Antecedents and Outcomes of Organisational Climate: Study of Select Public and Private Hospitals

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CERTIFICATE

This is to certify that the thesis entitled **"Antecedents and Outcomes of Organisational Climate: Study of Select Public and Private Hospitals"** submitted by **Ms. Bhanu Mishra**, ID No. **2014PHXF0416P** for award of Ph.D. of the Institute embodies original work done by her under my supervision.

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Dedicated to

(My Parents)

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ABSTRACT

Organisational climate has emerged as one of the most interesting topics of research in the past few decades across globe. It has been studied in various contexts of different countries, spectra and myriad industries. The reasons of studying this construct lie in its effect on varied individual and organisational outcomes, such as commitment, satisfaction, team performance, and organisational productivity etc. And yet, various scholars over the years have lacked unanimity in terms of its constituent dimensions, its varied effects and the reasons for its formation. Though there are also some similarities in the research regarding the definition of it being a shared perception about the company policies, practices and procedures, and its formation through interaction among employees. But otherwise the constituent dimensions of the construct and its effect vary across cultures and contexts.

Indian healthcare system has emerged as one of the most important industries in the past few decades in terms of social and monetary contributions. The overall market share of this industry has been ever increasing and lucrative, of which, the hospitals have been a big part. But at the same time hospitals in India are playing a crucial role in serving a huge number of patients across nation. This has also led to work overload, physical burnout and mental exhaustion among doctors, and therefore the challenges have gradually surpassed the monetary benefits. Thus, with growth and expansion of this sector, many issues with regard to corruption, scandals and psychological pressures on individuals have emerged. Also, the hospital industry in India is a duly unregulated industry, in terms of practices and procedures therefore, the upsurge in the market potential of the industry has led to an increase in the attrition rate among staff, especially doctors as by-product.

Over the years many doctors have cited poor work environment and unethical bosses as some of the major reasons for leaving the jobs. It has led to lack of commitment, trust, and satisfaction with jobs and leaders etc. Thus, this study deemed organisational climate as

suitably important aspect to be investigated in Indian hospital context, by understanding its effects and the factors affecting it.

Doctors' profession is a noble one. They are looked upto by the community to uphold ethics and moral values, as they deal with ethical dilemmas in their day-today life. So it is not far-fetched to assume that their level of moral development helps them to deal with the latter. However, with the increasing importance of career growth, super-specialisation in various medical streams, immense scope for financial gains and staggering workload, the doctors may choose self-interest over morals and ethics. As a result, cynicism and distrust may spread among doctors, which can further lead to negative perception about the work environment. The above mentioned characteristics are usually found in high Machiavellian individuals. Although Machiavellianism is pervasive in nature, high Machs may further worsen the situation. Thus, in such a scenario the importance of ethical leadership is often realized. If the individuals perceive their leaders and bosses to be ethical then they are also motivated to act ethically and curb their selfish motives.

Together these factors could affect the overall organisational climate that may subsequently affect the job outcomes, such as commitment, trust, satisfaction with leader and job etc. Therefore this study aims to investigate the role of moral development, Machiavellianism and ethical leadership, as the antecedents of organisational climate and further investigate the effect of organisational climate on various job outcomes such as commitment, trust, job satisfaction and satisfaction with leader of doctors in Indian hospitals.

An empirical study has been done covering 10 medical colleges and attached hospitals (8 public and 2 private), that are part of tertiary care hospitals (500 bedded and above), using a questionnaire survey. Data was collected from a sample of 537 doctors, which was further analysed statistically using structural equation modelling through AMOS and SPSS software.

The results show a significant influence of the proposed antecedents on organisational climate and organisational climate further has significant & positive relationship with commitment, trust, job satisfaction and satisfaction with leader among doctors in Indian hospitals. Furthermore the results also show the moderating effect of climate strength on the relationship of organisational climate with commitment such that it strengthens the effect of climate on commitment.

The study has important implications for hospital administration and the academicians which are elaborated in detail further. These implications may help the hospital administration to come up with various practices leading to a positive workforce and forming a favourable climate, fostering positive job outcomes among doctors.

This is one of the few studies that determines the relationship of moral development, Machiavellianism and ethical leadership with organisational climate and it's further influence on various job outcomes of doctors in large (500 beds and above) public and private hospitals in Indian context, which adds to the originality of the research.

The study has its own limitations in terms of the scope, but has also identified various opportunities for future researchers.

Table of Contents

Acknowledgements iii
Abstract v
List of Tables xi
List of Figures xii
Abbreviations xiii
CHAPTER 1: INTRODUCTION 1
1.1 Introduction 1
1.2 Contextual background 3
1.3 Need and motivation for the study 5
1.4 Research problem 7
1.5 Research questions 8
1.6 Objectives of the study 8
1.7 Scope of the study 9
1.8 Organisation of the thesis 9
CHAPTER 2: LITERATURE REVIEW 11
2.1 Introduction 11
2.2 Importance of organisational climate 11
2.2.1 Conceptualization of organisational climate 15
2.2.2 Approach to climate formation 19
2.2.3 Dimensions of organisational climate 20
2.2.4 Antecedents of organisational climate 24
2.2.5 Outcomes of organisational climate 26
2.2.6 Importance of organisational climate in healthcare 29
2.3 Antecedents of organisational climate in this study 33
2.3.1 Moral development 34
2.3.2 Ethical leadership 40
2.3.3 Machiavellianism 46
2.4 Outcomes of organisational climate in this study 52
2.4.1 Commitment 52
2.4.2 Trust 55
2.4.3 Job satisfaction 57
2.4.4 Satisfaction with leader/supervisor 59
2.5 Climate strength 62
2.6 Contextual qualitative insights via in-depth interviews 63
2.7 Key observations and Research gaps 64

2.7 Concluding remarks 68
CHAPTER 3: PROPOSED RESEARCH MODELS AND HYPOTHESES....69
3.1 Introduction 69
3.2 Theoretical background 70
3.3 Research models and hypotheses 72
3.3.1 Hypothesized relationship between the antecedents and organisational climate....73
Moral development and organisational climate 73
Ethical leadership and organisational climate 75
Machiavellianism and organisational climate....76
3.3.2 Hypothesized relationship between organisational climate and job outcomes....79
Organisational climate and commitment....79
Organisational climate and trust....81
Organisational climate and job satisfaction and satisfaction with leader/supervisor....82
3.3.3 Hypothesized relationship between organisational climate, climate strength and job outcomes 85
3.4 Concluding remarks 89
CHAPTER 4: RESEARCH METHODOLOGY 90
4.1 Introduction 90
4.1 Overview of the research process....90
4.3 Scope of the study 91
4.4 Research design....93
4.5 Sampling....93
4.5.1 Sampling method....94
4.5.2 Sampling frame 94
4.5.3 Sampling unit 96
4.6 Scales and measures for data collection 97
4.7 Pre-test and Pilot study....99
4.8 Data collection....100
4.9 Overview of statistical techniques for data analysis....102
4.9.1 Preliminary data analysis....103
4.9.2 Techniques used for data analysis 103
Exploratory factor analysis 103
Structural equation modelling....106
Moderation analysis 107
4.9.3 Data aggregation....107
4.10 Concluding remarks....112
CHAPTER 5: DATA ANALYSIS....113

5.1 Introduction 113
5.2 Data preparation 113
5.3 Preliminary analysis 114
5.3.1 Demographic profile of respondents 114
5.3.2 Descriptive statistics 115
5.4 Exploratory factor analysis 119
5.5 Confirmatory factor analysis (CFA)/Measurement model 120
5.5.1 Reliability, convergent and discriminant validity 123
5.5.2 Common method bias (CMB) 124
5.5.3 Measurement model fit indices 125
5.6 Structural equation modelling 125
5.7 Composition Model 128
5.7.1 Data aggregation 128
5.7.2 Correlations statistics 130
5.7.3 Heirarchical linear regression 131
5.8 Concluding remarks 134
CHAPTER 6: DISCUSSION AND FINDINGS 135
6.1 Introduction 135
6.2 Discussion of results 135
6.2.1 The effect of the antecedents as moral development, Machiavellianism and ethical leadership on organisational climate. 135
6.2.2 The effect of the organisational climate on job outcomes as commitment, trust, job satisfaction and satisfaction with leader/supervisor. 138
6.2.3 The effect of the organisational climate and climate strength on job outcomes at organisational level 140
6.3 Major findings 142
6.4 Implications of the research 143
6.4.1 Theoretical implications for researchers 143
6.4.2 Practical implications 145
6.5 Novelty of the research 151
6.6 Major contributions of the research 152
6.7 Limitations and the future scope of the study 152
6.8 Concluding remarks 154
REFERENCES 156
APPENDICES 193
Appendix 1: Final Questionnaire 193

