the LMX model employed in

this research consisted of the sub-dimensions of respect, trust, and obligation. Hypothesis One's prediction of a relationship between emotional intelligence and LMX quality was based on the observation that these dimensions resembled competencies in the self-management, social awareness, and relationship management cluster.

The most significant theoretical implication from this finding is that EI may contribute to the process of leadership-making, which is considered to be central to the development of the quality of a leader-member exchange (Graen & Uhl-Bien, 1995). In the process of developing partnerships, this research suggests that emotional intelligence is a predictor of developing trust and obligation. These two LMX dimensions are particularly chosen, as respect is theorised to exist at the beginning of a relationship or exchange, even one of low quality. Trust and obligation develop from respect, which is the basis of a harmonious employment relationship. As Scandura, et al. (1996) state, respect is established at the 'stranger' phase of relationships. However, from there, particular competencies will aid the development of the relationship, through two further stages, to 'acquaintances' and 'partners'. Specifically, the relationship skills determined by the EI competency framework were conceptually linked to trust, and obligation was conceptually linked to competencies such as conscientiousness and service orientation. Both of these dimensions indicate a sense of duty which may be found in high quality leader-member exchanges, and explain the behaviours that such members have of investing in organisational interests and performing beyond that required from the formal employment contract (Graen & Uhl-Bien, 1995).

Empirical support for the relationship between EI and LMX also pro-

vides support for use of the Emotional Competence Inventory 2 (ECI2). In this study, employee and supervisor ratings were not significantly different, establishing reliability for the instrument. As proposed by its developers (Boyatzis, Goleman, & Rhee, 1999), the instrument does more reliably measure emotional intelligence as a whole (α = .93 and α =.95 for employee and supervisor ratings, respectively); the sub-dimensions have considerably lower reliabilities (for example, employee-rated self-awareness and social awareness have Cronbach alpha reliabilities of .66 and .68, respectively).

The overall measure of EI is an appropriate instrument for research where other developable constructs are being examined. For example, a major strength illustrated by the findings of this research resides in the proposition that EI, as a set of competencies, can contribute to the development of hierarchical relationships and performance. Therefore, it is appropriate that it contributes to the theory of leadership making, specific to the assumptions of LMX. It would be advantageous, both theoretically and empirically, to use a competency-based framework to investigate the causes of LMX, and particularly, the ECI2, when exploring how to develop leadership and relationships with leaders. For theoretical reasons, as well as the methodological ones discussed earlier, employee data was most important as it enabled an assessment of the role of EI in developing leadership skills, specifically with the leader-member exchange framework.

8.5 The role of emotional intelligence in other relationships at work

Hypothesis Two postulated a relationship between emotional intelligence and social support, on the basis that relationship management skills would develop networks of people, and that the competencies of being trustworthy, empathetic, and exhibiting appropriate expression would facilitate relationships. It was suggested in Chapter Five that an increase in social support offered and accepted is more likely when the individual has greater ability to recognise and manage the social capital available to them. This was not supported, as emotional intelligence did not account for work-based social support. This conflicts with evidence from Pau, et al. (2003) who conducted work with students and found that those with high EI developed helping relationships (social support) more effectively than those with lower EI. This implies that another factor, or a combination of factors, predicts social support in healthcare. It is evident from the findings that social support provided by other, non-work-related sources were rated more highly. Therefore, social support from friends and family may be considered more sufficient. However, Hypothesis Two related to support provided from the leader, in order to determine outcomes in the workplace. From correlations (see Table 7.11), social support from other sources did not relate as highly as support from the supervisor on any work-based outcomes.

Additionally, the present findings refute the notion of social support as a social competence (Lawton, 1983; Stewart, 1993). The notion of "social climate" may have had an impact on this (Moos & Lemke, 1992; Langford,

et al., 1997). Langford, et al. (1997) suggest, with particular reference to nursing, that structures that enhance connectedness, and helpful and protective organisational environments, are the main antecedents to social support. The unsettled context within which participants were employed may account for this, where hospital staff have been uncertain about their employment, and have felt disappointed by the organisation. Therefore, a perceived lack of social support may arise from unsupportive organisational structures which do not allow individuals to develop social networks. The findings in this research are congruent with this, as the control variable perceived organisational support explained much of the variance in perceived social support from the workplace, rather than EI. Wayne et al. (1997) implied that human resource practices and decisions about rewards would act as antecedents to perceived organisational support, providing further support for the role of organisational structure and practices in influencing perceptions of support.

Although emotional intelligence has little effect on an individual's perceived social support, this research has revealed that emotional intelligence does predict how effective relationships with supervisors develop into ones where leadership behaviours are expected, as in the notion of leadership making. Perceived organisational support explains individuals' ratings of social support, more than emotional intelligence. This suggests that individuals need to feel valued by the organisation as a whole, in order to feel supported by their more immediate co-workers and supervisors. It is understandable that the quality of the relationship with the organisation on a broad level is important to this sample, as staff in these hospitals were experiencing job uncertainty and may have been seeking reassurance that their roles will not

be affected by changes. This sample highlights the importance of perceived organisational support, as this variable explains a high degree of variance in relation to many employee outcome variables.

These findings confirm conclusions from Eisenberger et al. (2001) and Aiken et al. (2002). The latter examined perceived organisational support in relation to nursing staff. They defined organisational support as "a measure of hospital organisational climate that reflects managerial decisions that shape the context in which nursing takes place" (p.190). This includes managerial support, ensuring adequate staffing, and providing well organised practices and structures. This large body of research findings indicates the importance of having controlled for its effects in the present study.

However, some question exists about the distinction of perceived organisational support from other concepts, demonstrating its relative newness in organisational behaviour literature (Shore & Tetrick, 1991), particularly perceived supervisor support (Kottke & Sharafinski, 1988). Both refer to a model of exchange based on reciprocity (Gouldner, 1960). Eisenberger et al. (2001) go further and suggest that perceived organisational support causes feelings of obligation, on which LMX is based. However, distinction may be made between obligations to an individual, and obligations to the wider organisational objectives and welfare. This research demonstrates, that in healthcare employees, a distinction can be identified relating the employees perception of sources of support in work. Where LMX is an exchange on a dyadic level, perceived organisational support is related more to organisational practices.

8.6 The role of high quality LMX in reducing employee stress

Hypothesis 10a and 10b represented the relationship between LMX and stress as either linear or a more complex non-linear function. A linear relationship was expected based on evidence that high quality leader-member exchanges have a positive effect on role stress (for example, role overload, role ambiguity, and role conflict). These studies have identified that supervisors in high quality LMXs provide favourable work schedules, and support to employees, which reduce stress (Graen & Uhl-Bien, 1995; Lagace et al., 1993; Lapidus et al., 1997; Van Dyne et al., 2002). A non-linear relationship was expected, based on stress literature asserting the role that high demands have on employees. Not only does the demand-control model of Karasek (1979) inform this, but also literature about the negative effects on high employer expectations, job limits, and employee abilities based on a person-environment fit model proposed by Ecker's (1985), and discussed in Chapter Four. Specifically, these models describe that high supervisor expectations (characterised in LMX theory as high levels of trust and delegation) may lead to high workloads, both qualitative and quantitative, as measured in the present research.

Although some results indicated that LMX quality is related to lower stress, hence supporting Hypothesis 10a, this was only in relation to the severity of stress dimensions (job pressure and lack of support). This supports most of the literature about the relationship between LMX and stress (Nelson et al., 2004; Gutknecht, 2005; Liden et al., 1997; Tanner & Castleberry, 1990). The rationale for this relationship originates in role theory, where it is

specified that high quality leader-member relationships provide the employee with support, communication, and clear definition about their roles and what is expected of them. Therefore, those in low quality supervisor-employee relationships experience higher levels of stress because they have feelings of uncertainty, and do not receive adequate information to ease these feelings.

The frequency with which employees felt job pressure, however, demonstrates the complexity of the relationship with LMX that was expected. A curvilinear relationship (where the relationship changes from describing a high stress and low quality LMX to a high stress and high LMX quality) between LMX and the frequency with which employees feel pressure may be explained by the delegation, trust, and obligation facets of LMX. These two types of relationships taken together suggest that the supportive element of high quality leader-member exchanges reduces the extent to which stress is experienced. However, the higher expectations for reciprocation, generated through trust in the employees' abilities to perform well, and take on extra responsibilities, results in employees experiencing stress more frequently (Edwards, 1992; Kuper & Marmot, 2003). This may be created by increased obligations to achieve more than is expected contractually, possibly resulting in more time invested in the organisation. This illustrates the value in employing a method of assessing stress that considers severity and frequency dimensions separately, as they have clearly distinct implications for how LMX affects employees.

This finding of a curvilinear relationship, and the above explanation, supports the findings of Harris and Kacmar (2006). Their thesis, as is the rationale for the current hypothesis and interpretation, is that LMX relationships

of a high quality can have a detrimental effect on employees. This highlights the dual role of LMX as an important antecedent of support, but also as a source of extra pressure and obligations. Sherman (2002) also examines leader-role inversion and asserts that the leadership-making element of LMX theory results in a reconfiguration of employee pressures, through more responsibilities. This research defines a positive relationship between LMX and pressure, but does not explore fully the possibility of a curvilinear one.

Several important implications follow from these findings. Firstly, this finding is not specific to a healthcare setting, and is not specific to the UK. Harris and Kacmar (2006) used a sample of American state lottery employees, and a sample of employees from a water management facility. Furthermore, Harris and Kacmar (2006), as was found in this research, established tenure as an important control variable. In the present case specifically, multi-source ratings of variables are more reliable from someone who has known the focal individual (employee) for longer. The LMX-stress relationship is significant beyond the controlled effects of tenure. The research presented here, and the importance of organisational factors in examining the relationships of interest, suggests that broader contextual factors, for example organisational structure, may have a role in facilitating LMX development and the impact on stress. These are discussed further in Section 8.8 where LMX and stress are examined in relation to the healthcare context specifically.

A second implication is that these findings highlight the complex nature of stress, and suggest that different dimensions of examining the experience of stress (severity and frequency, for example) may have different antecedents. In reference to LMX, a balance of reciprocal demands and support may be

required to decrease stress severity *and* frequency, informed by Hypothesis 10b.

This model of the LMX-stress relationship may also be informed by the traditional demand-control-support model proposed by Karasek (1979) and Johnson and Hall (1988). This model postulates that support moderates high demands, to create a working experience that is neither passive, nor stressful. This principle may explain a critical balance between providing support and demonstrating trust through higher expectations, in developing and maintaining high quality leader-member relations. This notion of balancing job autonomy, job demands, and social support, has been tested in healthcare settings, with positive employee outcomes (McPhail et al., 1990; Heeremans et al., 1994; Landsbergis, 1998; Berhout et al., 2003). Moreover, evidence also exists to suggest that these three 'job characteristics' have a curvilinear relationship with employee outcomes in nursing samples (De Jonge & Schaufeli, 1998), which supports the implications of the present research. For example, emotional exhaustion was highest when social support was very high and very low. De Jonge and Schaufeli (1998) considered that social support was very pertinent aspect of nursing jobs, because they work in small teams, with relatively low levels of autonomy, providing confirmation for the significance of balancing support and delegation to reduce the effects of high workload. An unbalance in the supportive and demanding facets of LMX may explain the curvilinear effects on stress. Sargent and Terry (2000) confirmed the importance of the supervisor in buffering the effects of job pressure, central to the position adopted for this discussion.

However, conclusions about this inference are limited, as demand and con-

trol were not directly tested. It is proposed here that the facets of a demand-control-support model are characteristic of high quality LMXs. Nonetheless, no research has attempted to explain the mixed experience of stress, using any model of individual differences as possible antecedents. This is a central aim of the present research, and the subject of the next section, where the role of emotional intelligence is examined.

8.7 The examination of individual differences in explaining experiences of stress

A central aim in this research was to investigate the role of emotional intelligence, defined in terms of an individual competency, in how employees experienced stress. This investigation is encapsulated in two specific sets of hypotheses: one related to the direct effects of EI on stress (H6a, 6b, and 6b); the other related to the moderating function of EI in explaining the complex relationship between LMX and stress (H13). The results did not support these hypotheses.

An overall measure of emotional intelligence did not affect stress. Perceived organisational support accounted for a significant degree of variance in stress, when considering the overall measure, and the sub-dimensions. However, more specific hypotheses were postulated (H6b: the self-orientated dimensions of EI are negatively related to stress, H6c: the other-orientated dimensions of EI are positively related to stress), to capture the exact nature of emotional intelligences' role. The self-awareness and self-management dimensions of EI were expected to be related to lower levels of stress, on the

basis that these competencies would increase an individual's awareness of factors that they know to be personal stressors, and that the individual would accurately assess their ability to cope with the source of stress. This theory is supported from the general pattern of findings in this research, although, for the large part, the results indicating this negative relationship were not significant. The only relationship between EI and stress that was significant was between the self-management EI dimension and the frequency with which an individual felt they lacked organisational support. Self-management includes the competencies of: adaptability, emotional self-control, initiative, achievement orientation, trustworthiness, and conscientiousness. Results indicated that individuals high on these competencies were less likely to perceive a lack of social support (i.e., have lower reported stress frequency) than those who were rated lower on this competency cluster.

One possible interpretation of this finding is evident from theory. Individuals with high levels of competencies in the self-management cluster have a greater sense of self-worth and have a strong belief in their own abilities and qualities (Goleman, Boyatzis, & Rhee, 1999). This personal consistency and stability could reduce the frequency with which they feel the need for support from others. These individuals may rely less on regular contact as a means of controlling stress than individuals who have lower ratings of self-management.

This interpretation is also consistent with evidence that individuals with high self-efficacy, have lower reported stress frequency. Greenglass (2001) stated "individuals who lack inner resource may be less likely to handle heavy workloads and may be more likely to perceive others as treating them un-

fairly" (p.3), which supports the proposed effects of self-oriented management competencies. Greenglass (2001) also contributed to an understanding that notions of personal control have in coping with stress, and suggested that high self-esteem, personal control, and valuing oneself promote pro-activity, consistent with dimensions contained within the self-management EI cluster.

Additionally, these results are consistent with theory that those with an internal locus of control experience less stress. Parkes (1989) explains that personal control effects how individuals perceive themselves and their position in the organisation, how they value their own personal qualities, and the scope they perceive for creating opportunities for control. Competencies in the self-management cluster may be a set of individual differences that frame individuals' self-perceptions, and their ability to cope with low levels of social support. This theory is derived from human expectancy theory, and suggests that those who expect outcomes to be determined by an internal locus of control consider that their work outcomes are governed by their own actions, rather than those of someone else. Therefore, from this perspective, self-management dimensions such as emotional self-control and initiative will internally govern an individual's ability to achieve desired outcomes at work, therefore rendering the influences of others as less important. However, these interpretations are speculative, as control as a separate construct was not assessed in this research design. This discussion provides insight into the value of adopting control as another variable in future research.

The social awareness and relationship management clusters of EI were considered to increase the experience of stress, on the basis that such individuals would take on responsibilities related to others, and the organisation

more broadly. This involves being active in business interests (service orientation and organisational awareness). Moreover, such individuals would invest time and other resources in interpersonal concerns, and other people more generally. The notion of 'people oriented responsibilities' may provide some explanation of the experience of stress in individuals who demonstrate these competencies. As established in connection with Hypothesis One, emotional intelligence is positively related to LMX quality, which suggested that EI competencies established an individual as trustworthy, and a sound investment to whom responsibility could be delegated. It is possible that EI competencies foster behaviours that involve individuals engaging more frequently with others, and even being given people management roles.