List of Tables

Table 2.1: Dimensions of organisational climate given by Litwin and Stringer (1968) 21
Table 2.2: Dimensions of organisational climate given by Dawson et al.,(2008) 24
Table 2.3: Select studies of antecedents and outcomes of organisational climate 27
Table 2.4: Select studies of organisational climate in healthcare sector 32
Table 2.5: Kohlberg's six stage model 37
Table 2.6: Machiavellianism linked with various individual and organisational variables 47
Table 2.7. Research Gaps, research questions and objectives 67
Table 4.1: Scale of measures used in this study 97
Table 4.2: Items used in the questionnaire 104
Table 5.1. Demographic profile of the respondents 115
Table 5.2: Measures of central tendency, dispersion and symmetry 116
Table 5.3: Tests of normality after transformation 118
Table 5.4: Skewness and kurtosis after data transformation 118
Table 5.5: Correlations matrix of all variables 119
Table 5.6: KMO and Bartlett's Test of Sphericity 120
Table 5.7: Reliability and validity scores for each construct 124
Table 5.8: Model fit indices for structural model 126
Table 5.9: Results of hypotheses testing from conceptual model 1 127
Table 5.10: Data aggregation statistics 130
Table 5.11: Correlations matrix 131
Table 5.12: Results of regression analysis of aggregate outcome variables on organisational climate and climate strength 132
Table 5.13: Results of the proposed hypotheses for conceptual model 2 133

List of Figures

Figure 2.1: Factor structure of Machiavellianism ….……50
Figure 3.1: Conceptual Model 1: Antecedents and outcomes of organisational climate at individal level…….....……..85
Figure 3.3: Conceptual Model 2: Moderating effect of climate strength at organisatioanl level. 88
Figure 4.1: Research Process 91
Figure 5.2: Path diagram representing structural scores 127

Abbreviations

OC	Organisational climate
EL	Ethical leadership
MA	Machiavellianism
MD	Moral development
CO	Commitment
T	Trust
JS	Job satisfaction
SWL	Satisfaction with leader/supervisor
CS	Climate strength
ICC	Intra class correlation coefficient
IRA	Interrater agreement
IRR	Interrater reliability
agg	Aggregated value
SCT	Social cognitive theory
SET	Social exchange theory
SLT	Social learning theory

CHAPTER 1: INTRODUCTION

1.1 Introduction

The research on organisational climate and its importance among various industries has gained momentum over the past few decades. Importance of organisational climate is realized because it has implications for individual outcomes including job attitudes (Colquitt et al., 2002), ethics (Martin and Cullen, 2006), safety (Clarke, 2006), innovation (Anderson and West, 1998), and individual performance (McKay et al., 2008), as well as broader work outcomes such as customer attitudes (Dietz et al., 2004), organizational citizenship behaviors (OCBs) (Ehrhart, 2004), etc. Therefore it can be said that organisational climate is pervasive in nature as it affects most of the aspects of organizational life.

Research has found that of all the organisational issues, a poor work environment has been one of the critical challenges faced by the hospitals across nations (Joint Learning Initiative, 2004; Francis and Roger, 2012). Studies in Indian health organisations reported that the human resource development climate in the Indian hospitals is significantly poor (Mufeed, 2006). In fact, healthcare personnel are facing highly demanding external environment, in terms of manpower shortage, patient overload, ethical management, and job dissatisfaction (National Health Profile, 2018; Gulati et al., 2019). In such a scenario, it is even more important for hospital administration to implement a favorable internal environment for better job outcomes of the doctors and staff.

In this regard, it has been proven that positive organisational climate in healthcare is important in daily lives of doctors for their motivation, as it reduces stress, and leads to lower turnover intentions (Carlucci, 2014; Francis and Roger, 2012; Wienand et al., 2007). Several other studies have highlighted the importance of organisational climate in the hospital context (Clarke et al., 2002; Stone et al., 2006; Wienand et al., 2007).

Organisational climate is marked by the shared perception of employees regarding practices and procedures of an organisation which distinguishes it from other organisations (Schneider, 1975). Add to this the specific nuances of healthcare and the resultant perceptions of employees become far more relevant. Along with facing poor HRD climate, doctors in public and private sector are also faced with challenges regarding various practices and competencies pertaining to hospitals in domains of "working in teams," "service management," "goals and direction setting," "HR informatics, procurement of employees, finance management," "the ability to influence the key players in government policy makers and decision makers," (Gulati et al., 2019).

The present study on antecedents and outcomes of organisational climate in hospital context is important for various reasons and that has also been realized by other researchers. According to Dawson et al. (2008), an organisational climate in healthcare sector is concerned with the well-being of the employees, the quality of patient care delivered and integration among departments. This is extremely significant in Indian hospital context, where doctors are constantly facing emotional and physical burnout (Morse et al., 2012, NHP, 2018). Considering that organisational climate helps in reducing stress and burnout and improving morale (Maslach, 2001; Gelade and Young, 2005), it has emerged as an area of increasing interest among healthcare researchers.

Furthermore, the quality concerns of maintaining health standards and delivering the best of healthcare to patients is an extremely important aspect of the hospitals. Thus, the perception of doctors, regarding the meeting of health standards such as ICU maintenance, patient ward maintenance, physical work environment and cleanliness of doctor's chambers, etc. affects their attitude and job satisfaction (Dawson et al., 2008; Gulati et al., 2019).

And, finally the co-operation and collaborative nature of doctors' profession has been of great importance and marks the organisational climate of the hospital significantly. The integration among various departments such as anaesthesia, surgery and medicine is extremely important in delivering satisfactory patient care as well as maintaining a healthy and productive work environment. Similarly, integration among various cadres in hospitals, such as paramedical staff, doctors and top management is also of equal importance (Baum et al., 2009; Beena M., 2013; Gulati et al., 2019).

So it can be deduced that compromising any of the above mentioned criteria may severely affect the overall climate of the hospital organisation and may lead to lack of satisfaction and commitment among doctors (Maheshwari et al., 2007). Therefore, it is of utmost importance that an organisational climate marked by such dimensions should be studied and properly maintained in health organisations (Dawson et al., 2008).

Based on the results of the study, the key takeaways for the practitioners are to regularly review the organizational climate and improve upon it on a day-to-day basis at ground level, with respect to employee well-being, standard of quality care as well as collaboration and communication among employees. Understanding the antecedents and job outcomes can help the top management in the hospitals to implement programmes and modify HR policies, practices and procedures to create favoable work climate. However before focusing on climate construct it is essential to understand the contextual background of the present study.

1.2 Contextual background

Currently, in terms of monetary growth, healthcare market in India is expected to reach US$ 372 billion by 2022, of which hospital industry is a big part. The sector is expected to grow further due to rise in incomes, better health awareness, and better insurance availability (Frost and Sullivan, 2019 in IBEF report).

The past 26 years has seen a fast growth in India's medical educational infrastructure. The number of medical colleges in India increased upto to 476 in the year 2018. The number of doctors registered with medical council of India increased to 10,41,395 in 2017 from 827,006 in 2010, of which doctors registered with Rajasthan medical council are 40559 (National Health Profile, 2018).

However despite growing at a fast pace, the hospital system in India is facing challenges of manpower shortage and increased workload. According to a study in India, there is a deficit of 600,000 doctors as there is only one government doctor per 10000 patients. It was communicated that the targeted doctor population ratio would be 1:1000 and achievable by the year 2031 (Source: National Health Profile 2018). But the statistics today are still worrisome.

For instance, in Rajasthan, tertiary healthcare medical colleges and attached hospitals are facing patient overload (Health Vision 2025, Government of Rajasthan) due to influx of patients from surrounding states, which imbalances the doctor-patient ratio. Doctors are thus facing burnout and exhaustion (Morse et al., 2012). Researchers have identified that the effect of shortage of skilled workers in hospitals leads to high performance expectation, low morale, job dissatisfaction and burnout among doctors (Bhattacharya et al., 2012).

Thus, along with facing serious challenges in terms of job competencies, such as "time management, stress management, need and requirement forecasting, as well as budget forecasting" (Gulati et al., 2019), doctors are continuously facing physical burnout, mental exhaustion, stress and low morale.

With regard to the above mentioned issues, recent researches in healthcare have highlighted the importance of organisational climate in improving job satisfaction, commitment, workforce stability and reducing stress (Koppala et al., 2014; Kalhor et al., 2018; Sein et al.,

2021). Previous study by Beena M., (2013) also stated that organisations must work towards improved their work environment as well maintained and properly implemented work schedules, good communication channel in the organisation, frequent training programs and extrinsic as well as intrinsic benefits will lead to lack of turnover.

Organizational climate and its various facets such as climate for justice, innovation, ethics etc. have been researched vigorously in various contexts (Schneider, 1975; Victor and Cullen, 1988; Naumann and Bennett, 2000; Zohar 2000). However, organisational climate and its importance in healthcare sector have been mostly overlooked by the scholars so far.