This has implications for the leadership-making role explained by LMX theory and therefore, explains some basis for the non-linear relationship between LMX and stress. Given that the results in connection with H10b illustrated that high LMX increased the frequency of stress experienced, those with high levels of EI are more likely to engage in high quality leader-member exchanges, and are therefore more likely to be given management responsibilities. Consistent with this notion, this research found that employees who had management positions experienced more stress than those not in management roles, on both frequency scales: job pressure, and lack of support (described in Section 7.1.2 relating to stress). This may be the result of people management roles, and the increased networking and collaboration responsibilities.

8.7.1 How emotional intelligence can contribute to understanding the relationship between LMX and stress

It has been confirmed that emotional intelligence is a direct predictor of the quality of LMX, but that, overall, EI does not significantly affect stress. However, Hypothesis 13 postulated a moderating role of EI in the role that LMX has in reducing stress. Specifically, it was expected that EI would affect how LMX impacted on stress. This was expected based on theory of emotional intelligence which specifies that self-management skills would enhance an individual's ability to recognise their own strengths and limitations in assessing the impact of stressors (Abraham, 2000; Ashforth, 2001; Bar-On, 1997), and seek to develop relationships with others. Skills, such as relational abilities, have been positively related to EI, and expected to reduce stress. For example, Greeson (2001) found that cooperation, an EI skill, was essential to networking in hierarchical relationships. These competencies were expected to confound the positive outcomes of LMX when LMX quality was high, and also strengthen the negative outcomes of LMX when it was low, as high EI individuals would seek high quality relationships.

Contrary to expectation, the interaction between EI and LMX was not significant in the prediction of stress. Only supervisor liking, a control variable, was related to stress frequency on both dimensions, when assessing the impact of the EI-LMX interaction. This does not provide an adequate explanation for the non-significance of this finding. However, given the restricted range of LMX ratings, the generally high quality of LMX in the sample may have buffered the interaction results.

This may have resulted from the nature of the sample, where LMX relationships, particularly for clinical staff, are representative of a high LMX quality, as both senior members of staff, and employees work closely together on the same tasks. Although a formal relationship does exist, it is apparent that in this sample, the immediate hierarchical relationships are experienced informally, therefore limiting the range of LMX quality ratings. This may have influenced the EI-LMX interaction. Additionally, the sampling technique and distribution of surveys to participants meant that supervisors provided employees with surveys. It is possible that this method promoted responses from those who perceived high quality relationships with the supervisor, and non-respondent may represent a wider range of LMX ratings, specifically, the lower quality exchanges. However, access limitations restricted the possibility of an alternative method. Non-significant indications of the EI-LMX interaction influence on job pressure severity (Chapter 7, Figure 7.2) suggests that exploring the interaction of low EI and high LMX on reducing stress may be worthwhile, perhaps in a different sample where relationship structures are more pronounced.

Investigation of the role played by individual differences in the relationship between LMX and stress is relatively unexplored in literature (Martin et al., 2005). The present findings suggest that EI does not contribute to understanding the complex relationship between LMX and stress. However, it is possible that the distinctive healthcare setting may have influenced employee experiences of stress, as well as how leader-member exchanges and opportunities for leadership making are developed. This is explored further in the next section.

8.8 LMX and stress in healthcare settings

It has been established so far that high quality leader-member exchanges both decrease perceived stress intensity (perhaps because of the benefits of increased support from one's supervisor), and increase the frequency of stress experienced. It is also evident that an employee's emotional intelligence may contribute to the development of high quality leader-member exchanges, and, by inference, contribute to the process of leadership making. Employee emotional intelligence does not directly or indirectly affect stress. Having discounted the role of emotional intelligence in explaining the relationship between LMX and stress, the attention of this argument focuses on the impact of organisational and contextual factors.

8.8.1 The nature of the job

Job stress was experienced more frequently by employees who were in management roles, which may be expected (Frankenhaeuser et al. 1989; Turner et al. 1995). Such roles illustrate the argument presented here that this is the consequence of people-oriented responsibilities. However, in addition, the nature of clinical jobs may have further implications for stress, as the caring function is 'people orientated' (Sutton & Kahn, 1987). This theory suggests that employees in roles where the responsibility is more for others, than for tasks (as in administrative roles) is a significant and unique source of stress. Particularly, this type of work involves "unpleasant interpersonal decisions" (Ivancevich & Matteson, 1980, p.115). This is likely to be a large part of individuals' roles when their work is clinically oriented, as they are likely health professionals who, as part of their daily work, engage with individuals

who are unwell, and with whom unpleasant conversations are probable. In line with this, Vitello-Cicciu (2003) highlighted the negative effects of emotional labour on nurses, where their work involved being highly skilled in conducting appropriate social and emotional behaviour, to maintain the professionalism expected as part of their role. This demonstrates the significance of identifying clinical work roles, and the implications on the broad type to stressors they may encounter.

However, evidence from research conducted with hospital nursing staff (a similar sample to the current one) suggests that these interpersonal pressures are not always experienced negatively (Simmon & Nelson, 2001). The implication is that optimal stress levels create challenge in the role, but not burnout. Perhaps high quality leader-member exchanges have a moderating effect on the relationship between demanding roles and stress, a notion that was not tested in this research, and would need careful identification of the exact nature of the participants' daily role. It can be concluded from the job titles provided by participants in this research that the majority of staff had nursing roles, and were therefore closely involved with patients, and people-oriented responsibilities. The structure of work and working relationships will determine the extent to which LMX quality can influence employee outcomes. This is examined in the next section.

8.8.2 Work and organisational structure

An important finding of this research is that the quality of LMX relationships does influence employees' experiences of stress. This may suggest that, for the clinical roles which made up most of the current sample, both employees

and supervisors had a high degree of access to one another which enabled them to gain mutual benefits. It may be that the clinical nature of supervisors' and employees' work means that both members of the dyad perform the same tasks. The close proximity of their working roles may facilitate the effects of LMX on stress, whether they are positive or negative. Cogliser and Schriesheim (2000) reported that workgroup cohesion was positively related to LMX quality, suggesting that team cohesiveness is an important outcome for the employee and the organisation. However, Brazier (2005) highlights the difficulty in achieving proximity in "clinical" work spaces. Although the setting for most of the roles examined in this research are ward-based, Brazier (2005) is suggesting that informal, or social forms of interaction are limited by structures inherent to hospitals, like the physical layout of the work environment. Additionally, there may be implications for other barriers to social cohesion, which facilitate high quality LMX relationships, for example, hierarchical structure, and inflexible rules and procedures (Pillai & Meindl, 1998; House et al., 1991). The removal of such barriers, characteristic of bureaucratic organisations like the NHS, would aide input into decision making, and communication, so that direction, encouragement, and information from the supervisor was clear and timely.

For example, where high LMX produces low stress intensity, the close working relationship, characterised by support, where both members work together on a ward, may strengthen the experience of low stress. Likewise, this close proximity to supervisors may strengthen the experience of increased stress frequency, as the employee is more accessible to the supervisor for the delegation of responsibility. Therefore, the clinical nature of the work

performed by most individuals in this sample means that supervisors and employees often engage in the same professional role (for example, staff nurse and nurse), and may explain how LMX affects stress. Similar contextual variables such as unit size have been found to affect LMX (Green, Anderson & Shivers, 1996). Generally, it has been found that the greater the number of employees for which a single leader is responsible, the lower the quality of the LMX relationship as supervisors have limited availability of time and resources (Yukl, 1994).

Although the present research was focused on the effects of a dyadic unit of analysis (a supportive leader-member exchange relationship) on employee experiences of stress, it is inevitable that the larger NHS structure will also determine these relationships and levels of stress. As has been presented in other research (Ivancevich & Donnelly, 1984; Sinha & Nayyar, 2002), rigid and tall organisational forms do not support high quality relationships, and foster stress through a lack of perceived control over the coordination of their work. The NHS is one of the UKs largest organisations and it is therefore important that this research informs and provides some evidence that fostering and supporting close working partnerships, possibly by the flattening of hierarchical structures, will contribute to the management of stress.

Cummings et al. (2005) stated that organisational restructuring had significant effects on nurses, however, nurses who worked in resonant leadership environments (with supervisors who are sympathetic to the negative experiences of employees), experienced fewer negative effects. This reflects Goleman et al.'s (2002) assertion that effective leaders are empathetic and

supportive. However, during times of change (which is pertinent to several of the sites investigated in this research current), evidence suggests that effective leadership may be particularly important. Cummings et al. (2005) also suggest that hospital restructuring, especially that which threatens unemployment, can cause negative employee outcomes. Stordeur et al. (2001) report that much research assessing stressors in nursing staff are organisational in nature. Specifically, constantly evolving technology means increased demands in learning new applications, nursing shortages (Janssen et al., 1999), and lack of advancement in the profession have been sited. Therefore, it is evident from theory that hospital staff are susceptible to wider organisational factors, and perhaps cultures, that influence their experience of stress, in particular, change (Noblet et al., 2006). In particular, it can be inferred from the findings in this research that employees perceptions of outcomes are impacted by changes detailed in Agenda for Change, and the implications of the knowledge and skills framework detailed in Chapter Six.

8.8.3 Perceived social support

Finally, this research did not support the expectation that social support is related to emotional intelligence (H2) or LMX (H11). As would be expected, perceived organisational support explained some significant changes in the perception of work-based social support. This finding suggests that social support will be experienced if the individual feels the organisation is committed to its employee's well-being (Eisenberger et al., 1986).

8.9 The effects of EI and LMX on performance, organisational commitment, and job satisfaction

Hypotheses 3, 4, and 5 proposed relationships between employee emotional intelligence and employee performance, organisational commitment, and job satisfaction, respectively. The results indicated that only performance had a significant relationship with EI. Employee and supervisor ratings of performance were not significantly different, therefore, the supervisor rating was used. Similarly, the examination of the relationships between leader-member exchange and these variables (Hypotheses 7, 8, and 9) determined that LMX only had a significant relationship with performance. These findings and possible explanations are now discussed.

8.9.1 The role of EI in predicting performance

The overall measure of emotional intelligence was significantly related to performance. Emotional intelligence has been consistently and positively linked to a variety of performance indicators, for example, organisational advancement, achievement of targets, and a range of more organisational level performance outcomes. Examples of these are turnover rates, revenue, and levels of commitment (Slaski & Cartwright, 2002; Tischler, Biberman, & McKeage, 2002; Kelly & Caplan, 1993; Dulewicz & Higgs, 2000). The large variety in chosen performance outcomes makes comparability of the results with other research difficult.

However, all the findings, including those presented in the present re-

search, support the propositions made by advocates of EI (Goleman, 1998; Higgs, 2004). Goleman (1998) specified that conscientiousness, adaptability, and achievement drive (all dimensions of the self-management cluster) would predict performance. However, the present study found that relationship management competencies predicted performance more than any other competency cluster. This is more consistent with the claims made by Steele (1997) who found that the relationship management cluster related highly with high performers who used their skills of influence and persuasion to achieve. Steele also suggested that empathy was imperative to modern organisations, in order that individuals would understand each other accurately, and prevent the experience of stress. The implication of this statement was that modern organisations would require more of these competencies to cope with more demanding roles. As Landale (2007) has recently stated "we work in structures which are much flatter than ever. We have to be much faster on our feet with both colleagues and clients and, whatever the team structure, there is increasing priority for us to build the relationships we need - fast. In this context EQ (emotional quotient) is the glue that holds people and teams together" (p.24).

As mentioned, the measure used to rate performance is important. This research chose to utilise a performance measure which was based on the employee's last appraisal. This, it was felt, would capture the appraisal of that employee independently of the other questions asked in the survey. However, it was expected that the supervisor who was rating performance also appraised the employee, and therefore, biases based on other factors, may have impacted this result. For example, supervisor liking, which was

included as a control variable in the regression equations also was significantly related to performance.

High relationship management competencies would mean that individuals more frequently engage with others, perhaps on the behalf of the supervisor, or the organisation generally, resulting in stress. The characteristics displayed as part of emotional intelligence may be appraised as high performance, and possibly contribute to the development of high quality LMX relationships, as described in the role-making process of fostering trust through the delegation of tasks that are performed well. This establishes performance and LMX quality as a cyclical process. The role of LMX in performance is examined next.

8.9.2 The role of LMX in predicting performance

LMX was found to explain a significant amount of variation in performance. This is consistent with evidence that employees who engage in high quality exchanges with their supervisors are more involved in challenging tasks, and are more innovative and creative (Tierney, Farmer, & Graen, 1999).

However, performance was also explained by the extent to which the supervisor liked the employee, and the length of time that they had been in a dyadic relationship, although it is expected that these two variables influence each other also, as affectivity increases over time. Additionally, it must be recognised that the performance variable was measured with items asking the supervisor to describe how they rated the employee's performance at the most recent appraisal. Although there may be a natural bias in the results emanating from common-source bias (Wayne & Ferris, 1990), the predicting

effects of EI and LMX on performance are significant and consistent with theory.

8.9.3 The role of EI and LMX in predicting organisational commitment and job satisfaction

Emotional intelligence and leader-member exchange were expected to be positively related to employee work-related attitudes. In this study, organisational commitment (H4, H8) and job satisfaction (H5, H9) were the outcomes of interest. As key positive employee outcomes, it was important that these relationships were tested, in order to inform the healthcare context about all the possible employee well-being outcomes of developable constructs like EI and LMX. It was expected that constructs that can be developed would have a greater impact on informing organisations how to progress. For example, Vitello-Cicciu (2003) highlighted the negative effects of emotional labour on nurses, claiming that exposure to patient suffering and the emotional demands of the job required emotional intelligence as a set of skills to enable coping, and reduce high levels of turnover due to dissatisfaction. The direct link made between well-being outcomes and organisational outcomes like turnover establishes predictors of employee outcomes vital to organisations.

In the present study, no relationships were found between EI, LMX, organisational commitment and job satisfaction. These results infer conflict with suggestions by Luker et al. (2000). They found that having skills in developing relationships with patients, interpreting their concerns, and anticipating their needs (competencies encompassed in emotional intelligence) increase job satisfaction, by connecting more to the patient experience. From

the regression models assessing the impact of the control variables, EI, and LMX on these outcomes, it was evident that perceived organisational support accounted for most of the variance in commitment and satisfaction, illustrating the value that employees in this sample attach to feeling valued by the NHS, particularly during times of extreme change and job uncertainty. The fact that social support also does not feature as explaining variations in employee outcomes, further demonstrates that organisational level, and supervisory level support (through LMX) is important to employees. It is possible that this is also the result of wide-spread organisational change.

8.10 Limitations

There are several limitations that may be addressed in any replication of this research. They are largely methodological. The first is that, although a questionnaire was used to gather appropriate data, and the instruments used could ensure triangulation of responses through multiple sources, some bias in responses is inevitable. The sensitive nature of some of the items in the questionnaire means that some responses are subject to a degree of bias. Secondly, not all potentially influencing contextual factors could be controlled, and therefore there may be variables that could arise from further research in validating the presented model would account for. In addition to this, the researcher was not in a position, due to access restrictions, to use other methods, like interviews or observations, to explore other factors, as all respondents were anonymous.

The third main limitation of the study, that is common to all survey methods, is that it was limited only to those individuals who are willing to

respond. This created a restriction in responses and therefore, a restriction in the range of ratings that could be tested. Due to the multivariate nature of this research, the questionnaire administered was necessarily lengthy, and may have had a detrimental effect on response rates. An administrative limitation compounded this, as members were administered their version of the survey through their supervisors, for logistical constraints on access to identify participants. This may have influenced how many members responded, and also how they responded. The researcher to assure participants that only the researcher would have access to their responses, and that their participation would be completely confidential. The restrictions on size and willingness to participate prevented the ability to gather data about the supervisors emotional intelligence, which may have been an influencing factor in the nature of the relationships tested.

Another reason for this limited range may, in retrospect, be the result of the predominately clinical nature of the roles of respondents, where the supervisor-employee relationship is less structured and formal than expected from such a bureaucratic organisation.

Finally, the cross-sectional design of this study, and the necessity for participants identity to be protected, resulted in a limited knowledge and understanding of the roles of participants. Had the researcher been given fuller access, it would have been advantageous to interview staff to gain a richer, deeper understanding of what their roles involved. This hindrance means that some conclusions about the nature of participants' work cannot be drawn without making assumptions, and inferences based on literature. In this study, literature about nursing has predominately informed arguments.

as nursing staff composed the majority of the sample.

A number of these limitations were overcome however. Bias in responses can be identified through using a second source for rating variables. The results suggest that both ratings of factors were almost identical, therefore reliable. Additionally, although not all control variables can be accounted for, three were considered, and a large variety of demographical data was gained. Finally, some qualitative data were taken from semi-structured interviews with gatekeepers to each of the five hospital settings. This allowed some insight to the cultural, contextual, and situational factors which may impact the nature of responses. This had value in providing the researcher with an understanding of some significant changes currently affecting the organisations. This was a very important factor to consider in the research, and further study in this area may introduce theories of change management to the further development of the model presented here. Likewise, this research did not include any variable that measured employee control or decision latitude. Therefore, discussion around the links of this to LMX is tentative and conceptual, as no evidence is provided from the results of this study.

8.11 Summary

This chapter has shown some research hypotheses to have been upheld, thus validating, in a healthcare setting, theories about the role of individual differences and leadership relationships in influencing key employee outcomes. Hypotheses which were not supported also were considered, and the implications of these results for theoretical development and potential explanations of these results proposed. One possibility which has emerged from this dis-

cussion is that healthcare may have a unique set of contextual factors that explain results beyond the capabilities of established theory. Such conditions are: working a constantly changing environment, where changes affect employment conditions; the clinical nature of work means that the function of most participants' roles are "people orientated"; supervisors and employees, although are members of a hierarchical dyadic relationship, perform very similar roles; and the team-based organisation of work has implications for the rigid structures around which work is organised in large healthcare organisations, specifically the NHS. All of these inform the experiences of supervisor-employee relationships and stress.

However, two other important concepts are supported from this reflection on the results from the research. Firstly, emotional intelligence does influence the quality of the leader-member exchange, but less so for other work relationships. The other significant indication from this discussion is the importance of considering stress on continuums of severity and frequency, as they each have distinct implications for how high quality relationships are developed and managed, and provide a rationale for the curvilinear stress-LMX relationship, where high LMX may increase demands, therefore stress, and low LMX decreases support, therefore LMX. These relationships contribute to the existing theory on individual differences, hierarchical relationships, and employee outcomes, which are defined clearly in the concluding chapter.

Chapter 9

Conclusion

9.1 Summary of study and findings

This chapter reflects on the findings from the research presented in this thesis, and identifies the contributions it offers the organisational behaviour research community, and the healthcare service in Britain. The other purpose of this chapter is to highlight areas for future development of the concepts generated from the findings and how they may be improved upon in further work. Firstly, however, a summary of the study and its main findings is provided.

This research aimed to develop a model that explained the relationships between emotional intelligence (as a model of individual differences), the quality of hierarchical relationships (utilising leader-member exchange theory), and a selection of employee outcomes. Stress was of particular interest as an outcome, as it was considered that high quality leader-member relationships may have unique effects on stress. This model was tested by postulating a group of hypotheses to examine the influences of all of these relationships, informed by theory. Five National Health Service (NHS) hos-

pitals were chosen for testing this model, as the NHS is an organisation with a tall organisational structure provided large numbers of vertical dyads, and was distinctive in the way in which stress was experienced. A cross sectional survey design was chosen, and data were analysed using regression analysis. This measures the extent to which variables covary, although there are limitations on the extent to which causal relationships can be determined. Some hypotheses were supported, and some were refuted. These were discussed in Chapter Eight, where characteristics inherent in the organisation were considered to influence the relationships expected.

The results did not support expectations about the role of emotional intelligence and leader-member exchange in predicting work-based social support. Social support referred to the utilisation of a network of others to help. It is speculated that support from friends and family may account for this, although social support from friends and family was not related to any outcome variable. Furthermore, emotional intelligence and leader-member exchange did not relate to organisational commitment or job satisfaction, which was contrary to expectation. However, perceived organisational support explained much of the variation in ratings of employee attitudes, which highlighted the importance of the organisation demonstrating commitment and value to employees to create positive employee attitudes. This was more important that individual differences or relationship quality at the dyadic level, through LMX.

EI and LMX were related to the supervisors' rating of performance, although it is a tentative relationship, as liking accounted for much of the high performance ratings. Therefore, high supervisor rating may be the result of

affective attitudes towards employees.

However. two very important confirmations were supported from the evidence in this research. Firstly, emotional intelligence was found to predict the quality of leader-member exchange. This has important implications as emotional intelligence is a competency-based model of individual differences. which may inform the development of relationships with supervisors. This would involve being trustworthy and demonstrating reciprocal behaviours. such as obligation, support, and respect. Performance would extend beyond that expected contractually. Secondly, leader-member exchange influenced the way in which stress was experienced, particularly the frequency with which employees felt job pressure. This relationship was curvilinear, that is, high stress was experienced with high and low quality LMX. However, stress severity had a linear relationship with LMX, describing that LMX was related to lower stress intensity. The contributions of these to existing theory are defined next. Finally. the interaction between EI and LMX was not supported, suggesting that individual differences did not moderate the extent to which LMX impacted stress outcomes. It is considered that an interaction effect was not found because of the limited range in ratings of emotional intelligence and leader-member exchange.

9.2 Theoretical contributions

Important contributions have been made to theory in spite of the limitations discussed in Chapter Eight. Three key theoretical contributions of this study were identified. Firstly, the research explored the role of emotional intelligence in the process of developing leader-member exchanges, and provided

evidence that this set of personal competencies does determine the development of high quality hierarchical relationships, and contributes to the process of leadership making. This validates EI as a model of individual differences that contributes to the development of outstanding leadership skills in employees. EI also has implications for LMX theory. It suggests that individuals with certain characteristics are more likely to effectively develop high quality hierarchical relationships. However, it has not been possible to determine which characteristics predict this, as EI clusters on their own, did not provide explanatory power. However, this does illustrate that EI is a useful and more powerful model for determining LMX quality outcomes if measured as a complete set of competencies, rather than in smaller clusters.

The empirical link between emotional intelligence and leader-member exchange has been under-examined in emotional intelligence, LMX, and leadership literature generally. However, the notion that emotional intelligence contributes to leadership skills is a broadly explored area, and the present research contributes to literature about the role of EI in the broader leadership field. This area of literature centres on some distinct agendas, for example, developing leader's abilities to create a positive working environment, and having a positive impact on others (Goleman, 1998; George, 2000; Dell, 2002; Hogen et al., 1994). Other research has been interested in the use of EI as a vehicle of social influence (Wasielewski, 1985), and related to this, previous research has also concentrated on the role of EI in leadership effectiveness, although this link is largely theoretical (Gardner & Stough, 2002).

The EI-leadership link has neglected the role of EI in employees' abilities

to conduct effective relationships with supervisors. This research addresses this defined gap in this literature, by presenting empirical evidence that EI of the employee contributes to the effectiveness of hierarchical relationships. Therefore, the aforementioned literary areas will be enriched by the assertion made in this study, and can address other competency-based approaches to developing leader-member exchanges, which, it has been confirmed in this research, have positive employee well-being outcomes. The use of a multi-rater instrument to measure EI facilitated substantial data collection. Multiple sources of EI helps to validate the findings.

A second contribution is that the research provides evidence that LMX has influences that are positive and negative for employee stress. Specifically, high LMX partially explains lower levels of stress intensity, conceptually believed to be the result of increased supervisory support, encouragement, and trust. However, high LMX also partially explains higher levels of stress frequency, suggesting that increased demands and obligations create higher workloads for employees, through the process of delegation and obligations, characteristic of high LMXs. This finding implies that a balance of support and demands is required to manage stress. Therefore, demands and support are two elements of LMX, the effects of which may be understood using demand-control-support models. Furthermore, it demonstrates the importance of making a distinction between how intensely and how frequently stress is experienced, as different factors may contribute to each. This distinction is often overlooked in research, and contributes a new understanding the relationship between LMX and stress.

Such findings also have theoretical implications for models of demand,

control, and support. While Karasek's (1979) model referred to concepts like demand and support generically, this research provides greater depth to the interpretation of these. Demands are evidenced in this study as those which are experienced frequently by employees, rather than a previously held assumption that demands caused stress due to their extent beyond an individual's ability to cope. Rather, an individual's ability to cope may be affected more by support provided, specifically from the supervisor, and less so from co-workers. Therefore, Karasek's model of demand, control, and the later addition of support, is refined in healthcare settings to: demand frequency, control (although not tested here), and support from supervisors.

Furthermore, the interpretation of generally high and restricted ratings of LMX quality, suggested that the close proximity of supervisor-employee working relations in clinical settings may have facilitated increased stress through more frequent demands. With further testing of findings, there are contributions to other forms of management. For example, in virtual organisations, where management input are necessarily distant, job stress frequency may be lower. However intensity may increase, due to less exposure to supervisory support. These results and interpretations also imply that employees in less structured organisations may experience stress differently than the sample featured in this study, although understanding how would require similar research in different settings.

Still considering the contributions to LMX literature, the link between LMX and performance supports the notion that the quality of the leader-member exchange develops through repeated performance and the consequent further delegation of tasks. For every task performed well, trust is

considered to increase (Graen & Uhl-Bien, 1995). This cyclical dynamic of relationship development suggests a dual direction of causation, although this could not be confirmed in a cross sectional research design. The empirical LMX-performance link supports previous claims (Tierney, Farmer, & Graen, 1999), and suggests a conceptual rationale which provides and understanding of the nature of the LMX construct.

The third main theoretical contribution is the unsupported hypothesised relationship between emotional intelligence and stress. This challenges research and conceptual assumptions that stress results from a lack of self management and relationship management competencies, and suggests that other factors, distinct from individual level stressors account for variations in employees' experience of stress (Ashforth, 2001; Bar-On & Parker, 2000; Martinez, 1997). The present research suggests that organisational and task characteristics influence stress in a healthcare setting, specifically, the people-orientated nature of clinical work and the large organisational structure. These findings have implications for the NHS, its management and structure, and the endeavours to develop employee leadership competencies. These implications are addressed in the final chapter, along with suggestions for expanding on the ideas addressed in this research.

9.3 Implications for management

This research, as well as contributing to the understanding of the antecedents and consequences of LMX, and the roles of EI and social support, also contributes to practical management applications within a particular organisational setting, secondary healthcare in Scotland. This exploration is timely

for the National Health Service (NHS), as the organisation is developing a portfolio and programme of staff competencies, building partnerships, and developing leaders. "As a large bureaucratic organisation, the NHS has historically been marked by an emphasis on management rather than leadership" (Edmonstone and Western, 2002, p.35). However, the value of the development of leadership skills in a range of staff is now being realised by the organisation: "middle and junior managers and clinical professionals...are seen to be simply dependent 'followers' rather than leaders in any sense themselves" (Edmonstone and Western, 2002, p. 35). The notion of leadership making is therefore a valuable contribution to addressing the traditional approach of leadership.

Specifically, the link between emotional intelligence and leader-member exchange evidenced in this study highlights the importance of competencies in developing leadership behaviours and managing hierarchical relationships. This provides support for promoting the Knowledge Skills Framework, which the NHS use to benchmark competencies, and is very reminiscent of the facets of emotional intelligence. However, tailored educational solutions for managers and clinical employees are implied. Particularly, EI could inform team-based skills, and effective communication and leadership.

Furthermore, the research assesses and provides independent intelligence about the effectiveness of working partnerships. This is an area of great interest to NHS management, as developing partnerships across all levels of the NHS is a relevant and current concern. Specifically, this study provides a framework for assessing which qualities are favourable in the selection of employees, and the development of these staff (Cherniss, 1999; Cadman,

2001; Boyatzis & Oosten, 2002). Selection which is partially based on EI may result in hiring individuals who have the competencies necessary to participate in close working teams, and ultimately, cope with the emotional demands of working with patients. Effective teams may be created by using EI as a selection criterion.

Additionally, the research identifies antecedents of stress for employees. The facets of LMX may have more complex effects on stress, as they require high levels of obligation and trust. Of particular concern to this project, are the role that relationship management EI competencies have in building relationships with supervisors, and the extent to which support is reciprocated from the leader to manage the experience of stress. Stress is considered in terms of job stressors and lack of support, both of which may derive from high quality, highly demanding and obligatory relationships with supervisors. This information can be utilised in the development of stress management interventions, employee assistance programmes (EAPs). The links found between LMX and stress suggest that managers, in addition to providing support to employees, should also provide moderate amounts of delegated tasks, particularly related to the frequency with which they make demands. Therefore, not only can managers be informed about task management, employees can be informed about how to participate in high quality LMX's, to manage workload, and therefore, stress.

At the time of this research, the NHS in Scotland was experiencing a process of modernisation, which involved several activities central to the function of human resource management (HRM) (Arnold et al., 2003). For example, a standardisation of roles, payment bands, and contractual agreements cre-

ated not only uncertainty for service providers, but also had implications for management. Additionally, a Knowledge and Skills Framework had been developed to ensure that each role within the organisation appropriately utilised desired competencies. This framework consisted of sixty four competencies, which are related to task-specific competencies, and other skills, for example, relationship and team-working skills (Department of Health, 2003). Thus, this research could inform the development of personal development plans (PDPs) to focus on an assessment of facets of emotional intelligence, in order that some areas could be highlighted for personal development.

9.4 Directions for future research

In light of the findings from this research, and the restrictions of the study, there are several areas which could be addressed in future development of the concepts discussed. Some are theoretical, and some are methodological improvements on the presented study. The latter are addressed first.

A different epistemological position could support the use of a different approach to examining individual differences, their effects on work-place relationships, and the effects of high quality relationships on stress outcomes. Specifically, a case-study approach, using a range of methods, may uncover greater variation in the perception of LMX quality, and the influences on the development of such relationships. Using methods which would expose a full range of experiences would greatly inform the research presented in this thesis.

There are some methodological changes that could be tested to confirm or contest the findings of the current research, and therefore, the theoretical

claims that can be made for the relationships examined in this thesis. For example, restrictions on sample size and willingness to participate prevented the ability to gather data about the supervisors emotional intelligence, which may have been an influencing factor in the nature of the relationships tested. Therefore, future research may consider employing a multiple rating of supervisor emotional intelligence and the effects on LMX. In relation to the distribution method employed for this research, limitations to response bias may be overcome with different access arrangements. More diverse ratings of emotional intelligence and leader-member exchange quality would provide an opportunity to test the interaction between the two concepts, for their effects on stress. This would be very valuable.

There are a number of conceptual areas for development and examination too. Firstly, this research could be informed by using a theory of change management as a theoretical perspective for considering the effects of emotional intelligence and leader-member exchange on employee outcomes. This is suggested specifically, as continual change is a feature of the British NHS (Doyle, 2001). Secondly, the model generated from the findings of the presented research may be tested in other organisations, selected for having very distinct supervisor and employee roles. This may reduce the effects of organisational influences that are considered to have a bearing on this study.

Additionally, it would be valuable to examine more closely the antecedents of social support, and to assess why emotional intelligence influences supervisor-employee relationships, but not other forms of support. Although social support was assessed here as work-based and non-work based, as informed by factor analysis, using co-worker exchange as an approach to examining

the role of emotional intelligence may contribute a deeper understanding of how supervisors and other work-based relationships differ. The influence of co-worker exchange may have a distinct impact on stress, or it may act in the same way as social support. This could be explored. Additionally, it is implied from these findings that theories of control may contribute understanding to the nature of the relationship between LMX and stress. As no variable measuring control, autonomy, or decision latitude was included in this research, conclusive associations cannot be determined. Therefore, it is recommended that the relationship between LMX and the demand-control-support model be examined for its effects on employee stress, which would address a gap in existing literature.