The present study has made an attempt to investigate the organizational climate in the context of Indian hospitals, which is important as issues of turnover for doctors, job dissatisfaction, and lack of commitment, are becoming more critical in India, (Purohit and Wadhwa 2012; Maheshwari et al., 2007) where poor organizational climate might be the possible reason.

1.3 Need and motivation for the study

As explained in the previous section, the growth potential of healthcare market has brought it into limelight, but the financial growth has resulted in the subsequent increase of the instances of corruption and malpractices in Indian hospitals (Gadre, 2015; Chattopadhyay, 2016). This has invariably brought the moral and ethical inclinations of doctors into question. The budget allotted to hospitals and its proper implementation in various areas is extremely important for proper functioning and ultimate patient care delivery.

The health personnel have to face tough ethical challenges such as ethical distribution of funds, ensuring autonomy, giving importance to public health problems, limited control over decision-making, political issues and pressure while navigating political framework, maintaining confidentiality of data, etc (Baum et al. 2009).

Confronted with these issues, the choice of exercising ethically right or wrong decisions is done by subjective interpretations which are rooted in the interaction of external (climate) and internal factors such as moral reasoning (Mclaggen and Snell, 1992) and ethical decision making power of individuals (Babu and Yamuna, 2018). The top management in hospitals, who are handling large sum of finances for healthcare infrastructure and other needs, should therefore be ethical and fair in utilization of funds keeping in mind the employee welfare as well as patient satisfaction.

As such various studies have highlighted that ethical leaders and moral employees have led to an ethical and favorable organisational climate (Aloustani et al, 2020; Shin, 2012). Considering that hospital administration deals with ethical and moral dilemmas frequently, the need for such leadership seems significant.

Therefore it is important to ask ourselves, if the healthcare is equipped with the requisite leadership and staff for making moral and ethical decisions affecting patient care delivery? Ethics and leadership as part of curriculum among medical students has been a neglected aspect of healthcare in India. Different approaches have been tried to ensure that the undergraduate medical student can be taught professionalism and leadership skills, ranging from the development of ethical case scenarios to the delivery of modular training. Role modeling or shadowing, are effective tools for teaching, in which teachers act as a role model and students try to learn their attributes and replicate the same (Singh et al., 2016).

This is nothing but essentially learning ethics vicariously as per social learning theory. However, still, the doctors have shown moral disengagement in practice (Self et al., 1993). Could this be due to conflicting self-interest or need for achievement and personal gain?

Thus, it seems necessary to understand the antecedents of organisational climate with underlying ethical inclinations. This may gradually lead to a supportive work climate and open environment that may further positively affect various employee job outcomes.

1.4 Research problem

The studies mentioned above have clarified the importance of studying organisational climate in Indian hospitals. Also, recent researches (Britnell, 2015; Babu and Yamuna, 2018) have emphasised upon the determinants of organisational climate in Indian context. Given the current scenario (NHP, 2018) of healthcare industry, we can see that there is a need for ethical leadership and teaching ethics to doctors (Singh et al., 2016). However role modelling via ethical leadership is insufficient for the employees' perception of organisational climate to be affected. In order for ethical leadership to influence the employees' behaviour, it should be reinforced by internal factors, for instance the moral reasoning or moral development of each individual. It is important for doctors to have some internal moral compass to begin with, in order to be influenced by ethical leadership.

In such scenario when doctors interact with each other, their morality or lack thereof will influence the overall perception of the organisational climate. Research has shown that moral development is not enough for moral action (Kohlberg, 1984; Sendjaya et al., 2016). This is because self-interest has been found to be pervasive to some degree in all individuals along with low or high moral reasoning. This should affect the perceptions of the individuals. One of the personality types to embody self-interest is Machiavelliansim.

In the aforementioned studies it has been seen that healthcare professionals have to make decisions based on ethical guidelines while also dealing with political framework, manipulation and peer pressure. And Machiavellianism is the embodiment of manipulative tactics and politicking. Therefore the present study aims to understand how ethical leadership

of the management, along with moral development of an individual as well as his/her Machiavellian personality, can influence the perception of organisational climate in hospitals among doctors, which is consistent and strong enough to further influence their various job outcomes, such as commitment, trust, job satisfaction and satisfaction with leader.

1.5 Research questions

The importance of hospital organisations and the growing need for better organisational climate in hospitals has led to the formation of following questions:

1. How do ethical leadership, moral development and Machiavellianism affect the organisational climate in Indian hospitals among doctors?
2. What is the effect of organisational climate on various job outcomes of doctors, namely commitment, trust, job satisfaction and satisfaction with the leader?
3. What is the moderating effect of climate strength on the relationship of organisational climate with various job outcomes namely commitment, trust, job satisfaction and satisfaction with the leader?

1.6 Objectives of the study

Based on the research questions, the corresponding research objectives are as follows:

1. To analyse ethical leadership, Machiavellianism, and moral development as antecedents of organisational climate.
2. To study the effect of organisational climate on employee job outcomes (commitment, trust, job satisfaction, satisfaction with the leader).
3. To study the moderating effect of climate strength on the relationship of organisational climate with various job outcomes namely commitment, trust, job satisfaction and satisfaction with the leader.

1.7 Scope of the study

The purpose of this study is to determine the antecedents and outcomes of organisational climate in select public and private hospitals. To fulfil the aim, the data was collected from various public and private medical colleges and attached hospitals in Rajasthan. The rationale for taking Rajasthan as the scope of the study was, that it provides a wide assortment of public, private and centre owned medical colleges and hospitals. Also, in the past few years, the state has seen an upsurge in the number of strikes by medical personnel due to job dissatisfaction, political incompetence, pay and security, etc.

Furthermore, the state has seen manpower shortage in doctor-patient ratio, leading to high work stress and unfavourable environment for doctors. Thus, the study was conducted in tertiary hospitals (500 bedded and above) that are attached to medical colleges in Rajasthan. The respondents for the study were doctors of assistant professor grade and above.

1.8 Organisation of the thesis

The thesis work is divided and organized into six different chapters. The brief description of each chapter is given below.

Chapter 2: Literature review

This chapter provides a thorough review of the literature covering the concept of organisational climate and its importance, as well as review of ethical leadership, Machiavellianism and moral development and the select job outcomes of organisational climate.

Chapter 3: Proposed research models and hypotheses

This chapter introduces the ethical leadership, Machiavellianism and moral development as the probable antecedents of organisational climate identified from the thorough review of the

literature. The conceptual model of antecedents and outcomes of organisational climate is proposed where the hypotheses regarding the effect of organisational climate on various job outcomes such as trust, commitment, job satisfaction and satisfaction with leaders are framed that are empirically testable. Further the hypotheses are framed for explaining the moderating effect of climate strength on the relationship of organisational climate and job outcomes.

Chapter 4: Research methodology

In this chapter, the study has detailed the methodology followed to achieve the objectives of the study. The research approach and the research design adopted, development of the questionnaire, data collection methods, sampling method, sampling frame, sampling unit, sample size determination and various techniques used for preliminary data analysis and final data analysis are discussed.

Chapter 5: Data analysis

A detailed account of the statistical analysis conducted to test the conceptual model is provided in this chapter. With a sample of 537 respondents, this study has empirically tested the proposed relationships using Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structured Equation Modelling (SEM).

Chapter 6: Discussion and findings

The results of the statistical analysis conducted are discussed in detail in this chapter. The study has imparted strong theoretical bases for accepting and rejecting the hypotheses. Following the discussions, the major findings of the study are outlined, and the contributions and its implications for both theory and practice are listed. Further, the limitations of the study and scope for the future research are stated.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this chapter, a critical and exhaustive literature review has been carried out and presented, which has provided the in-depth understanding of the subject to the researcher. Research papers from various national and international journals of repute were reviewed. Some of the journals that were referred for healthcare studies are, “Journal of Hospital Administration,” “BMC Nursing,” “Psicothema,” “Journal of Evidence-Based Integrative Medicine,” and “Pacific Journal of Health Management,” etc. The present chapter begins by explaining the importance of organisational climate, followed by conceptualisation of organisational climate, and different definitions and dimensions of this construct. Further the antecedents taken in the study, i.e., moral development, Machiavellianism and ethical leadership and job outcomes such as commitment, trust, job satisfaction and satisfaction with leader are defined and explained.

2.2 Importance of organisational climate

An organisational climate is a unique feature of an organisation, which is formed by the shared perception of the employees regarding the policies, practices and procedures of the organisation’s system, that distinguishes it from other organisations by providing a competitive edge and influencing individual behavior (Schneider et al., 1975).

There are various studies that outline the importance of organisational climate. For instance it has been found in the literature that a satisfactory organisational climate is very important for the success and productivity of the company (Murray, 1999). The organisational climate is found to be a significant predictor of organisational performance and, an unfavorable organisational climate has a negative effect on individual productivity (Srivastav, 2006).

Early research has seen that organisational climate is determined by the relationships of the people with their superiors, subordinates and organisation that are based on the interactions among their goals and objectives, organisational structure, leadership styles, practices and procedures implemented by management and employees' behavior (Mullins, 1989).

Also, organisational climate as a construct has been studied and dissected at both individual and organisational level because of its impact on individual outcomes such as innovation and individual performance (Anderson and West, 1998; McKay et al., 2008), and organisational outcomes like customer attitudes, team performance etc. (Dietz et al., 2004; Colquitt et al., 2002). It has been seen that turnover intentions, job satisfaction, and organizational commitment are some of the popular outcomes being studied.

Various facets of climates have been found to be related to above mentioned job outcomes. For example, job satisfaction and commitment have been linked to climate for participation (Tesluk et al., 1999), as well as justice climate (Liao and Rupp, 2005). Similarly, empowerment climate (Maynard et al., 2007) has been found to be related to better job satisfaction. In fact in a few research studies (Glisson and James, 2002; Schneider and Snyder, 1975) a generic climate was found to be positively related to employee satisfaction. Also, organisational climates have also been positively linked to job satisfaction in Indian healthcare studies (Akula and Talluri, 2013; Koppala et al., 2014).

In addition, various studies have suggested similar relationships between specific climate types and organizational commitment. Such as ethical climates (Cullen et al., 2003), justice climate (Simons and Roberson, 2005; Walumbwa et al., 2008) as well as climates for support (Gelade and Young, 2005), have all been significantly associated with organizational commitment. Kalhor et al., (2018) found that organisational climate is positively related to commitment among nurses.

Similarly, over the years many studies have investigated the relationship of another significant job outcome such as trust with a specific climate type, such as ethical climate in different contexts, and has revealed that ethical climate is significantly related to supervisor trust (Simha and Stachowicz-Stanusch, 2015), co-worker trust (Ascigil and Parlakgumus, 2012), and leader trust (Engelbrech et al., 2014).

Interestingly, it has also been seen that organisational climate affects various unit-level outcomes. Studies have shown relationships of various developmental climates such as climate for innovation, creativity, and training with intended unit-level outcomes respectively. Study by Jung et al., (2003) depicted a positive relationship between innovation climate and organizational innovation. In addition, it was found that innovation climate among teams led to overall team creativity (Pirola-Merlo and Mann, 2004). Furthermore, Tracey and Tews (2005) developed and training climate measure and showed that it is significantly elated to training investment. Finally, Carlucci (2020) found that organisational climate affected employees' innovative work behaviour through organisations' openness to innovation.

The studies so far have shed light on the importance of examining organisational climate by depicting its significant effect on various job outcomes. Further in the chapter, the researcher has conceptualised organisational climate and explained its various dimensions. But before that the difference between organisational climate and culture needs to be addressed. Climate research is rooted in culture research but it has been established that climate and culture are different constructs as explained below.

Difference between organisational climate and organisational culture

Organisational climate and culture have been studied as relative constructs in the previous researches, frequently as their definitions are so similar in nature, yet many studies have also

established organisational climate and culture are different and distinct concepts (Denison, 1996; Cameron and Quinn, 2011). Although climate and culture are both learned through socialization and interaction among employees with the purpose of making sense of their environment to deal with it, yet even with these similarities, several aspects distinguish climate from culture.

The culture literature finds its roots in anthropological studies, whereas climate has originated in Lewinian psychology (Schneider, 1990). The basis of their origin has further shaped their studies and measurement scales. Organizational culture is constituted with different dimensions (beliefs and myths) than organizational climate. Culture is focused on understanding the underlying assumptions of the organization, which are so deeply rooted in any organisation that they are taken for granted and are intangible in nature (Schein, 2004). Therefore, organizational culture is considered to be a deeply abstract concept however climate is easily manipulated as it exists in short term.

Various studies have shown that climate is manifested at surface-level which shows how things are done. But, culture studies have emphasized on the manifestation of the concept via artifacts, legends, and symbols which reveal shared values. The organisational climate studies emphasize the processes by which these shared values are taken into consideration (Moran and Volkwein, 1992; Schneider et al., 2013).

Moran and Volkwein (1992) have previously stated that climate and culture are closely related to each other, as not only is climate affected by the shared perceptions of the individuals in an organisation, but also by the organisational culture. Many other studies have corroborated these findings such as Hughes et al., (2002) and Denison (1990) have stated that organisational climate and culture are related functions and the former can be sometimes derived from the latter. Burke and Litwin (1992) supported the above studies by stating that

organisational climate is influenced by organisational culture and the shared perceptions of the employees determine both the concepts but at different levels.

Thus, it appears that organisational climate can be easily interpreted in empirical terms as it is a more explicit concept than organisational culture, because it consists of both behavioral as well as attitudinal aspects (Moran and Volkwein, 1992). Therefore, it can be said that climate can affect the behavior of the individuals in an organisation directly (Tseng and Fan, 2011; Schneider et al., 2013). Hence, if a study aims to change or modify the behaviour of the people in an organisation then a climate based approach seems more suitable (Moran and Volkwein, 1992). So, for the purpose of this study we have further conceptualized the organisational climate, as studied by various researchers over the years.

2.2.1 Conceptualization of organisational climate

In the early climate researches, Forehand and Von Haller (1964), have defined organisational climate as "a set of characteristics that describe an organization and that (a) distinguish the organization from other organizations (b) are relatively enduring overtime and (c) influence the behavior of people in the organization".

Although organizational climate had been widely studied in organizational psychology (Murray, 1938; Lewin 1939), its conceptualization and measurement techniques were initially disjointed. Earlier, Lewin et al., (1939) determined the psychological inclination of the organisational climate and further investigated that different leadership styles significantly affect organisational climate.

Later, Tagiuri (1968) defined organizational climate as a "quality of the internal environment of an organization that (a) is experienced by its members, (b) influences their behavior and (c)

can be described in terms of the values of a particular set of characteristics (or attributes) of the organization."

Pritchard and Karasick (1973) studied the validity of a scale to measure organisational climate and investigated the relationship of climate with job outcomes such as job performance and satisfaction. They concluded that climate and job performance are positively associated with satisfaction. In yet another study, Porter et al. (1974) discussed that certain attitudes regarding organisational commitment and turnover among employees can be understood by comparing the level of their expectations with their perceptions of job/work environment.

James and Jones (1974) further studied organisational climate in terms of psychological well-being. The study examined the perception of organisational climate by its members and its impact on their psychological well-being. Their study conceptualized organisational climate at unit level and at individual level.

Schneider (1975) conceptualized climate as follows: "Climate perceptions are psychologically meaningful molar descriptions that people may agree characterize a system's practice and procedures." An important insight in Schneider's work is the distinction between organizational climate and job satisfaction. He posed that the two constructs are related yet distinct from each other and thus are defined and analyzed independently. He defined climate, as a perception of the external environment, whereas job satisfaction is seen as the study of an individual's emotional state.

In the 1990s organisational climate was conceptualized as a distinct construct from organisational culture. Schein (1990), Reichers and Schneider (1990), and Denison (1996) postulated that climate is merely a superficial manifestation of culture. The organizational climate as a term started appearing in management literature and it was often used

synonymously with culture. (Denison, 1996) provided substantial difference between climate and culture stating that culture is dynamic, however climate is more static comparatively and thus is easily measured. Therefore the managers in an organisation can try and control the climate depending upon the targeted behavior, as compared to culture which is deep seated in company values.

One of the most comprehensive definitions of climate was provided by Moran and Volkwein (1992). According to their study, "Organisational climate is the relatively enduring characteristic of an organisation which distinguishes it from other organisations: and (a) embodies members' collective perceptions about their organisations with respect to such dimensions as autonomy, trust, cohesiveness, support, recognition, innovation and fairness; (b) is produced by member interaction; (c) serves as a basis for interpreting the situation; (d) reflects the prevalent norms, values and attributes of the organisation's culture; and (e) acts as a source of influence for shaping behaviour."

Later in 2000, Bowen and Ostroff (2004) defined Organizational climate as a shared perception of organisational practices, policies, procedures, routines, and rewards. They emphasized that the managers enforced climate by rewarding expected behavior and vice versa in a formal organisational unit.

Pareek (2006) further corroborated that organisational climate is the shared perception of the employees regarding the organisation and its sub-systems from a motivational point of view. He derived a framework to examine organisational climate based on the motives and needs of the individuals, which ultimately determines how the organisation deals with its members, groups and issues.

Hannevik et al., (2014), stated that organisational climate varies across organizations. It is persistent in nature, and is perceived by all employees such that it affects their behavior. It

impacts organizational policies, practices, leadership behavior, safety, creativity, innovation and rewards.

Recently, Punwatkar and Verghese (2018), defined organisational climate as the recurring patterns of attitudes, feelings and behaviors related to the employees' workplace environment. He studied the impact of the competencies of salespeople on their job performance, which was found to be stronger for a favourable organisational climate.