The final conceptual gap which has arisen from this research, and may need testing in other settings, with fuller ranges of ratings, is the interaction between emotional intelligence and leader-member exchange on employee stress. Unless this notion can be theoretically contested, evidence in this research suggests that emotional intelligence could moderate the impact of high LMX on stress. It would be valuable to examine this in relation to a high stress and a low stress outcome, on severity and intensity dimensions.

An understanding of the relationships identified here will be valued in research and management communities, as emotional intelligence as a competency is still a relatively new concept, and the linkage of leader-member exchange to antecedents and consequences is unexplored (Martin et al. 2005). There may be business level implications to knowing the antecedents of employee outcomes (Spencer, 2001), so that for example, performance is promoted, and stress is limited. In conclusion, these suggestions for further re-

search into the relationships between emotional intelligence, leader-member exchanges, and employee outcomes (particularly stress), will contribute significant understanding about the influences of individual differences in how work-relationships are conducted, and the implications for employee performance, attitudes, and stress.

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Appendix 1

Interview Questions

These questions are to supplement information about what it's like to work in the NHS. I am really interested to hear from you, what the effects of changes recently, and how they affected the overall context and work environment for my participants.

1. How would you describe the current mood of this organisation? (where the sample was taken from).

2. What can you identify as the main changes that have taken place in the last 6 months?

3. Have there been, in this setting, many instances of change of manager (s) for team members? *(Only relevant to those who are in organisations affected by the changes)*

4. Is there, so far, any changes in the way relationships are characterised?

   a. How have relationships changed?
   b. How would you describe working relationships in this organisation?

5. Is there, so far, evidence of changes in stress levels among members of this organisation?

   a. What has changed?
   b. How would you describe stress levels among members of this organisation?

6. How would say these changes have affected

   a. Managers?
   b. Other staff? *(Only relevant to those affected by changes)*

I am interested to find out about how the context of this organisation may have affected how participants completed the survey, and whether they have reflected on issues such as emotional intelligence, leadership, working relationships, and stress. So:

7. How did you select/what selection criteria were used for choosing who was sent a survey?

8. What, if any, training in the areas of EI, leadership/management development, and stress have participants has exposure to?
   a. What does it consist of?

Finally, to get an overall feeling for the NHS as a place to work, I have two more questions

9. Thinking of things like cultural, structural and employment relations factors, how would you characterise the NHS as an employer/place to work overall?

10. Is there anything else you feel I should know that can help my understanding of the environment/context of NHS and my sample?

NB. Items in bold are for those who have not been affected by changes.

THE UNIVERSITY OF STRATHCLYDE IN GLASGOW

Dear Respondent,

I would very much appreciate your participation in completing this questionnaire, which is being conducted for the purposes of my Ph.D. research at Strathclyde University.

Your responses are of great importance, as this survey forms a critical part of the study. This research is about the impact of emotional intelligence on managers and their employees, and how this affects stress and performance. I therefore value your cooperation very highly Feedback from this research will also provide beneficial information about a variety of issues related to relationships and stress in your work place.

Participation in this study will be anonymous and information in the questionnaires will be completely confidential and for my research purposes only. Please try to answer ***all*** questions to the best of your knowledge and keep in mind that there are no right or wrong responses.

If you wish any further information about the study please feel free to contact me at the address, phone or email below.

Hannah Hesselgreaves
Department of Human Resource Management
University of Strathclyde
50 Richmond Street, Glasgow, G1 1XU
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On the following pages are several different kinds of questions about you, your organisation and your managers. ***Please answer each question with the supervisor who handed you this questionnaire in mind. Even if you have not worked with that manager for long, your answers are still very useful. When you have completed the questionnaire, please enclose it in the envelope provided and seal. The deadline for returning is Monday 3rd July.***

Thank you for your time.

Employee Questionnaire

Part 1. Your work

The following statements are about different aspects of your job. Ask yourself: How satisfied am I with this aspect of my job? Please tick the appropriate box next to each statement.

		Extremely satisfied	Very satisfied	Satisfied	Somewhat satisfied	Not Satisfied
1	Being able to keep busy all the time	☐	☐	☐	☐	☐
2	The chance to work alone on the job	☐	☐	☐	☐	☐
3	The chance to do different things from time to time	☐	☐	☐	☐	☐
4	The chance to be "somebody" in the community (i.e. outside work)	☐	☐	☐	☐	☐
5	The way my boss handles his/her workers	☐	☐	☐	☐	☐
6	The competence of my supervisor in making decisions	☐	☐	☐	☐	☐
7	Being able to do things that don't go against my conscience	☐	☐	☐	☐	☐
8	The way my job provides for steady employment	☐	☐	☐	☐	☐
9	The chance to do things for other people (i.e. at work)	☐	☐	☐	☐	☐
10	The chance to tell people what to do	☐	☐	☐	☐	☐
11	The chance to do something that makes use of my abilities	☐	☐	☐	☐	☐
12	The way company policies are put into practice	☐	☐	☐	☐	☐
13	My pay in relation to the amount of work I do	☐	☐	☐	☐	☐
14	The chances for advancement on this job	☐	☐	☐	☐	☐
15	The freedom to use my own judgment	☐	☐	☐	☐	☐
16	The chance to try my own methods of doing the job	☐	☐	☐	☐	☐
17	The working conditions	☐	☐	☐	☐	☐
18	The way my co-workers get along with each other	☐	☐	☐	☐	☐
19	The praise I get for doing a good job	☐	☐	☐	☐	☐
20	The feeling of accomplishment I get from the job	☐	☐	☐	☐	☐

The following questions relate to how you feel about the organisation. Please answer by ticking the appropriate box.

		Strongly disagree	Moderately disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Moderately agree	Strongly agree
21	I am willing to put in a great deal of effort beyond that normally expected in order to help the organisation be successful	☐	☐	☐	☐	☐	☐	☐
22	I talk up this organisation to my friends as a great organisation to work for	☐	☐	☐	☐	☐	☐	☐
23	I feel very little loyalty to this organisation	☐	☐	☐	☐	☐	☐	☐
24	I would accept almost any type of job assignment in order to keep working for this organisation	☐	☐	☐	☐	☐	☐	☐
25	I find that my values and the organisation's values are very similar	☐	☐	☐	☐	☐	☐	☐
26	I am proud to tell others that I am part of this organisation	☐	☐	☐	☐	☐	☐	☐
27	I could just as well be working for a different organisation as long as the type of work was similar	☐	☐	☐	☐	☐	☐	☐
28	This organisation really inspires the very best in me in the way of job performance	☐	☐	☐	☐	☐	☐	☐
29	It would take very little change in my present circumstances to cause me to leave this organisation	☐	☐	☐	☐	☐	☐	☐
30	I am extremely glad that I chose this organisation to work for over others I was considering at the time I joined	☐	☐	☐	☐	☐	☐	☐
31	There's not too much to be gained by sticking with this organisation indefinitely	☐	☐	☐	☐	☐	☐	☐
32	Often, I find it difficult to agree with this organisation's policies on important matters relating to its employees	☐	☐	☐	☐	☐	☐	☐
33	I really care about the fate of this organisation	☐	☐	☐	☐	☐	☐	☐
34	For me this is the best of all possible organisations for which to work	☐	☐	☐	☐	☐	☐	☐
35	Deciding to work for this organisation was a definite mistake on my part	☐	☐	☐	☐	☐	☐	☐

This next set of statements reflects possible opinions you have about the support offered to you from the organisation. Please indicate the degree of your agreement or disagreement with each statement by ticking the appropriate box.

		Strongly disagree	Moderately Disagree	Slightly Disagree	Neither disagree nor agree	Slightly agree	Moderately agree	Strongly agree
36	The organisation values my contribution to its well-being	☐	☐	☐	☐	☐	☐	☐
37	The organisation fails to appreciate any extra effort from me	☐	☐	☐	☐	☐	☐	☐
38	The organisation would ignore any complaint from me	☐	☐	☐	☐	☐	☐	☐
39	The organisation really cares about my well-being	☐	☐	☐	☐	☐	☐	☐
40	Even if I did the best job possible, the organisation would fail to notice	☐	☐	☐	☐	☐	☐	☐
41	The organisation cares about my general satisfaction at work	☐	☐	☐	☐	☐	☐	☐
42	The organisation shows very little concern for me	☐	☐	☐	☐	☐	☐	☐
43	The organisation takes pride in my accomplishments at work	☐	☐	☐	☐	☐	☐	☐

Questions 44-46 are about your performance in this organisation. Please answer all questions by ticking the appropriate box.

		Yes	No
44	Have you been appraised or evaluated on your performance in the past 12 months?	☐	☐

Please answer with reference to the previous question.

		Poor	Fair	Good	Very Good	Excellent
45	**If 'yes'**, which of the following best describes how your performance was evaluated?	☐	☐	☐	☐	☐
46	**If 'no'**, how would you evaluate your performance in the last 12 months?	☐	☐	☐	☐	☐

Part 2. Your relationships at work

This part of the questionnaire relates to feelings you may have about your working relationships. Please complete the next section by indicating the extent to which you feel any of these at your work.

Not at all - 0 1 2 3 4 – very much

		0	1	2	3	4
47	My friends and family can be relied upon when things get tough at work	☐	☐	☐	☐	☐
48	The people I work with can be relied upon when things get tough at work	☐	☐	☐	☐	☐
49	My supervisor can be relied upon when things get tough at work	☐	☐	☐	☐	☐
50	My friends and family are willing to listen to work-related problems	☐	☐	☐	☐	☐
51	The people I work with are willing to listen to work-related problems	☐	☐	☐	☐	☐
52	My supervisor is willing to listen to work-related problems	☐	☐	☐	☐	☐
53	My friends and family are helpful in getting the job done	☐	☐	☐	☐	☐
54	The people I work with are helpful in getting the job done	☐	☐	☐	☐	☐
55	My supervisor is helpful in getting the job done	☐	☐	☐	☐	☐
56	My friends and family are easy to talk to	☐	☐	☐	☐	☐
57	The people I work with are easy to talk to	☐	☐	☐	☐	☐
58	My supervisor is easy to talk to	☐	☐	☐	☐	☐

The following questions and statements refer to your relationship with your supervisor. Please choose the response that best indicates how often each of the following apply.

		Not at all	Just a little	Moderate amount	Quite a lot	A great deal
59	Do you usually know how satisfied your supervisor is with what you do?	☐	☐	☐	☐	☐
60	How well do you feel that your supervisor understands your problems and needs?	☐	☐	☐	☐	☐
61	How well does your supervisor recognise your potential?	☐	☐	☐	☐	☐
62	What are the chances that your supervisor would help you solve problems in your work?	☐	☐	☐	☐	☐
63	Regardless of the amount of formal authority your supervisor has, what are the chances that he/she would 'bail you out' at his/her expense?	☐	☐	☐	☐	☐
64	I have enough confidence in my supervisor that I would defend and justify his/her decisions if he/she were not present to do so.	☐	☐	☐	☐	☐

		Extremely ineffective	Worse than average	Average	Better than average	Extremely effective
65	How would you characterise your working relationship with your supervisor?	☐	☐	☐	☐	☐

	strongly disagree – 1	*2*	*3*	*4*	*5 = strongly agree*
66.	I get along well with my supervisor.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
67.	Being supervised by this supervisor is a pleasure.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
68.	I think my supervisor would make a good friend.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

The following statements reflect work-related behaviours and relationships. Think about the interactions you've had with your co-workers (e.g. your colleague or supervisor) over the last several months and use the scale below to indicate how frequently you've shown each behaviour listed.

Item	***How often do you:***	Never	Rarely	Sometimes	Often	Consistently	Don't know
69	recognise the situations that arouse strong emotions in you?	☐	☐	☐	☐	☐	☐
70	have mainly positive expectations?	☐	☐	☐	☐	☐	☐
71	initiate actions to create possibilities?	☐	☐	☐	☐	☐	☐
72	anticipate obstacles to a goal?	☐	☐	☐	☐	☐	☐
73	show reluctance to change or make changes?	☐	☐	☐	☐	☐	☐
74	have a sense of humour about oneself?	☐	☐	☐	☐	☐	☐
75	encourage others' participation, in a group?	☐	☐	☐	☐	☐	☐
76	give constructive feedback?	☐	☐	☐	☐	☐	☐
77	adapt ideas based on new information?	☐	☐	☐	☐	☐	☐
78	set measurable and challenging goals?	☐	☐	☐	☐	☐	☐
79	solicit others' input?	☐	☐	☐	☐	☐	☐
80	take calculated risks to reach a goal?	☐	☐	☐	☐	☐	☐
81	believe the future will be better than the past?	☐	☐	☐	☐	☐	☐
82	give directions or demonstrations to develop someone?	☐	☐	☐	☐	☐	☐
83	look for feedback, even if hard to hear?	☐	☐	☐	☐	☐	☐
84	reflect on underlying reasons for feelings?	☐	☐	☐	☐	☐	☐
85	make yourself available to customers or clients?	☐	☐	☐	☐	☐	☐
86	publicly state everyone's position to those involved in a conflict?	☐	☐	☐	☐	☐	☐
87	relate well to people of diverse backgrounds?	☐	☐	☐	☐	☐	☐
88	make work exciting?	☐	☐	☐	☐	☐	☐
89	act defensively when receiving feedback?	☐	☐	☐	☐	☐	☐
90	bring up ethical concerns?	☐	☐	☐	☐	☐	☐
91	listen attentively?	☐	☐	☐	☐	☐	☐
92	stay composed and positive, even in trying moments?	☐	☐	☐	☐	☐	☐
93	lead by example?	☐	☐	☐	☐	☐	☐

Item	***How often do you:***	Never	Rarely	Sometimes	Often	Consistently	Don't know
94	act on your own values even when there is a personal cost?	☐	☐	☐	☐	☐	☐
95	know how your feelings effect your actions?	☐	☐	☐	☐	☐	☐
96	air disagreements or conflicts?	☐	☐	☐	☐	☐	☐
97	inspire people?	☐	☐	☐	☐	☐	☐
98	apply standard procedures flexibly?	☐	☐	☐	☐	☐	☐
99	have "presence"?	☐	☐	☐	☐	☐	☐
100	monitor customer or client satisfaction?	☐	☐	☐	☐	☐	☐
101	find a position everyone can endorse, in a conflict?	☐	☐	☐	☐	☐	☐
102	engage an audience when presenting?	☐	☐	☐	☐	☐	☐
103	state a need for change?	☐	☐	☐	☐	☐	☐
104	advocate change despite opposition?	☐	☐	☐	☐	☐	☐
105	get impatient or show frustration?	☐	☐	☐	☐	☐	☐
106	recognise specific strengths of others?	☐	☐	☐	☐	☐	☐
107	understand informal structure in the organisation?	☐	☐	☐	☐	☐	☐
108	behave calmly in stressful situations?	☐	☐	☐	☐	☐	☐
109	personally lead change initiatives?	☐	☐	☐	☐	☐	☐
110	get support from key people?	☐	☐	☐	☐	☐	☐
111	understand the organisation's unspoken rules?	☐	☐	☐	☐	☐	☐
112	keep promises?	☐	☐	☐	☐	☐	☐
113	understand historical reasons for organisational issues?	☐	☐	☐	☐	☐	☐
114	take personal responsibility for meeting customer needs?	☐	☐	☐	☐	☐	☐
115	acknowledge mistakes?	☐	☐	☐	☐	☐	☐
116	present yourself in an assured manner?	☐	☐	☐	☐	☐	☐
117	handle unexpected demands well?	☐	☐	☐	☐	☐	☐
118	articulate a compelling vision?	☐	☐	☐	☐	☐	☐
119	not show political savvy at work?	☐	☐	☐	☐	☐	☐
120	seek ways to improve performance?	☐	☐	☐	☐	☐	☐
121	acknowledge your own strengths and weaknesses?	☐	☐	☐	☐	☐	☐
122	see things from someone else's perspective?	☐	☐	☐	☐	☐	☐
123	believe oneself to be capable of a job?	☐	☐	☐	☐	☐	☐
124	cut through red tape or bends rules when necessary?	☐	☐	☐	☐	☐	☐
125	stay positive despite setbacks?	☐	☐	☐	☐	☐	☐
126	develop behind-the-scenes support?	☐	☐	☐	☐	☐	☐
127	persuade by appealing to peoples' self interest?	☐	☐	☐	☐	☐	☐
128	act impulsively?	☐	☐	☐	☐	☐	☐

Item	***How often do you:***	Never	Rarely	Sometimes	Often	Consistently	Don't know
129	not cooperate with others?	☐	☐	☐	☐	☐	☐
130	doubt your own ability?	☐	☐	☐	☐	☐	☐
131	avoid conflicts?	☐	☐	☐	☐	☐	☐
132	match customer or client needs to services or products?	☐	☐	☐	☐	☐	☐
133	establish and maintain close relationships at work?	☐	☐	☐	☐	☐	☐
134	hesitate to act on opportunities?	☐	☐	☐	☐	☐	☐
135	provide on-going mentoring or coaching?	☐	☐	☐	☐	☐	☐
136	have awareness of own feelings?	☐	☐	☐	☐	☐	☐
137	change overall strategy, goals, or projects to fit situation?	☐	☐	☐	☐	☐	☐
138	seek information in usual ways?	☐	☐	☐	☐	☐	☐
139	show attentiveness to peoples' moods or nonverbal cues?	☐	☐	☐	☐	☐	☐
140	learn from setbacks?	☐	☐	☐	☐	☐	☐

Part 3. Stress at work

The next sets of questions are about the stress you experience in your work. Regarding 5 as an average amount of stress experienced, please indicate how much stress you feel by ticking the appropriate box next to each item on the scale.