The organisational climate definition as provided by Moran and Volkwein (1992) is adapted for the purpose of this study as it emphasises upon the shared perception approach by stating that the prevalent norms and values in an organisation affect an individuals' behaviour. According to their study climate is nothing but an enduring characteristic of an organisation that is formed by the shared perceptions of the organisational members regarding various organisational aspects, such as policies, practices, as well as organisation's culture and can further affect employees' behaviour positively or negatively.

Understanding the factors that constitute the organisational climate is crucial to clearly understand the climate construct. This will not only provide an in depth understanding about concept but will also showcase its importance. Although the research regarding the climate formation is disjointed and inconsistent, yet understanding the emergence of climate in organisations is important as that will add to the extant literature of the conceptualization of the climate as well as highlight the methodological aspect of the construct, (Moran and Volkwein, 1992; Schneider and Reichers, 1983). Over the years the researchers have tried to analyse various approaches to climate formation of which the interaction approach is the most suitable for the present context.

2.2.2 Approach to climate formation

The symbolic interaction approach was first introduced by Herbert Blumer (1969). According to this approach, the individuals form some sort of meaning with respect to their interactions with each other. Thus the approach is founded under the context of each interaction. The characteristics of this approach are as follows (as cited by Kelly and Dorsch, 1991):

i. The individuals have a response to particular stimulus, which is in congruence with the meaning that they assign to the stimulus (e.g., the receipt of rewards).
ii. The individuals assign these meanings based on their interactions with each other (e.g., management's interaction with staff nurses and other members of the organization).
iii. The meanings assigned to these stimuli may be modified based on the interpretation of the individuals of their current environment or context (e.g., nursing personnel interpret rewards and treatment in the context of their organizational surrounding and their salient attitudes/feelings).

Therefore the essence of symbolic interaction is based upon the fact that human actions are particular to a situation/context and are largely based upon the individuals' interpretation of that situation (Blumer, 1969).

Interestingly, the idea of symbolic interactionism further determines how personality can factor in formation of climate as seen in the study by Schneider (1990), where he states that personality is the lens through which the individuals assign meanings to their interactions with each other given the particular context. Moreover, it has been studied that the construction of the environment in an organisation takes place by analysing the existing environment and forming decisions based on that analysis leading to certain actions that

further modifies the environment. Thus it is based on reflection and modification which constantly changes the social environment (Hatch, 1993).

According to the symbolic interaction perspective, climates emerge from the interactions that members of an organization have with each other during the socialization process and the interpretative meanings assigned to those interactions by individuals (Reichers, 1987; Kelly and Dorsch, 1991). People adapt to their immediate environment by learning and understanding the appropriate behavior through their perceptions of the climate, especially in early socialization process (Victor and Cullen, 1988).

Once a climate is formed through interaction and socialization, then the determination of the dimensions of the climate is important, to identify the constituents of the climate.

2.2.3 Dimensions of the organisational climate

An important and recurring problem in the organisational climate literature that has been faced by various researchers is whether to consider climate as a global construct across organizations consisting of similar dimension structure (Campbell et al., 1970; Kopelman et al., 1990; Patterson et al., 2005), or to consider different facets of organisational climate like climate for service (Schneider, 1990), climate for ethics (Victor and Cullen, 1988) and climate for innovation (Anderson and West, 1998) with specific and pertinent organizational outcomes.

These differences are regarding the focus of the study, whether to compare the organisational climate as a holistic construct across various organisations, or to test specific climate facets with specific job outcomes. This study takes a generalized approach to climate restricting the investigation to specific dimensions of climate that deemed relevant to the context of hospitals.

Patterson et al., (2005) postulated that, though the climate researchers may have an agreement on the definition of organisational climate, there also exists a level of disagreement among them about the constituent dimensions of the organisational climate, as the researchers over the years have tried to capture climate through limited number of dimensions, pertaining to their studies respectively. According to Steers (1977) this has occurred because the organisational climate has been studied in different contexts, like schools, banks and government organisations, which has led to difficulty in identifying same set of dimensions that might explain climate in all the above organisations.

Also, over the years, numerous new scales have been constructed to measure climate globally or specifically in different contexts, despite existing scales, making it increasingly difficult to certify some key dimensions of climate construct. However, Litwin and Stringer (1968) proposed that dimensions are based on the intended outcomes taken in the study and thus are subjective in nature. Litwin and Stringer (1968), gave the following dimensions of climate as shown in Table 2.2.

Table 2.1: Dimensions of organisational climate given by Litwin and Stringer (1968)

Dimension	Brief Description
Structure	It is perception of employees regarding organisational rules and regulations and the level of strictness with which they are imposed.
Responsibility	This dimension determines how employees perceive the level of autonomy and decision making within the framework of their roles.
Reward	It is the perception of employees regarding the rewards offered for the effort and output delivered by them.
Risk	It is the perception of employees about the risk associated with one's job and the overall inclination of the organisation to risk taking in general.
Warmth	This dimension deals with how the employees perceive the organisation's friendliness and care and concern towards them.
Support	It is the perception of employees regarding support and helpfulness that exists within an organisation between the superiors and the peers.
Standards	This dimension measures the quality of the work, by setting the standards for achieving predefined goals or exceeding them.
Conflict	This dimension helps the employees to understand the proclivity of an organisation to conflict resolving or avoidance tactics.
Identity	This dimension deals with the feeling of the employee as an integral part of an organisation, encompassing his/her importance of being in the organisation.

The organisational climate is formed with the interaction among various aspects of organisation such as the behaviour of leader and the employees, the structure as well as the system of the organisation etc. (Pareek, 1989). It is influenced by the perceptions of individuals regarding the implementation and the execution of the functions in an organisation. The framework of motivational analysis of organizational climate (MAO-C) proposed by Pareek (1989), consists of the six climate motives and 12 organisational dimensions as: (1) orientation; (2) interpersonal relationships; (3) supervision; (4) problem management; (5) management of mistakes; (6) conflict management; (7) communication; (8) decision making; (9) trust; (10) management of rewards; (11) risk taking; and (12) innovation and change.

Various other studies have linked the elements of HRM practices to dimensions of climate, for example, congruency in goal achievement and rewards (Kopelman et al., 1990). Also, many dimensions of climate have been linked with the sources of motivation and job satisfaction (Reichers and Schneider, 1990). Organisational climate thus, constitutes the basis of motivation and job satisfaction.

Later in 2005, Patterson et al., proposed a holistic view of dimensions measuring organisational climate. This model encompasses four major schools of study of organizational effectiveness, which are embedded in management and organizational psychology:

i. The Human Relations Model (internal focus, flexible orientations) consists of the feelings associated with belongingness, trust, and cohesion, which are fostered through organisational support, training and development. Co-operation, coordination and control are balanced within the organisation through participation and friendly and supportive interpersonal relationship management.

ii. In the Internal Process Model (internal focus, control orientation) the emphasis is on stability achieved within the functioning of the organsiation, by controlling or minimizing the effects of external/environmental uncertainties. Coordination and control within the organisation is fostered through formal codes and procedures. The Internal Process Model represents the classic bureaucracy.

iii. The Open Systems Model (external focus and flexible orientation) emphasizes on innovation and risk taking where organisational values are associated with growth, creativity and adaptation.

iv. The Rational Goal Model (external focus and control orientation) determines how the organisation achieves its objectives, where organisational values are integrated with productivity and attainment of goals.

Furthermore in 2008, Dawson et al., also postulated various dimensions of climate, which are used for the purpose of this study. Initially, the questionnaire structure used by Dawson at el., (2008) encompassed following dimensions such as, quality, team work, collaboration among departments, staff welfare, equity, safety, training, communication and incident reporting mechanism.

Although, these dimensions covered similar or overlapping items, and fell mostly in the Human Relations quadrant of Patterson et al., (2005). These dimensions emphasized the wellbeing, and growth of workers within an organization (Patterson et al., 2005, p. 384). Given the nature of the medical colleges and attached hospitals, it is understandable that the management needs to focus on integration, collaboration, and training & development. Finally, Dawson at el. (2008) converged the overlapping dimensions into three dimensions representing organisational climate as shown in Table 2.2.

Table 2.2: Dimensions of organisational climate by Dawson et al., (2008)

Dimension	Brief Description
Well-being	Perception of employees about organisation regarding concern for their welfare, encompassing their career growth, opportunity for training and development and emotional well-being.
Quality	Perception of employees about the emphasis laid by the organisation on good quality care of patients.
Integration	Perception of employees about the extent to which teams, work groups, and departments collaborate with each other to achieve their tasks. It also include perception regarding support from peers and superiors

For the purpose of this study the dimensions proposed by Dawson et al. in 2008 are used to determine the individual perceptions regarding the organisational climate. It is important to address here as to how such a climate comes about. There have been various studies outlining different antecedents to climate leading to targeted outcomes. Therefore, further we review various antecedents and outcomes studied in climate literature.