		0	1	2	3	4	5	6	7	8	9+
141	Having to perform disagreeable duties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
142	Working extra hours	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
143	Lack of opportunity for advancement	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
144	Having to take on new or unfamiliar duties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
145	Fellow workers not doing their job	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
146	Inadequate support from supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
147	Dealing with crisis situations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
148	Lack of recognition for good work	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
149	Performing tasks not in job description	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
150	Inadequate or poor quality equipment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
151	Having to take on increased responsibility	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
152	Periods of inactivity	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
153	Difficulty getting along with supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
154	Experiencing negative attitudes toward the organisation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
155	Insufficient personnel to handle workload	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
156	Making critical on-the-spot decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
157	Personal insult from customer/consumer/colleagues	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

158	Lack of participation in policy-making decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
159	Inadequate compensation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
160	Competition for business success and personal growth	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
161	Poor or inadequate support from supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
162	Noisy work area	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
163	Frequent interruptions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
164	Frequent changes from boring to demanding activities	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
165	Excessive paperwork	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
166	Meeting deadlines	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
167	Insufficient personal time (e.g., coffee breaks, lunch)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
168	Covering work for an employee	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
169	Poorly motivated workers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
170	Conflicts with other departments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

For each of the job-related events listed, please indicate the approximate number of days during the past <u>6 months</u> on which you have personally experienced this event. Tick zero if the event did <u>not</u> occur, tick 9+ for each event that you experienced personally on <u>9 or more days</u> during the past 6 months.

		0	1	2	3	4	5	6	7	8	9+
171	Having to perform disagreeable duties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
172	Working extra hours	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
173	Lack of opportunity for advancement	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
174	Having to take on new or unfamiliar duties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
175	Fellow workers not doing their job	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
176	Inadequate support from supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
177	Dealing with crisis situations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
178	Lack of recognition for good work	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
179	Performing tasks not in job description	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
180	Inadequate or poor quality equipment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
181	Having to take on increased responsibility	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
182	Periods of inactivity	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
183	Difficulty getting along with supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
184	Experiencing negative attitudes toward the organisation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
185	Insufficient personnel to handle workload	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
186	Making critical on-the-spot decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
187	Personal insult from customer/consumer/ colleague	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
188	Lack of participation in policy-making decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
189	Inadequate compensation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
190	Competition for business success and personal growth	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

191	Poor or inadequate support from supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
192	Noisy work area	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
193	Frequent interruptions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
194	Frequent changes from boring to demanding activities	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
195	Excessive paperwork	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
196	Meeting deadlines	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
197	Insufficient personal time (e.g., coffee breaks, lunch)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
198	Covering work for an employee	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
199	Poorly motivated workers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
200	Conflicts with other departments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please continue over the page.

Part 4. More About you

Finally, I would like some general information about you. This will only be used for general comparisons and is entirely confidential.

201. **Are you male or female?**

Male ☐
Female ☐

202. **How old are you?**

Less than 20 years	☐	30-39	☐
20-24	☐	40-49	☐
25-29	☐	50-59	☐
		60 or more	☐

203. **To which of these groups do you consider you belong?** ***Tick one box only***

White	☐	Indian	☐
Black Caribbean	☐	Pakistani	☐
Black African	☐	Chinese	☐
Black other	☐	Another Ethnic group	☐
		Please Specify	_____

204. **What is your job title?** _____

205. **What is your employment status?**

Full-time permanent	☐	Part-time permanent	☐
Full-time temporary	☐	Part-time temporary	☐

206. **How long have you worked in this position?** ____ years ____ months

207. **How long have you worked with your current supervisor?** ____ years ____ months

208. **What is the highest educational qualification you have gained?** ***Please tick.***

Higher degree	☐	Standard grades/GCSES at grade A-C, N/SVQ level 2 or equivalent	☐
Bachelors degree	☐	Standard grades/GCSEs at grade D or lower, N/SVQ level 1 or equivalent	☐
Higher grades/'A' Levels/N/SVQ level 3 or equivalent	☐	None of the above	☐

Please see overleaf for returning instructions

If you have any comments about the survey, please use the space above.

Please now fold and place your completed questionnaire in the envelope provided, seal it, and place in the box marked "Survey for University of Strathclyde" in the mail room.

Thank you very much for participating.

THE UNIVERSITY OF STRATHCLYDE IN GLASGOW

Dear Respondent,

I would very much appreciate your participation in completing this questionnaire, which is being conducted for the purposes of my PhD research at Strathclyde University.

Your responses are of great importance as this survey forms a critical part of the study, which is about the impact of emotional intelligence on managers and their employees, and the consequences of these factors in terms of stress and performance. I therefore value your cooperation very highly. Feedback from this research will also provide beneficial information about a variety of issues related to relationships and stress in your work place.

Participation in this study will be anonymous and information in the questionnaires will be completely confidential and for my research purposes only. Please try to answer ***all*** questions to the best of your knowledge and keep in mind that there are no right or wrong responses.

If you wish any further information about the study please feel free to contact me at the address, phone or email below.

Hannah Hesselgreaves
Department of Human Resource Management
University of Strathclyde
50 Richmond Street, Glasgow, G1 1XU
Tel: 0141 551 8746
Email: hannahhesselgreaves@hotmail.com

On the following pages are several different kinds of questions about you, your organisation and your immediate team members. ***Please hand the enclosed questionnaire and envelope coded <u>EMP_</u> to the employee on your team, who arrives first on your next shift. In your own questionnaire, please answer each question with that employee in mind. Even if you have not worked with that manager for long, your answers are still very useful. When completed, enclose it in the envelope provided and seal. The deadline for returning is Monday 3rd July.***

Thank you for your time.

Supervisor Questionnaire

Part 1. Your relationships at work

The following questions and statements refer to <u>your relationship with your team member</u>. Please choose the response that best indicates how often each of the following apply.

		Not at all	Just a little	Moderate amount	Quite a lot	A great deal
1	Do you usually know how satisfied this employee is with what you do?	☐	☐	☐	☐	☐
2	How well do you feel that this employee understands your problems and needs?	☐	☐	☐	☐	☐
3	How well does this employee recognize your potential?	☐	☐	☐	☐	☐
4	What are the chances that this employee would help you solve problems in your work?	☐	☐	☐	☐	☐
5	What are the chances that he/she would 'bail you out' at his/her expense?	☐	☐	☐	☐	☐
6	I have enough confidence in this employee that I would defend and justify his/her decisions if he/she were not present to do so.	☐	☐	☐	☐	☐

		Extremely ineffective	Worse than average	Average	Better than average	Extremely effective
7	How would you characterise your working relationship with this employee?	☐	☐	☐	☐	☐

strongly disagree – 1 2 3 4 5 = strongly agree

8. I get along well with this employee. **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** ☐
9. Supervising this employee is a pleasure. **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** ☐
10. I think this employee would make a good friend. **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** ☐

Questions 11-13 are about the performance of the employee this questionnaire is about. Please answer all questions by ticking the appropriate box.

		Yes	No
11	Was this employee appraised or evaluated for his/her performance in the past 12 months?	☐	☐

Please answer in with reference to the previous question.

		Poor	Fair	Good	Very Good	Excellent
12	**If 'yes'**, which of the following best describes how this employee's performance was evaluated?	☐	☐	☐	☐	☐
13	**If 'no'**, how would you evaluate this employee's performance in the last 12 months?	☐	☐	☐	☐	☐

The following statements reflect behaviours that you may or may not have observed in the individual you are rating. You will be asked to report on your experiences with this person. Please respond to <u>all</u> items by ticking the box.

Item	***This employee:***	Never	Rarely	Sometimes	Often	Consistently	Don't know
14	recognizes the situations that arouse strong emotions in him/her	☐	☐	☐	☐	☐	☐
15	has mainly positive expectations	☐	☐	☐	☐	☐	☐
16	initiates actions to create possibilities	☐	☐	☐	☐	☐	☐
17	anticipates obstacles to a goal	☐	☐	☐	☐	☐	☐
18	is reluctant to change or make changes	☐	☐	☐	☐	☐	☐
19	has sense of humour about oneself	☐	☐	☐	☐	☐	☐
20	in a group, encourages others' participation	☐	☐	☐	☐	☐	☐
21	gives constructive feedback	☐	☐	☐	☐	☐	☐
22	adapts ideas based on new information	☐	☐	☐	☐	☐	☐
23	sets measurable and challenging goals	☐	☐	☐	☐	☐	☐
24	solicits others' input	☐	☐	☐	☐	☐	☐
25	takes calculated risks to reach a goal	☐	☐	☐	☐	☐	☐
26	believes the future will be better than the past	☐	☐	☐	☐	☐	☐
27	gives directions or demonstrations to develop someone	☐	☐	☐	☐	☐	☐
28	looks for feedback, even if hard to hear	☐	☐	☐	☐	☐	☐
29	reflects on underlying reasons for feelings	☐	☐	☐	☐	☐	☐
30	makes self available to customers or clients	☐	☐	☐	☐	☐	☐
31	publicly states everyone's position to those involved in a conflict	☐	☐	☐	☐	☐	☐
32	relates well to people of diverse backgrounds	☐	☐	☐	☐	☐	☐
33	makes work exciting	☐	☐	☐	☐	☐	☐
34	is defensive when receiving feedback	☐	☐	☐	☐	☐	☐
35	brings up ethical concerns	☐	☐	☐	☐	☐	☐
36	listens attentively	☐	☐	☐	☐	☐	☐
37	stays composed and positive, even in trying moments	☐	☐	☐	☐	☐	☐
38	leads by example	☐	☐	☐	☐	☐	☐
39	acts on own values even when there is a personal cost	☐	☐	☐	☐	☐	☐
40	knows how their feelings effect their actions	☐	☐	☐	☐	☐	☐

Item	***This employee:***	Never	Rarely	Sometimes	Often	Consistently	Don't know
41	airs disagreements or conflicts	☐	☐	☐	☐	☐	☐
42	inspires people	☐	☐	☐	☐	☐	☐
43	applies standard procedures flexibly	☐	☐	☐	☐	☐	☐
44	has "presence"	☐	☐	☐	☐	☐	☐
45	monitors customer or client satisfaction	☐	☐	☐	☐	☐	☐
46	in a conflict, finds a position everyone can endorse	☐	☐	☐	☐	☐	☐
47	engages an audience when presenting	☐	☐	☐	☐	☐	☐
48	states need for change	☐	☐	☐	☐	☐	☐
49	advocates change despite opposition	☐	☐	☐	☐	☐	☐
50	gets impatient of shows frustration	☐	☐	☐	☐	☐	☐
51	recognises specific strengths of others	☐	☐	☐	☐	☐	☐
52	understands informal structure in the organisation	☐	☐	☐	☐	☐	☐
53	behaves calmly in stressful situations	☐	☐	☐	☐	☐	☐
54	personally leads change initiatives	☐	☐	☐	☐	☐	☐
55	gets support from key people	☐	☐	☐	☐	☐	☐
56	understands the organisations unspoken rules	☐	☐	☐	☐	☐	☐
57	keeps their promises	☐	☐	☐	☐	☐	☐
58	understands historical reasons for organisational issues	☐	☐	☐	☐	☐	☐
59	takes personal responsibility for meeting customer needs	☐	☐	☐	☐	☐	☐
60	acknowledges mistakes	☐	☐	☐	☐	☐	☐
61	presents self in an assured manner	☐	☐	☐	☐	☐	☐
62	handles unexpected demands well	☐	☐	☐	☐	☐	☐
63	articulates a compelling vision	☐	☐	☐	☐	☐	☐
64	is not politically savvy at work	☐	☐	☐	☐	☐	☐
65	seeks ways to improve performance	☐	☐	☐	☐	☐	☐
66	acknowledges own strengths and weaknesses	☐	☐	☐	☐	☐	☐
67	can see things from someone else's perspective	☐	☐	☐	☐	☐	☐

Item	***This employee:***	Never	Rarely	Sometimes	Often	Consistently	Don't know
68	believes oneself to be capable of a job	☐	☐	☐	☐	☐	☐
69	cuts through red tape or bends rules when necessary	☐	☐	☐	☐	☐	☐
70	stays positive despite setbacks	☐	☐	☐	☐	☐	☐
71	develops behind-the-scenes support	☐	☐	☐	☐	☐	☐
72	persuades by appealing to peoples' self interest	☐	☐	☐	☐	☐	☐
73	acts impulsively	☐	☐	☐	☐	☐	☐
74	does not cooperate with others	☐	☐	☐	☐	☐	☐
75	doubts their own ability	☐	☐	☐	☐	☐	☐
76	avoids conflicts	☐	☐	☐	☐	☐	☐
77	matches customer or client needs to services or products	☐	☐	☐	☐	☐	☐
78	establishes and maintains close relationships at work	☐	☐	☐	☐	☐	☐
79	hesitates to act on opportunities	☐	☐	☐	☐	☐	☐
80	provides on-going mentoring or coaching	☐	☐	☐	☐	☐	☐
81	aware of own feelings	☐	☐	☐	☐	☐	☐
82	changes overall strategy, goals, or projects to fit situation	☐	☐	☐	☐	☐	☐
83	seeks information in usual ways	☐	☐	☐	☐	☐	☐
84	is attentive to peoples' moods or nonverbal cues	☐	☐	☐	☐	☐	☐
85	learns from setbacks	☐	☐	☐	☐	☐	☐

Part 2. About you

Finally, I would like some general information about you. This will only be used for general comparisons and is entirely confidential.

86. **Are you male of female?**

Male ☐

Female ☐

87. **How old are you?**

Less than 20 years ☐

20-24 ☐

25-29 ☐

30-39 ☐

40-49 ☐

50-59 ☐

60 or more ☐

88. **To which of these groups do you consider you belong?**

Tick one box only

White	☐	Indian	☐
Black Caribbean	☐	Pakistani	☐
Black African	☐	Chinese	☐
Black other	☐	Another Ethnic group	☐

Please Specify _____

89. **Which NHS board do you work within?** _____

90. **Which NHS division do you work within (e.g. primary, secondary)?** _____

91. **What is your job title?** _____

92. **What is your employment Status?**

Full-time permanent	☐	Part-time permanent	☐
Full-time temporary	☐	Part-time temporary	☐

93. **How long have you worked in this position?** ____ years ____ months

94. **How long have you worked with this employee?** ____ years ____ months

95. **What is the highest educational qualification you have gained?** ***Please tick.***

Higher degree	☐	Standard grades/GCSES at grade A-C, N/SVQ level 2 or equivalent	☐
Bachelors degree	☐	Standard grades/GCSEs at grade D or lower, N/SVQ level 1 or equivalent	☐
Highers/'A' Levels/N/SVQ level 3 or equivalent	☐	None of the above	☐

Please see overleaf for returning instructions

If you have any comments about the survey, please use the space above.

Please now fold and place your completed questionnaire in the envelope provided, seal it, and place in the box marked "Survey for University of Strathclyde" in the mail room.

Thank you very much for participating.

Appendix 4

Exploratory Factor Analysis

Employee rated LMX

	Component
	1
Do you usually know how satisfied your supervisor is with what you do?	.891
How well do you feel that your supervisor understands your problems and needs?	.900
How well does your supervisor recognise your potential?	.882
What are the chances that your supervisor would help you solve problems in your work?	.902
Regardless of formal authority your sup has, what are the chances that they would bail you out at their expense?	.748
I have enough confidence in my sup that I would defend and justify their decisions if they are not present	.853
How would you characterise your working relationship with sup?	.914

Extraction Method: Principal Component Analysis.
a 1 components extracted.

Supervisor rated LMX

	Component
	1
Do you usually know how satisfied your supervisor is with what you do?	.666
How well do you feel that your supervisor understands your problems and needs?	.829
How well does your supervisor recognise your potential?	.699
What are the chances that your supervisor would help you solve problems in your work?	.819
Regardless of formal authority your sup has, what are the chances that they would bail you out at their expense?	.656
I have enough confidence in my sup that I would defend and justify their decisions if they are not present	.762
How would you characterise your working relationship with sup?	.755

Extraction Method: Principal Component Analysis.
1 components extracted.

Appendix 5

Exploratory Factor Analysis

Employee rated Social Support

	Component	
	1	2
my co-workers can be relied on when things get tough at work	**.705**	.367
my supervisor can be relied on when things get tough at work	**.888**	.157
my co-workers are willing to listen to work-related problems	**.783**	.153
my supervisor is willing to listen to work-related problems	**.893**	.039
my co-workers are helpful in getting the job done	**.735**	.195
my supervisor is helpful in getting the job done	**.891**	.005
my co-workers are easy to talk to	**.748**	.213
my supervisor is easy to talk to	**.902**	.083
my friends and family can be relied on when things get tough at work	.199	**.861**
my friends and family are willing to listen to work-related problems	.145	**.896**
my friends and family are helpful in getting the job done	.083	**.704**
my friends and family are easy to talk to	.102	**.815**

Extraction Method: Principal Component Analysis.
Rotation converged in 3 iterations.

Appendix 6

Control variables for each regression equation (LMX, social support, performance, organisational commitment, and satisfaction outcomes)

			LMX (employee)		LMX (supervisor)		Social Support (work)		Performance (supervisor ratings)		Org'l commitment		Job satisfaction	
Table 7.12	Equation 1:	Tenure	-.052		.051		-.053		.242	**	.063		.114	
		POS	.386	***	.168	**	.332	**	.025		.758	***	.498	***
		Liking	.141		.758	***	.229		.351	**	-.108		.017	
	Equation 2:	Tenure	-.020		.083		-.035		.222	*	.054		.135	
		POS	.393	***	.156	*	.335	*	.020		.762	***	.503	***
		Liking	.126		.793	***	.214		.376	**	-.082		.021	
Table 7.14	Equation 3a:	Tenure	-		-		-.038		.221	*	.060		.104	
		POS	-		-		.355	**	-.026		.760	***	.480	***
		Liking	-		-		.304	*	.338	**	.078		-.027	
Table 7.16	Equation 4:	Tenure	-		-		-.008		-		-		-	
		POS	-		-		.065		-		-		-	
		Liking	-		-		.118		-		-		-	

Notes. All control variables are supervisor ratings. † p<.10 * p<.05 ** p<.01 *** p<.001

Control variables for each regression equation (stress outcomes)

		Job pressure severity (JP-S)	Job pressure frequency (JP-F)	Lack of organisation support severity (LS-S)	Lack of organisation support frequency (LS-F)
Table 7.13	Equation 1: Tenure	.092	.044	.075	.055
	POS	-.343 **	-.272 *	-.347 **	-.382 **
	Liking	.109	.049	.122	-.073
	Equation 2: Tenure	.084	.016	.061	.035
	POS	-.328 **	-.257 *	-.336 **	-.368 **
	Liking	.114	.097	.140	-.026
Table 7.15	Equation 3b. Tenure	.072	.031	.053	.037
	POS	-.220 †	-.230 †	-.177	-.245 *
	Liking	.101	.055	.081	.040
	Equation 3c. Tenure	.092	.041	.076	.056
	POS	-.319 **	-.254 *	-.325 **	-.385 ***
	Liking	.289	.232	.185	.069
Table 7.16	Equation 5: Tenure	.073	.055	.026	.037
	POS	-.229 †	-.198 †	-.190	-.251 *
	Liking	.135	.121	.089	.083
	Equation 6: Tenure	.078	.059	.030	.039
	POS	-.181	-.163	-.149	-.230 *
	Liking	.406 **	.324 *	.322 *	.202
Table 7.17	Equation 7: Tenure -		.027 -		.040
	POS -		-.225 † -		-.351 **
	Liking -		.221 -		.040

Notes. All control variables are employee ratings, except tenure. † p<.10 * p<.05 ** p<.01 *** p<.001

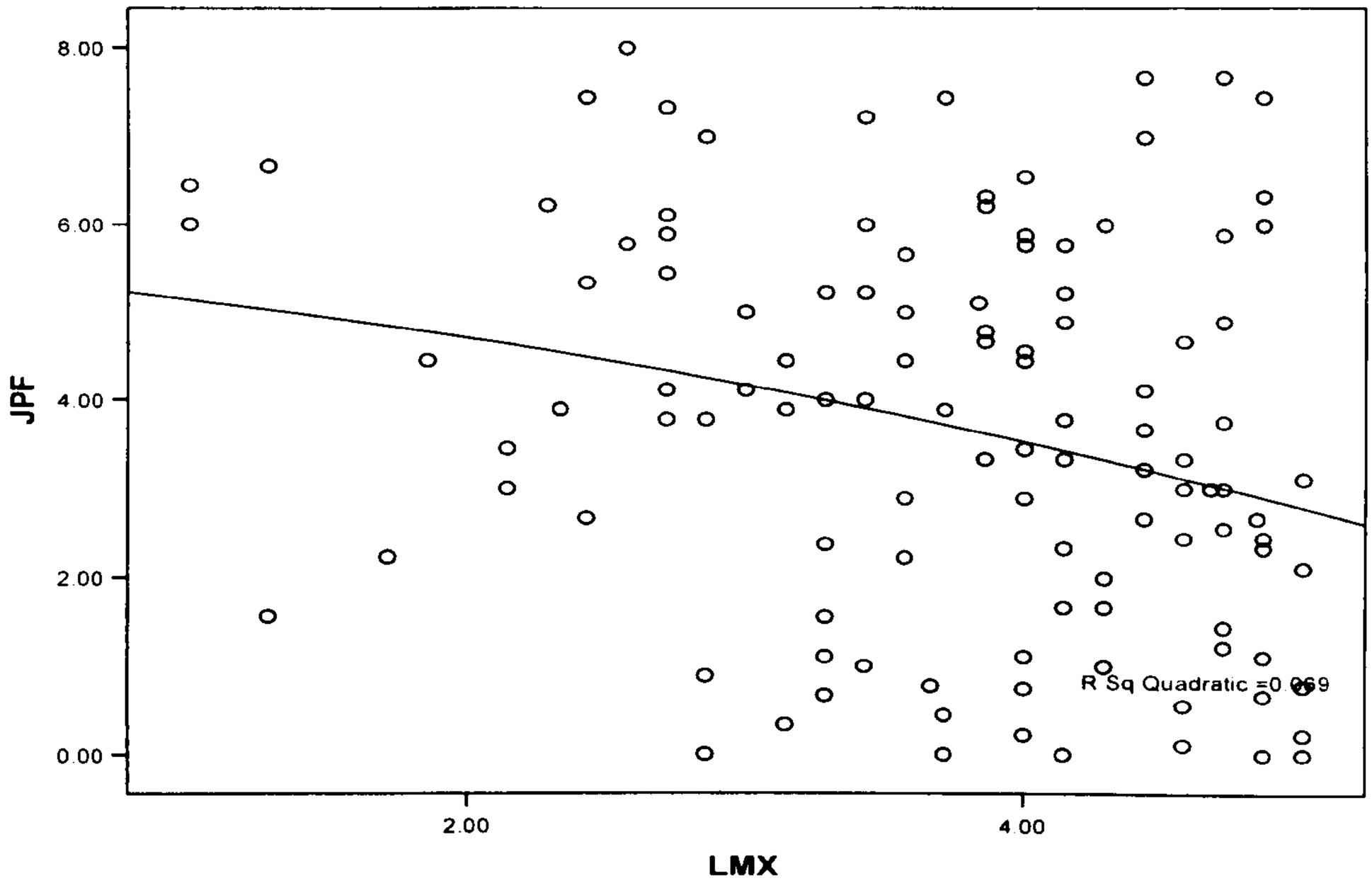
Control variables for regressions testing the relationship between LMX and stress (employee ratings)

			Job pressure severity (JP-S)	Job pressure frequency (JP-F)	Lack of organisation support severity (LS-S)	Lack of organisation support frequency (LS-F)
Table 7.18	Step 1:	Tenure	.072	.031	.053	.037
		POS	-.220 †	-.230 †	-.177	-.245 *
		Liking	.101	.055	.081	.040
	Step 2:	Tenure	.080	-.006	.067	.020
		POS	-.187	-.281 *	-.135	-.249 *
		Liking	-.058	-.394 *	.020	-.301 †
	Step 3:	Tenure	.059	-.013	.057	.015
		POS	-.187	-.281 *	-.135	-.249 *
		Liking	-.059	-.394 *	.019	-.302 †
	Step 4:	Tenure	.068	-.005	.067	.005
		POS	-.180	-.282 *	-.117	-.267 *
		Liking	-.043	-.382 †	.036	-.316 †

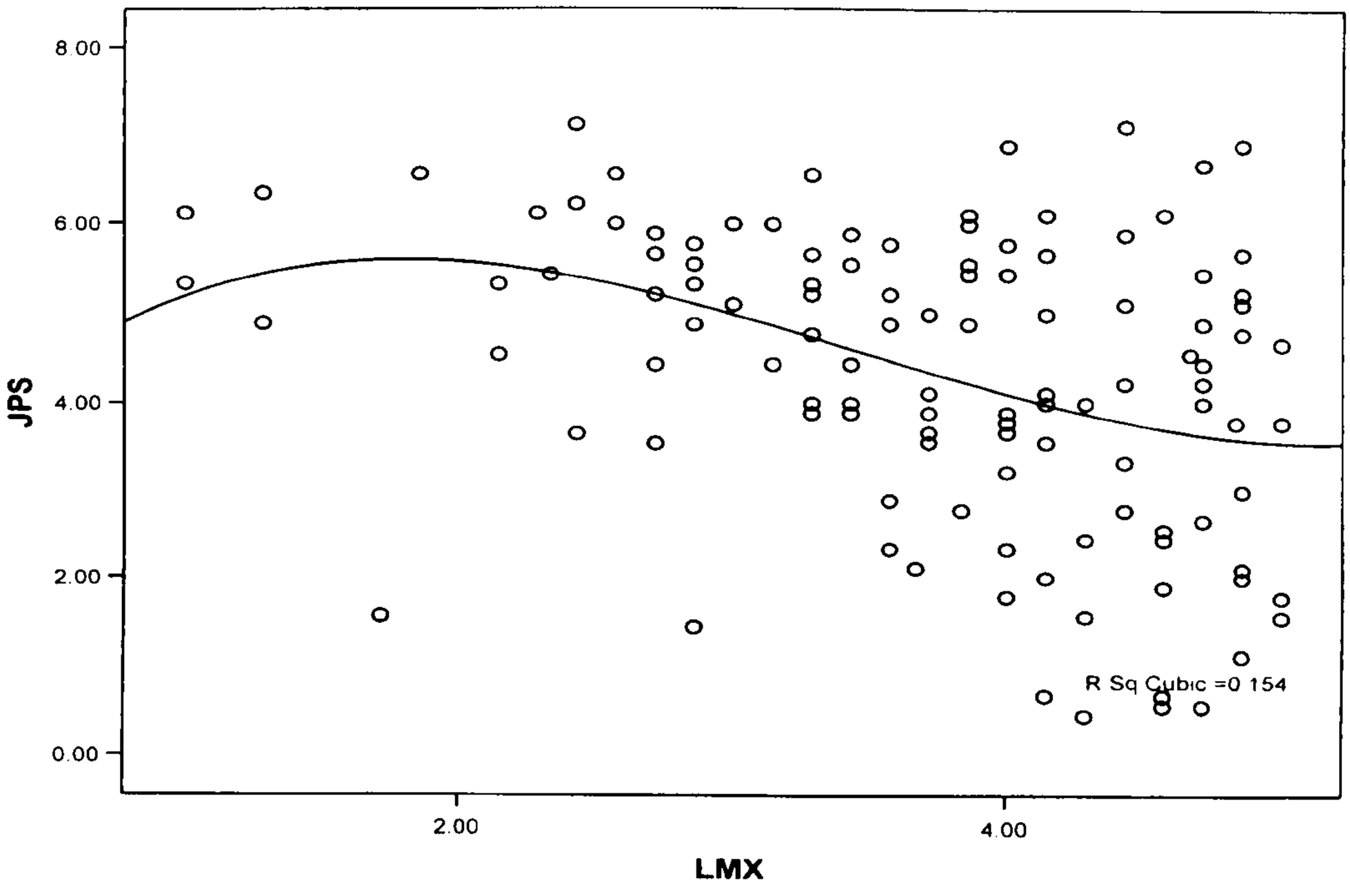
Notes. All control variables are employee ratings, except tenure. † p<.10 * p<.05 ** p<.01 *** p<.001