2.2.4 Antecedents of organisational climate

This section reviews the literature exploring antecedents of various climate types at different levels of analysis. It has been seen that most of the studies have investigated the impact of individual level antecedents such as age and gender on psychological climate (Parker et al., 1995; Forte, 2004; Mayhew et al., 2006). However, very few studies have investigated the individual-level antecedents of organizational climate.

But major studies have focused on specific climate types and their antecedents. Cullen et al. (2003) investigated the relationship between ethical climate and employee commitment. Likewise, Darr and Johns (2004) stated that various conflict types are positively associated with political climate. Schminke et al., (2005) stated that the several ethical climate types were influenced by cognitive moral development of employees and leaders.

Leadership as an antecedent of organisational climate has been studied by several researchers over the past decade. For instance specific characteristics of leaders were found to influence various organisational climates. Koene et al., (2002) found that leader consideration was positively associated with the overall organizational climate dimensions. Zohar and Luria (2004) found that transformational leadership was related to safety climate. Koene et al. (2002) found that charismatic leadership positively affects the organisational climate.

Mayer et al., (2007) studied the influence of leader personality on different types of justice climate. The study found that various justice climates related differently with different personality traits. For instance the latter was positively associated with personality type of agreeableness and conscientiousness, but it was negatively associated with neuroticism. It was also seen that specific transactional leadership related positively with procedural justice climate (Walumbwa et al., 2008). Moreover various studies have highlighted the positive relationship between ethical leadership and ethical climate (Shin, 2012; Demirtas and Akdogan, 2015; Ozden et al., 2019).

Additionally, organizational variables have also been studied as antecedents of organisational climate. For example, it has been seen that organisational climate for age discrimination was affected significantly by the variation in age based on organisational level (Kunze et al., 2011). Also, at the team level, team size and team collectivism have been found to be important precursors of team climate of justice (Colquitt et al., 2002). It has been seen that human resource management practices were identified as an important factor that influences the organisational climate (Kopelman et al., 1990; Klein and Sorra, 1996; Collins and Smith, 2006; Pareek, 2006; Purohit and Wadhwa, 2012).

Similarly various researchers have studied different individual as well as organisational outcomes of organisational climate.

2.2.5 Outcomes of organisational climate

Organisational climate has showcased its importance over the years by affecting various individual level and organisational level outcomes. Many studies have demonstrated that climate has been related to job performance, motivation, stress, and well-being through its relationship with commitment and satisfaction or mediated via attitude (Ostroff, 1993; Carr et al., 2003; Parker et al., 2003).

Moreover, it has been seen that many strategic climates have affected different behavioural outcomes. For example, previous literature review has shown that safety climate is related to many job outcomes such as commitment, satisfaction, safety behaviors and accidents (Beus et al., 2010; Christian et al., 2009; Clarke, 2006).

Organisational climate is measured as the extent of interaction of employees with each other in an organisation such that they collaborate and learn from each other. If the organisational climate improves then it leads to higher job satisfaction, lower employee turnover, and better organizational performance (Koles and Kondath, 2015). Punwatkar and Verghese (2018) found that the impact of competencies on job performance is stronger when the organisational climate is high.

Also, organisational climate researchers have proposed several facet-specific organisational climates, such as safety climate focusing on employees' safety and health (Griffin and Curcuruto, 2016). Organisational climate has also predicted various other outcomes such as both personal well-being and physical health, including employees' emotional exhaustion, anxiety, safety behaviours (McGonagle et al., 2014; Yulita et al., 2017; Becher et al., 2018).

Recently, scholars have shown interest in exploring the relationship between climate and outcomes at higher (organisational) levels of analysis. For example, several studies have linked climate with measures of organizational performance. Patterson et al., (2004) have

linked organisational climate with company productivity, positively. Also, Gelade and Young (2005) stated that a positive relationship exist between service climate and sales performance of employees in a study in bank.

Several studies have since then, examined the link between climate and global outcomes at the unit level of analysis. For example, Colquitt et al. (2002) found a positive relationship between procedural justice climate and team performance, and its negative relationship with team absenteeism. Ehrhart (2004) further examined the effects of procedural justice climate on unit-level organisational citizenship behaviors (OCBs) and found that when team members collectively felt fairly treated, they were more likely to exhibit OCBs. Following table 2.3 shows the selected significant studies of organisational climate and its antecedents and outcomes.

Table 2.3: Select studies of antecedents and outcomes of organisational climate

Climate type	Author	Antecedents	Outcomes
Participative climate	Tesluk et al., (1999)	• Attitude of district managers regarding participation • EI practices and supports	• Belief in improvability • Organization cynicism • EI activity • Extrinsic job satisfaction • Organization commitment • Intrinsic job satisfaction
Ethical climate	Cullen et al., (2003)	• Professional versus nonprofessional workers	• Commitment
	Neubaum et al., (2004)	• Organizational newness • Firm size • Entrepreneurial orientation	NA
	Ambrose et al., (2008)	NA	• Turnover intentions • Job satisfaction • Commitment
	Shin (2012)	• Ethical Leadership	• Collective organisational citizenship behaviour
	Demirtas and Akdogan (2015)	• Ethical leadership	• Commitment • Turnover intensions
	Ozden et al., (2019)	• Ethical leadership	• Job satisfaction
Organisational climate	Lindell and Brandt (2000)	• External contextual variables • Internal structural variables	• Organizational level outcomes • Individual-level outcomes

	Glisson and James (2002)		• Work attitudes • Turnover • Self -perceptions of service quality
	Gelade and Ivery (2003)	• Human resource management factors (professional development etc.)	• Branch cluster performance
Innovative climate	Van der Vegt et al., (2005)	• Organization tenure • Functional background • Age • Gender	NA
	King et al., (2007)	NA	• Organizational performance
Justice climate	Naumann and Bennett (2000)	• Group cohesion • Demographic similarity • Supervisor visibility as antecedents of climate strength	• Individual helping behaviors • Organizational commitment
	Mayer et al., (2007)	• Leader extroversion • Leader conscientiousness • Leader agreeableness • Leader neuroticism	• Job satisfaction
	Walumbwa et al., (2008)	• Contingent reward transactional (CRT) leadership	• Individual organizational citizenship behaviour • Satisfaction with supervisor • Organizational commitment
Safety climate	Hofmann and Mark (2006)	NA	• Medication errors • Nurse back injuries • Patient satisfaction • Needlesticks • Patient perceptions of nurse • Patient urinary tract infections
	Neal and Griffin (2006)	NA	• Lagged effect on individual safety motivation
Group level safety climate	Zohar and Luria (2005)	• Organisational climate strength • Organizational climate routine formalization • Organization routine formalization	• Climate variability
Support climate	Gelade and Young (2005)	NA	• Commitment • Indirectly customer satisfaction • Sales

2.2.6 Importance of organisational climate in healthcare

In the context of healthcare, several studies have outlined the importance of organisational climate, with an increasing interest in relationship between organisational constructs and health services outcomes (Jackson-Malik, 2005; Wienand et al., 2007; Carlucci et al., 2014). Regarding healthcare services, there is a growing need to understand the employees' perceptions and climate generated by their healthcare organisation because there is a positive correlation between climate, high quality service and patient satisfaction (Sleutel, 2000; Stone et al., 2006).

In the early 2000s various studies have explored climate in context of nurses and paramedical staff. Sleutel (2000) conducted a literature review and examined that organisational climate influenced various nursing practices. Mok and Au-Yeung (2002) also investigated that organisational climate influenced the empowerment of the nursing staff in a regional hospital of Hong Kong. The results of their investigation show that organizational climate and supportive leadership and teamwork are related to empowerment among nurses.

Stone et al. (2006) examined the relationship between organisational climate and intention to leave among intensive care unit nurses' and showcased that a satisfactory and a favourable organisational climate helps in creating a stable and qualified workforce. Recently, in a similar study (Sein et al., 2021) it has been seen that supportive organisational climate encourages workforce stability, better loyalty, improved productivity and better leadership among nurses.

With regard to other cadres of healthcare organisations, one of the significant studies pertaining to organisational climate was conducted by Carlucci (2014). In the study, several issues of poorly developed organisational climate elements were evident. Dissatisfaction regarding the performance appraisal and the mis-management of reward systems have been

identified as the reasons for unsatisfactory climate. As a result of this, employees lack motivation and do not pay sufficient attention to features concerning the hospital's policies. The study has also identified some of the well-developed elements of organisational climate. These elements are the employees' pride in belonging to the organization and empowerment (empowerment for daily job activities, autonomy, and job satisfaction).