Appendix 7

Scatterplot of non-linear LMX^2 -job pressure frequency relationship



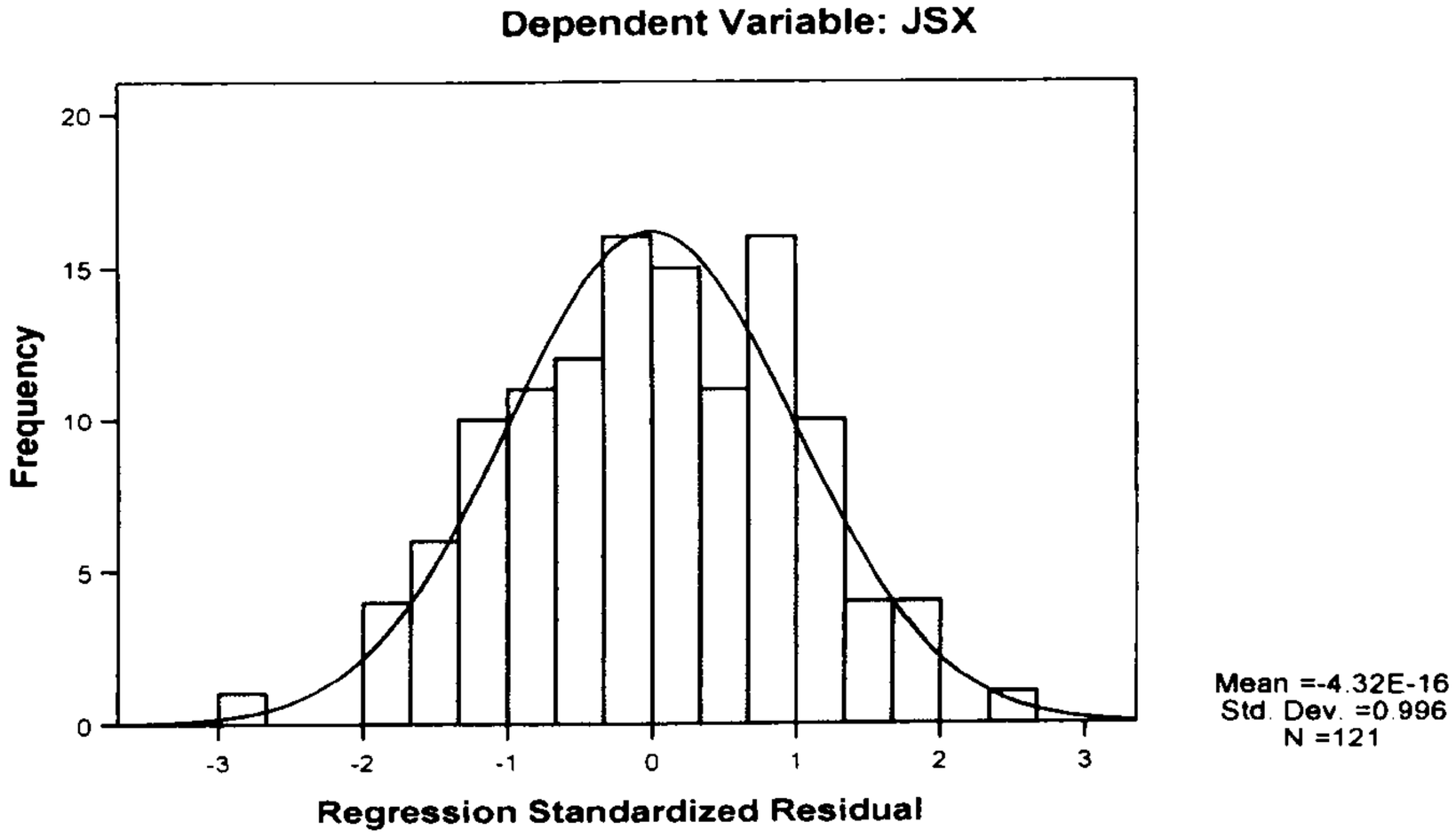
Scatterplot of non-linear LMX^3 - job pressure severity relationship



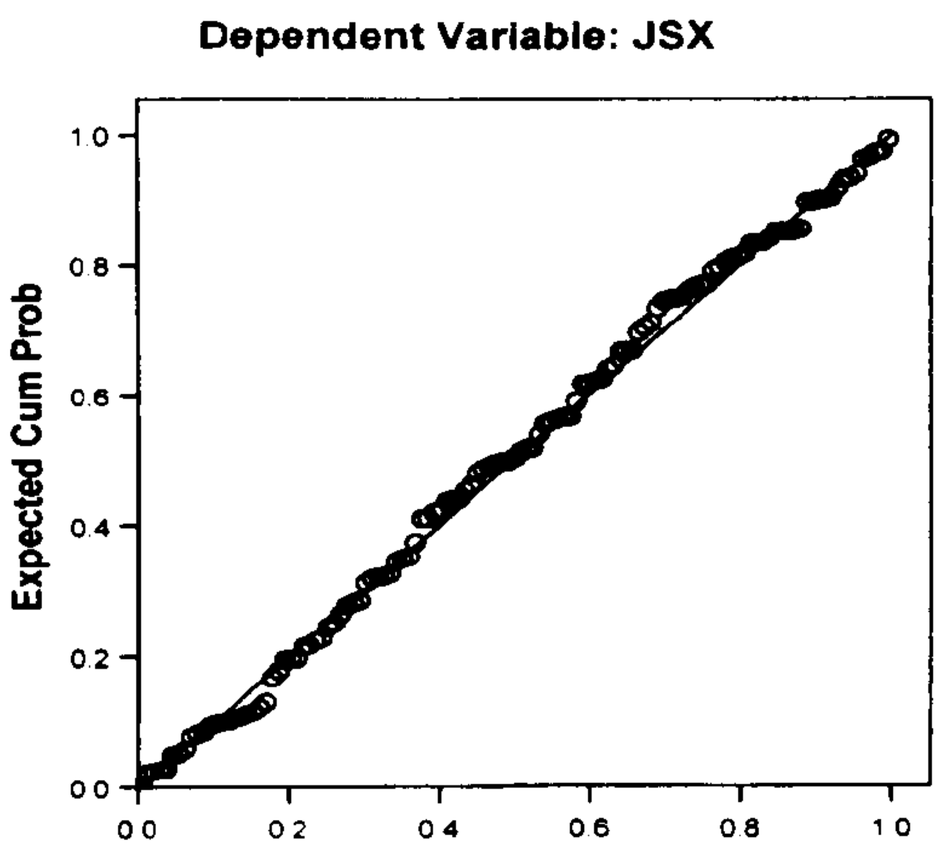
Appendix 8

Residual plots to test for normal distribution

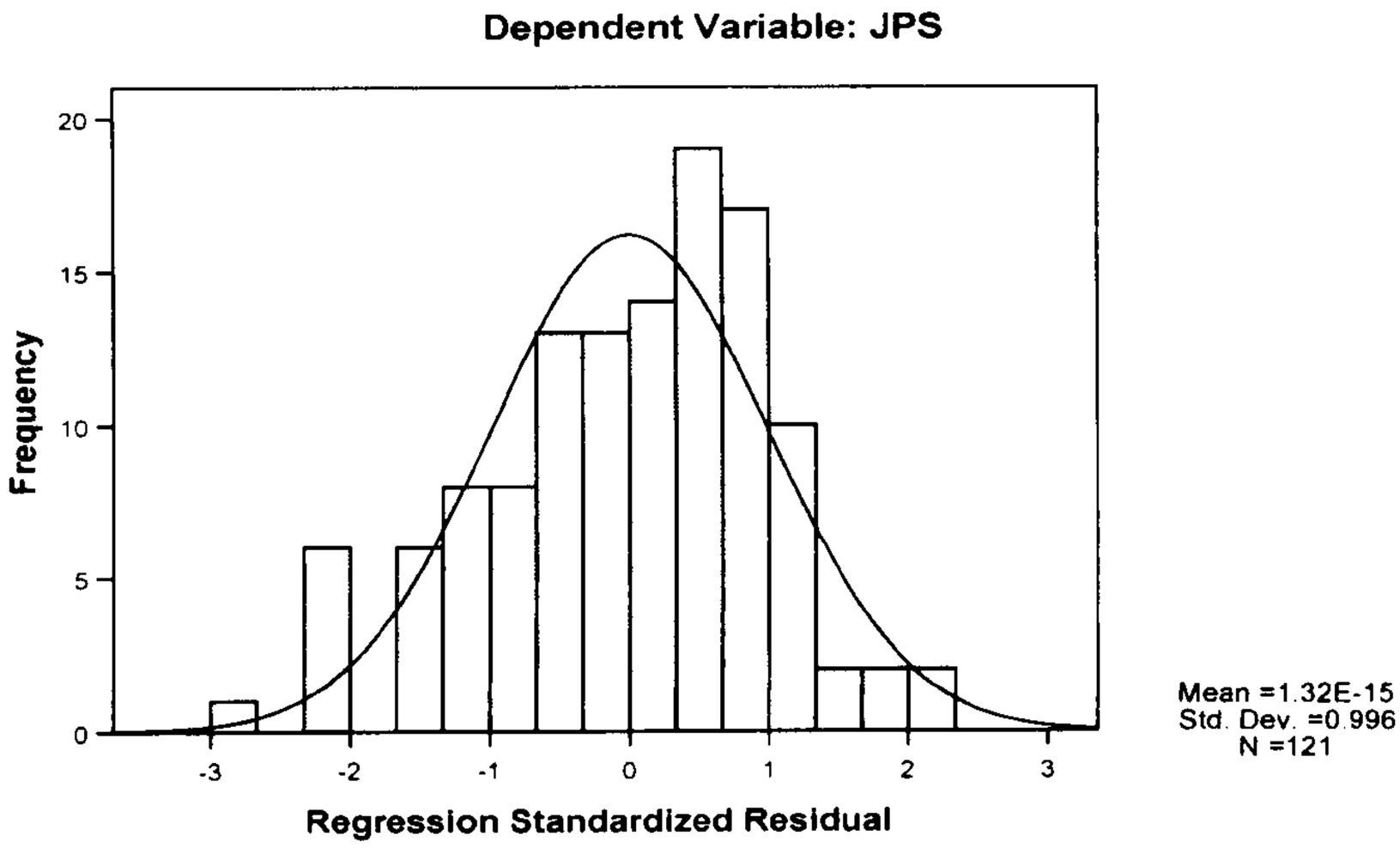
Job Stress Index (overall stress)

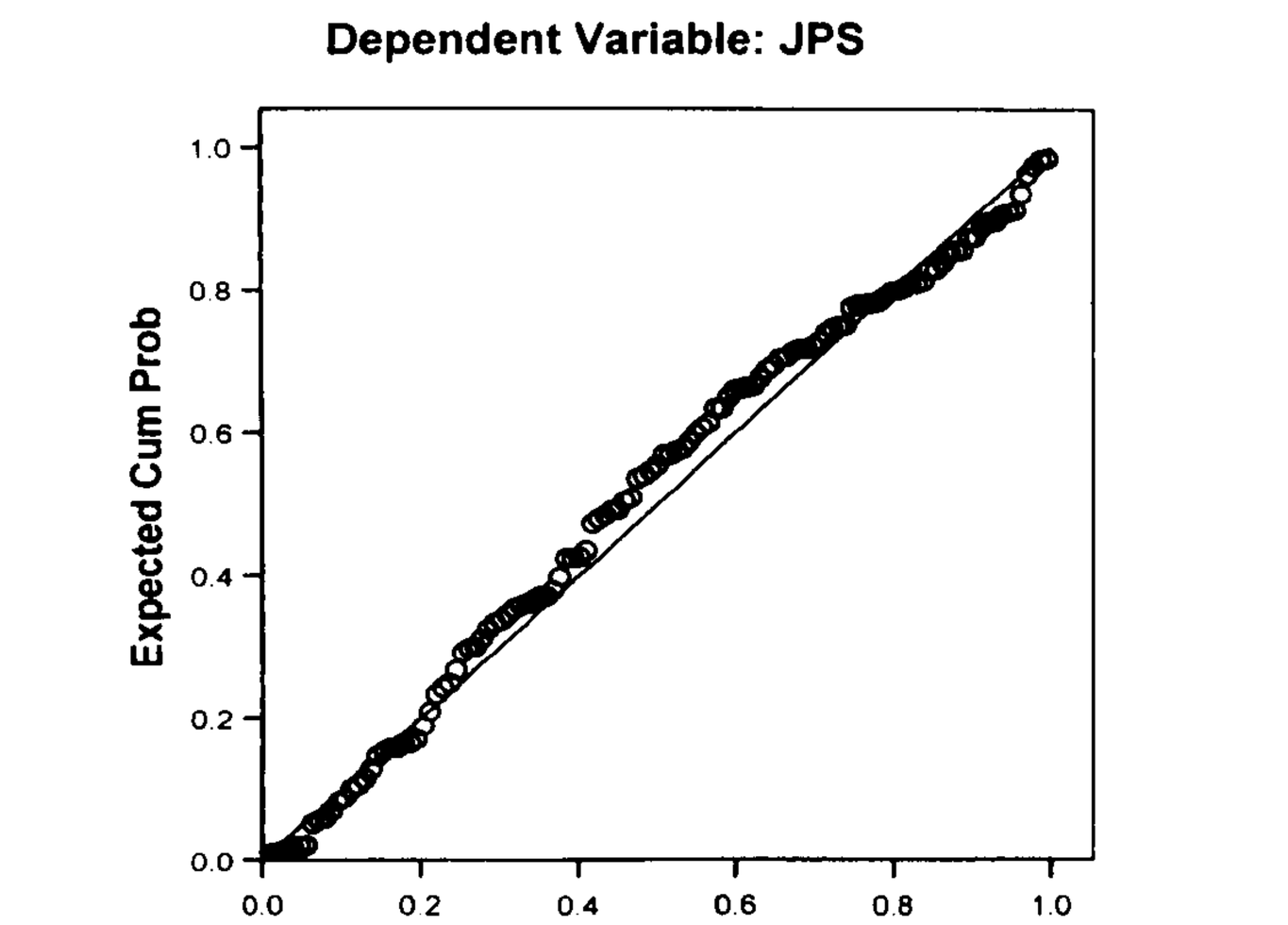


Normal P-P Plot of Regression Standardized Residual

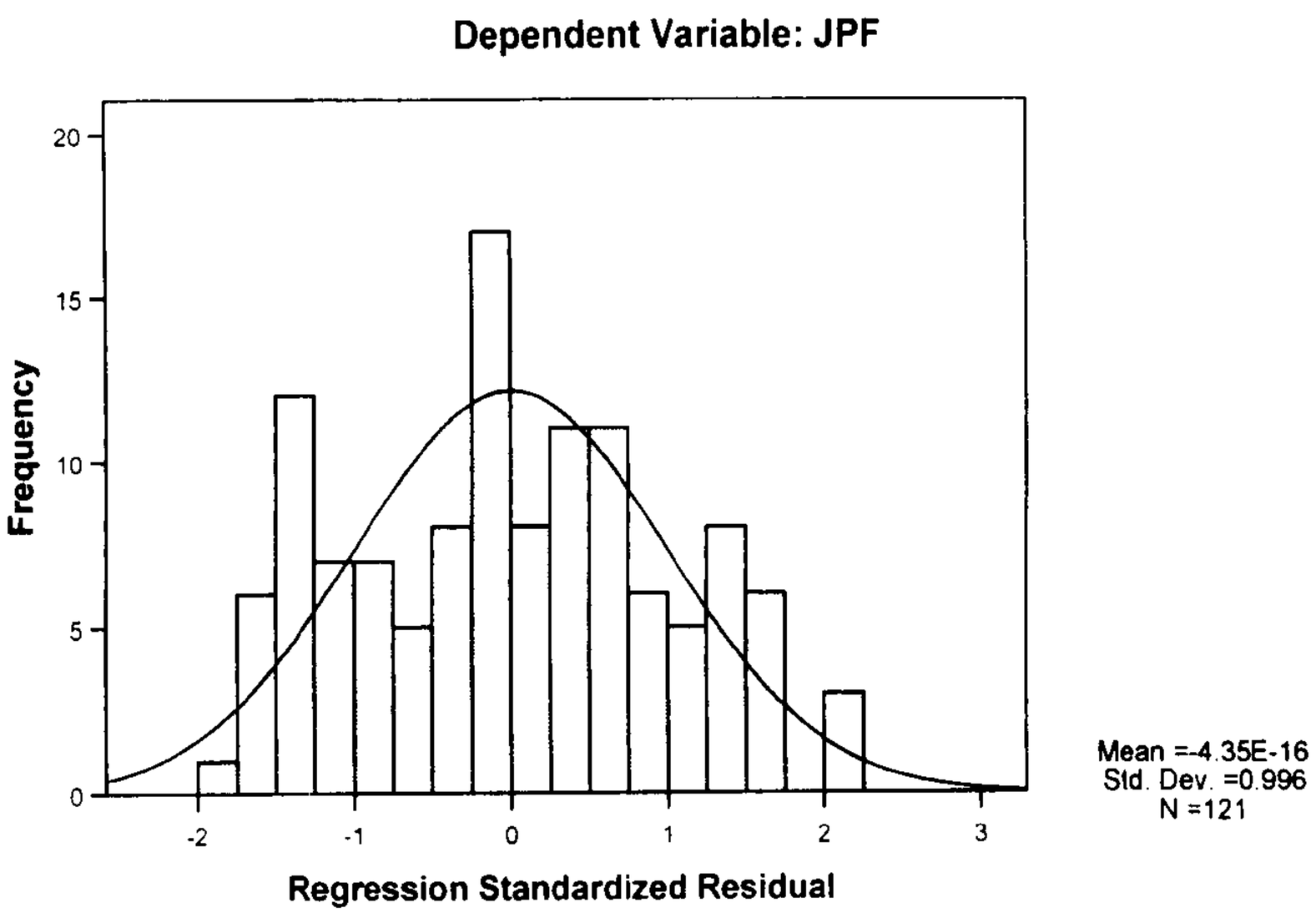


Job Pressure Severity

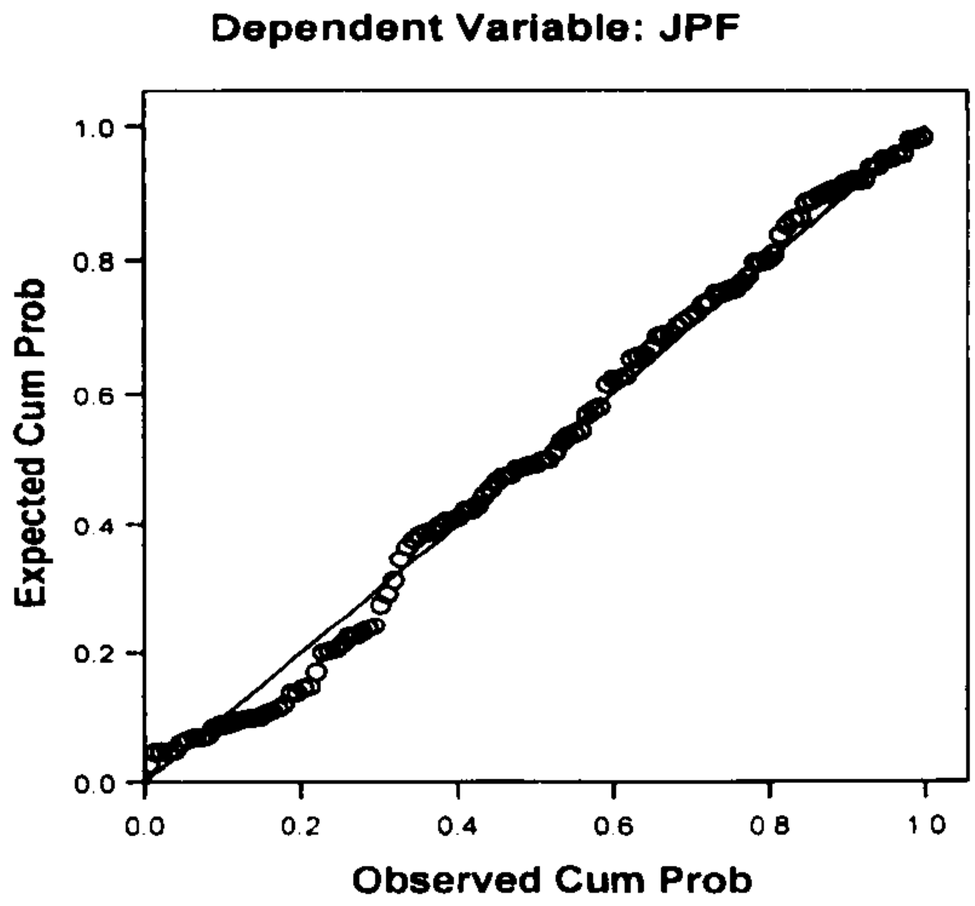




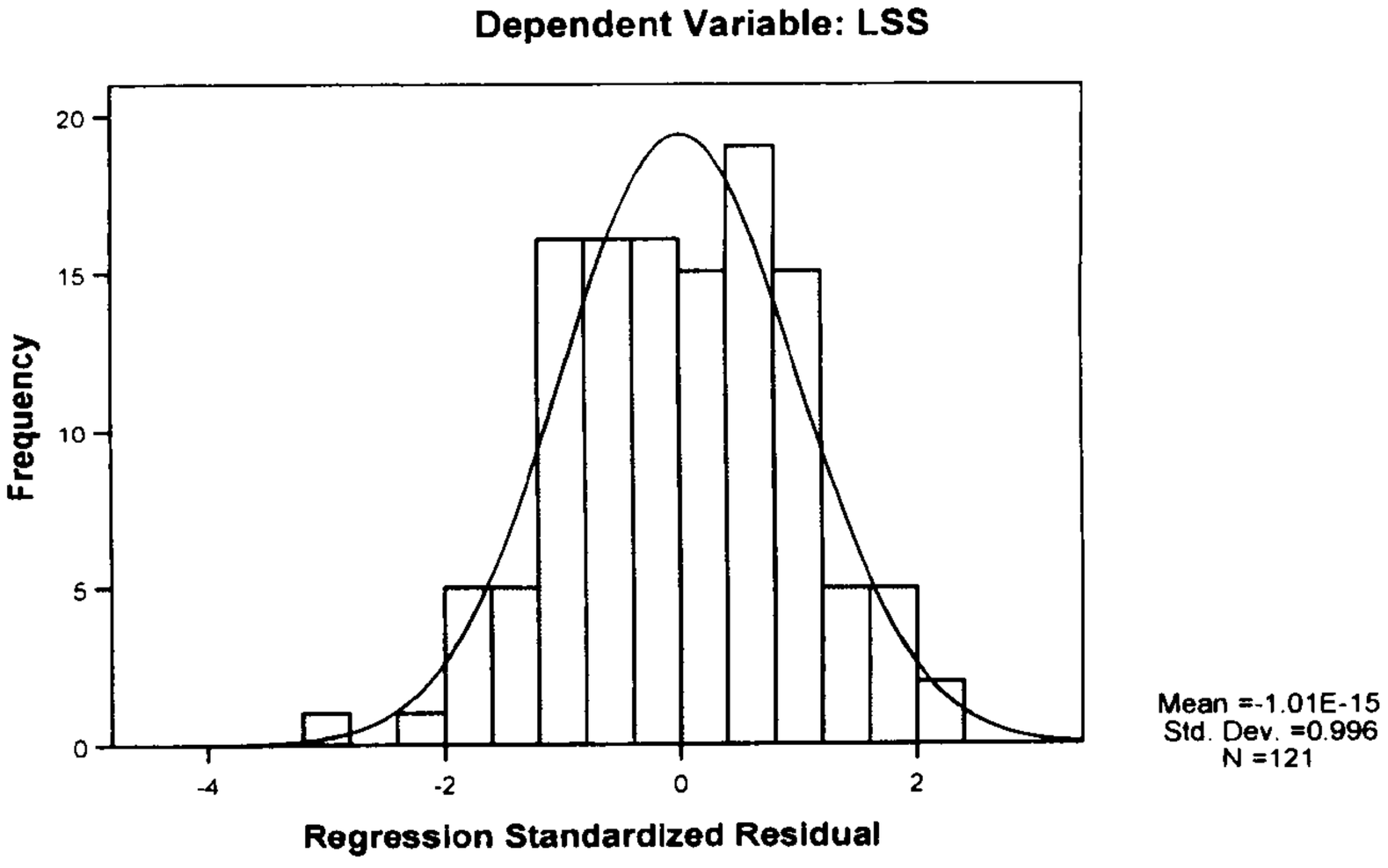
Job Pressure Frequency



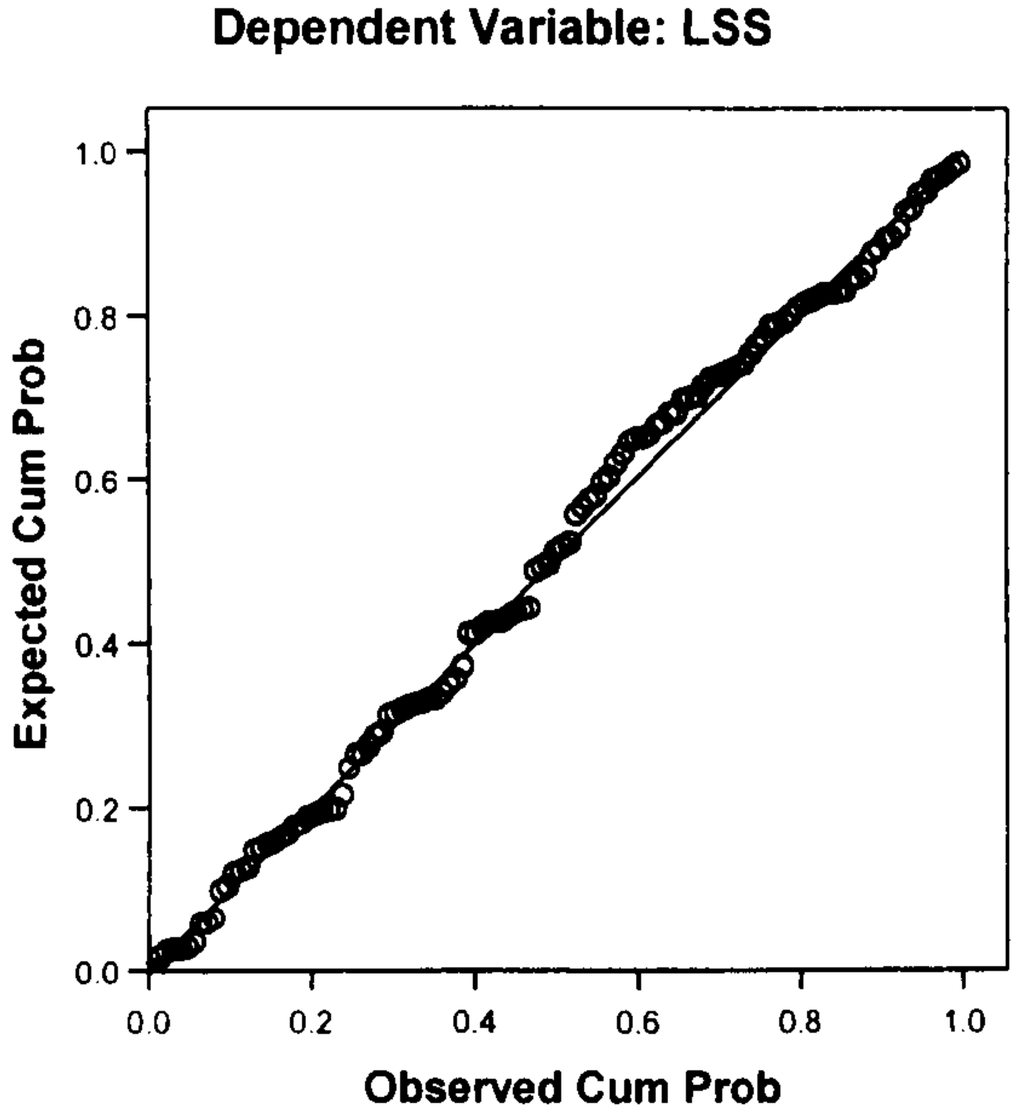
Normal P-P Plot of Regression Standardized Residual



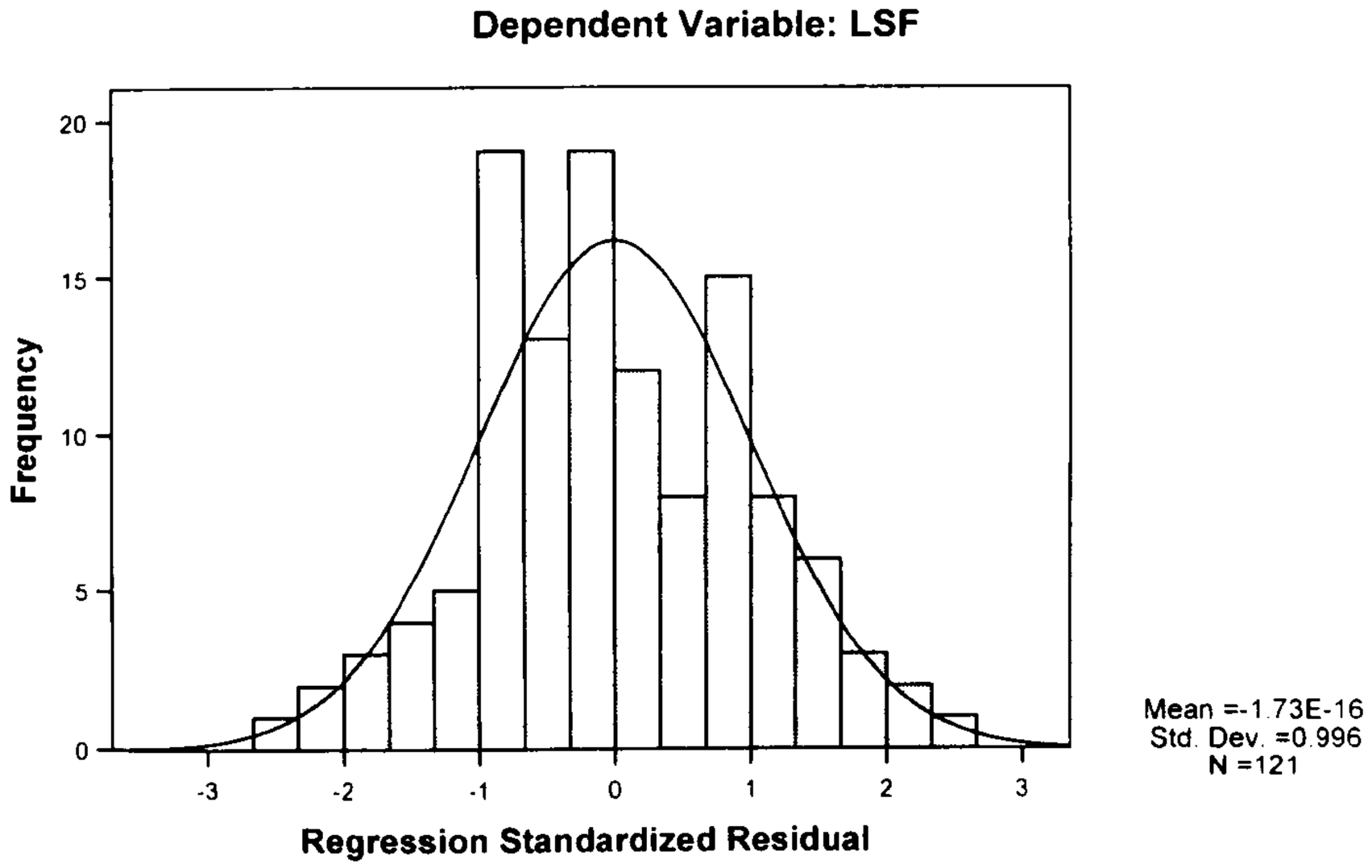
Lack of Organisational Support Severity



Normal P-P Plot of Regression Standardized Residual



Lack of Organisational Support Frequency



Normal P-P Plot of Regression Standardized Residual