In fact job satisfaction has been identified as an important outcome of organisational climate. According to the study by Koppala et al., (2014) higher level of job satisfaction among senior doctors in Indian private hospitals is due to favourable organisational environment. The study demonstrates that job satisfaction is related to the expectations of management, supervisor support provided by top management, respect given by subordinates and sense of accomplishment as well as recognition and also appreciation for the learning curve and career path. The study emphasised on supervisory support for job satisfaction. The study also cautions that job satisfaction is related to commitment among doctors and together they correlate with turnover intentions among doctors (Mosadeghrad et al., 2014).

Earlier studies have also highlighted the importance of commitment as a job outcome and its need among heath workforce. It is stated that employees having high levels of organisational commitment provide a secure and stable work force (Steers, 1977). Various dimensions of organisational climate can ensure job commitment. For instance, the climate of the organisation is not only inclusive of the physical infrastructure, but also the technological advancement in the form of machinery and modern tools. If the employee feels that his/her productivity increases due to the implementation of technological infrastructure, then loyalty and commitment towards the organization increases (Mahal, 2009).

Previously, Maheshwari et al., (2007) in their study focused on the commitment of the healthcare providers. According to the findings of their study, affective and normative

commitment levels are higher than continuance type of commitment among doctors. It is a good sign because emotional and moral bonding benefits the department by increasing the sincerity of the health officers' efforts.

Moreover many studies in the service sector have showcased the significance of commitment due to good HRM practices and work climate. For instance, training and developing environment shape the climate of an organization, such that the intention to leave in the employees is controlled and reduced (Guchait and Cho, 2010; Dhar, 2015). Pertaining to the healthcare sector, many researchers like, Alphonsa VK (2000), Sobo and Sadler (2002), Aarons et al. (2006) studied that organisational climate if instigated properly by the top management can have a positive impact on the work attitudes. But lack of interpersonal communication if incorporated in work climate may lead to less motivated and less satisfied employees.

In accordance with this, the study findings of Purohit and Wadhwa, (2012), indicate that in Indian hospitals, the communication channels are ambiguous in the organisation and are often controlled from higher authority (bureaucratic nature) leading to centralized decision making disregarding the sub-ordinate involvement. This results in a dependency climate, where employees are dependent on superiors for information and duties. Thus, to improve motivation climate, it is recommended that subordinates should be given more responsibility and autonomy that will allow them to take decisions within their own sphere of work and increasing their accountability. Therefore, a climate characterised by better communication and cooperation (integration) is in need among doctors for a satisfied workforce.

Another study by Purohit and Verma, (2013) indicated that participation and succession planning are least considered factors in Indian healthcare work environment. The study also found that rewards and recognition are the factors considered of most importance. It can be

concluded that the overall Human resource development climate from the viewpoint of medical officers needs improvement. Thus, a climate marked by HR practices, rewards (well-being) and participation (integration) is the need of the hour to retain doctors. The importance of leaders is also highlighted in creating a favorable climate and retaining employees.

Indeed not long ago, Dr. Surajit Banerjee of Max Healthcare, Delhi (2012) in an interview said that, although the reason for attrition among doctors is considered money, but most employees during exit interviews claimed unethical bosses and unfavourable work climate as the reasons for leaving. Morrison, et al. (2007) outlined that lack of engagement and high turnover rates had affected health care organizations.

The above mentioned studies signify the need for understanding the factors or job outcomes that may lead to turnover intentions such as job satisfaction, commitment, trust and satisfaction with leader. Based on above studies it is clear that organisational climate in healthcare industry is of importance as it influences the job satisfaction, commitment and performance of doctors. Some of reasons for the climate to be suffering could be lack of ethical leadership and morals in doctors, as is evident in various medical scandals over the years (Gadre, 2015; Chattopadhyay, 2016). The following Table 2.4 shows the few select studies of organisational climate in healthcare sector.

Table 2.4: Select studies of organisational climate in healthcare sector

Author (Year)	Key Findings
Gulati (2001)	There is high degree of integration in organisational goals, structure and climate. Majority of doctors and nurses have perceived high degree of organisational climate in Apollo Hospital, which has contributed to better commitment among doctors and nurses.
Erphan (2002)	The doctors who perceived organisational climate as favourable showed better job satisfaction compared to those who perceived climate as less favourable.
Carlucci and Giovanni (2012)	The AR project should support those management practices that will add value to the job outcomes by improving the organisational climate.

Akula and Talluri (2013)	This study was conducted in the hospitals in Guntur district in Andhra Pradesh ie., Government general Hospital (GGH)and NRI General hospital (NRI). The study stated that giving importance to the social values of the employees such as doctors will enhance their satisfaction of their job at Government general hospital whereas in the private general hospital NRI, the doctors felt that the management of mistakes is influencing their job satisfaction levels. Proper leadership is an important factor that is affecting the job satisfaction of the doctors at both the hospitals.
Koppala et al., (2014)	Support by higher authority, respect given by subordinate staff/people's recognition and sense of led to higher level of job satisfaction among senior executives in hospital. Favourable working climate leads to higher job satisfaction. The study also highlighted the importance of supervisor support with job satisfaction.
Black and Fitzgerald (2018)	Policies that promote social capital make it possible to manage openness, internal politics, and organisational commitment in an organisation.
Kalhor et al., (2018)	The results of the study highlighted that organizational climate predicted organizational commitment positively. The study showed that improvement in organisational climate will also improve the commitment among employees and managers and also provide competitive edge to the organisations.
Mansour and Diane (2019)	According to the findings of the bootstrap analysis and Sobel's test, variants of cognitive physical and emotional exhaustion mediate the relationship between psychological safety climate and safety workarounds.
Maphumulo et al., (2020)	The findings indicated that NCS tool was perceived to be effective by the nurses regarding the quality of healthcare delivery in South African tertiary hospitals, but still there is a scope for improvement in overall climate.
Aloustani et al., (2020)	Ethical leadership in an organisation led to a positive ethical climate which further improved the organizational citizenship behavior of the staff. Furthermore the findings suggested that nurses can use ethical leadership to improve their overall satisfaction and performance.
Carlucci et al., (2020)	The study showed that organisational climate affects employees' innovative work behavior both directly and indirectly through organisation's openness to innovation.
Sein et al., (2021)	A positively shared perception about the work climate among the nurses, irrespective of their background can induce loyalty among staff, improve productivity, reduce stress and encourages workforce stability.

2.3 Antecedents of organisational climate in this study

Based on the studies mentioned in previous section, it is evident that the significance of organisational climate with respect to various job outcomes has been studied profusely over the years, in various countries and contexts and yet the research into identifying the antecedents of organisational climate still lacks rigor.

Especially in the context of healthcare organisations, the individual level antecedents to organisational climate are under researched, where the emphasis lies on the ethics and morals along with the practical thinking of doctors. Maintaining this balance is extremely important to deliver high quality healthcare service to the patients, where the doctors not only use moral reasoning and ethics but also employ practicality. Therefore various antecedents with underlying ethical inclinations, to organisational climate are reviewed further.

2.3.1 Moral development

Based on the work of Piaget (1932), the cognitive moral development has been further researched and refined by Kohlberg (1969; 1984) and extended by others (Rest et al., 1974; Gilligan, 1982). According to Kohlberg the development of moral reasoning occurs in a sequence of stages in an individual, wherein cognitive structures provide the framework for classifying and organizing the information as right and wrong.

The cognitive moral development model emphasizes the interaction between the environment and the developing capacity of the individual to deal with the environment**.** The thinking capacity of an individual determines his/her response to the environment and enables him/her to deal with the experiences. This capacity develops in a sequential manner in different stages, each marked by different mode of thinking. Cognitive moral development determines an individual's ability to engage in ethical/moral decision making (Greenberg, 2010).

The essential reason of moral thinking research is to decide how people settle on choices when looked by a moral quandary (Duane III, 2008). Kohlberg expressed that there are six consecutive stages in the improvement of an individual's capacity to manage moral intellectual issues. As indicated by Kohlberg, moral improvement advances all through youth and puberty in unsurprising stages (Forte, 2004).

Kohlberg grouped the stages of moral development into three levels, namely the pre-conventional, the conventional and the post-conventional with each level containing two stages. The basic premise of the theory is that people go through progressive succession of three levels in the improvement of their moral/moral intellectual capacity (Velasquez, 2006).

At the pre-conventional level there are 2 stages, stage one (punishment and obedience orientation) and stage two (instrumental and relative orientation) (Velasquez, 2006). People at level one do not have the ability to consider the viewpoint of others of their activity (Piccolo et al., 2010). At this level, the individual is distracted with his or her own personal benefits as well as external rewards and punishments.

The first stage consists of punishment and obedience. In this stage, depending upon the guidelines set up by the power figure, an individual differentiates between right and wrong. Thus the rightness and wrongness of an action are determined by the authority of the power figure rather than with self-actualisation (Kohlberg, 1984). The second stage is one of individual instrumental reason and exchange. In stage two, the current needs and self-interests of an individual constitute the rightness of the actions of an individual and vice versa. During this stage, an individual evaluates behaviour based on its suitability to him or her and no longer puts together upright choices exclusively with respect to explicit principles or authority figures (Fraedrich et al., 2011).

The second level is referred to as the conventional level of moral reasoning. In this level the individuals behave in a manner that is expected of them. Here the individuals usually examine their social environment and then act as per the expected ethical behavior. According to Kohlberg (1984) individuals in this level comply with the law not only to avoid societal repercussions but because they understand that if an action promotes welfare and safety of the society as a whole, then it is construed as right.

Stage 3 can be understood as the stage of reciprocal expectations where people form mutually conforming relations. Fraedrich et al., (2011) stated that in this stage, individuals act ethically based on the rules and the laws as stated by the authority figures and simultaneously consider the welfare of others. In stage 4 an individual figures out what is right and wrong by thinking about his/her obligation to society and not simply to some explicit people. This stage can be alluded to as the phase of social frameworks while maintaining one's conscience. Obligation, regard for power and maintaining the law and order turns into the point of convergence.

The final level as determined by Kohlberg's theory is the post conventional level. At this level moral judgment is not just based on relational and societal obligations, but rather is based on the internalized principles of right and wrong, as well as justice and duty (Greenberg, 2010). At this level people settle on moral choices paying little heed to contrary outer tensions (Fraedrich et al., 2011). As indicated by Kohlberg, not very many people arrive at this level, however people who arrive at this level base their conduct on what they are persuaded is right, regardless of whether others concur (Forte, 2004; Greenberg, 2010).

The stage 5, in this level is referred to as the stage of social contract. A person in this stage is worried about maintaining the essential privileges, values and legitimate agreements of society. In this stage a feeling of responsibility and obligations is felt by the individuals, and people might put together their choices with respect to a normal computation of overall utilities.

Finally, the last stage in this level shows that the rightness of an action is dictated by molar ethical rules that everybody ought to adhere to. In this stage the individuals reach self-actualization and further believe that there are some unavoidable privileges and rights, which are all inclusive in nature and results. These rights thus, are based on the principle of universality and consequently they are legitimate and independent of a specific culture's law

or customs (Fraedrich et al., 2011). The following table depicts the Kohlberg's six stage model.

Table 2.5: Kohlberg's six stage model

Six Stages of Kohlberg's Moral Development	Description
Level One – Pre-conventional	
Stage 1 - Obedience and punishment	Pursuing the rules in order to avoid punishment
Stage 2 - Instrumental reason and exchange	Following rules which serve the self-interest
Level Two – Conventional	
Stage 3 – Reciprocal expectations, conforming relations	Living up to what is expected by those close to you
Stage 4 - Social conformity and system maintenance	Fulfilling duties and supporting social norms
Level Three – Post-conventional	
Stage 5 - Social contract and individuals rights	Upholding values and rules as social contracts and ignoring majority opinion when you are right
Stage 6 - Universal ethical principles	Follow self-recognized ethical principles follow laws not principals

In (2009), Andreoli and Lefkowitz emphasized that the ethical behaviour of an individual is most importantly determined by the degree of moral development of that individual. Later, Fraedrich et al., (2011) analysed Kohlberg's theory of moral development and determined that with the help of education as well as experience, the individuals may change their priorities while making decisions with time.

Moral situations are judged intellectually as well as affectively by the individuals during their social interactions with people and environment. Such interactions are determinant of one's development of moral reasoning. Social interactions are usually based on reciprocal relationships, where the individuals play certain roles specific to the society and the culture. In these relationships, the individuals also take others' perceptions into consideration. This phenomenon is called moral development. Thus moral development results from the interaction between the person's cognition and dynamics and changing complexities by

environment. This interactionist definition of moral development demands an environment which will facilitate dialogue between the individual, himself and others.

The Kohlberg's model has its own limitations because it tests the moral judgement of individuals based their insights and cognitions but not their behaviour. It tests how individuals ponder about moral situations and ethical dilemmas and not their actual conduct (Trevino, 1986). Research as detailed by Trevino (1986) has shown a moderate relationship between thought and its conversion to action. Therefore moral judgement is an important yet inadequate condition for moral behaviour like benevolence, genuineness and resistance against enticement (Trevino, 1986).

There are certain techniques to assess the moral reasoning of the individuals. For example, moral judgment interviews as developed by Kohlberg can be used. These interviews provide a series of hypothetical moral dilemmas to the subjects, wherein they have to assess the dilemmas and provide a just course of action as an approach to solve the dilemma. The interviewer tries to probe the respondent's mind and views, without interfering (Rest et al., 1974). These interviews are then analysed and the responses are further scored determining the stage of the moral development of the respondent.

This approach was criticised because it was time consuming and left considerable scope for interviewer's bias. Further it was dependent upon the verbal ability of the respondent. Later Rest (1974) developed a more standardized approach, called as the Defining Issues Test (DIT). It consisted of hypothetical dilemmas with a series of 12 statements attached to each dilemma that are stage specific. So the respondents are required to rank those 12 statements attached to the dilemmas in order of importance, which revealed their moral development stage. Kohlberg (1969) characterized this test as "assessing a continuous variable of moral maturity rather than discrete qualitative stages".

Although both methods measured moral reasoning, however they had various limitations especially in achieving response rate. Thus, this study used a measure based on Kohlberg's moral judgement interview, called MDSP scale, i.e. Moral Development Scale for Professionals which has been used among nurses in Scandinavian countries. Also the MDSP could be used for larger population contrary to Rest's DIT test, which is more suitable for small group situations.

Most of the research on cognitive moral development in organisations focuses on identifying the influence of employees' cognitive moral development on behaviours and attitudes. However, in this study we have explored how the overall climate of the organization is influenced by the cognitive moral development of the doctors.

Many researchers have studied moral behaviour just like Kohlberg (Trevino, 1986; Weber and Green, 1991) and have realized the importance of moral reasoning in inculcation of moral behavior (Maclagan and Snell, 1992). Past investigations (Aquino and Reed, 2002; Lapsley and Lasky, 2001), say that being receptive to the necessities and interests of others is a critical inspiration for people whose moral identity is vital to them. And healthcare employees endorsing morals and ethics are more prone to do this. Further, Turner et al. (2002) stated that people with better understanding of moral reasoning are likely to monitor their behaviour as per their moral judgment.

Some of the studies in healthcare show that doctors and medical students alike do not show any considerable increase in their moral reasoning during their work experience (Baldwin and Bunch, 2000; Murrell, 2014). Even though the studies were part of American system, it has been stated before that medical education does induce moral disengagement (Self et al., 1993). However, with the introduction of medical ethics as a subject this should be eradicated. Also, in terms of practising doctors, it has been seen that over the years, they tend

to reach post conventional stage of moral development, as age and education have been known to enhance moral reasoning, but that was not observed among doctors there (Baldwin and Bunch, 2000).

Indeed, a recent study among tertiary hospital doctors has revealed that doctors or staff, who had received medical ethics education, showed higher knowledge, better attitude, and improved practice scores as compared to those doctors and staff who did not receive medical ethics education. Furthermore, the employees preferred to consult their colleagues and seniors in case of ethical dilemmas. However, there were some cases where the doctors and then staff showed poor practices such as truth telling, reporting the errors of their peers, treating a minor etc. (Shrestha et al., 2021).

This makes moral development a pertinent parameter to be studied amongst doctors. Medicine has emerged as an area where the lines between right and wrong have become blurred over the years, with the increase in technological advancement and high financial potential of this sector. In which case, moral reasoning among doctors can help keep things from degrading ethically. But, do the doctors need moral policing?

2.3.2 Ethical leadership

Ethical leadership is described as conveying the employees what the right course of action is and taking actions in the best interests of employees (Brown et al., 2005). A number of studies have explored the meaning of ethical leadership from managerial perspectives (Trevino et al., 2000).

Ethical leaders are viewed as just, reasonable and principled decision makers, who act morally in all routines. The researchers described these attributes as the moral person aspect of ethical leadership. In view of these subjective discoveries, Brown et al. (2005) defined

ethical leadership as the exhibition of normatively suitable behaviour through personal actions and relational connections, and the promotion of such behavior to followers through two-way correspondence, support, and reinforcement. Moreover they developed a ten-item instrument to measure the people's perception about the leaders called the ethical leadership scale.

While defining the ethical leadership, most studies have emphasized upon integrity quotient of the leaders as well the honesty attribute in leaders (Demirtas and Akdogan, 2015). This is because ethical leaders help in diminishing people's uneasiness towards the vulnerability of the jobs or behaviors in the organisations by being circumspect, open, dependable and genuine, and by focusing on the significance of adherence to the high moral standards (Trevino et al., 2003).

According to Brown et al., (2005), ethical leadership differs from other forms of leadership with an ethical component such as spiritual (Fry, 2003) leadership, authentic and transformational leadership (Luthans and Avolio, 2003; Burns, 1978). The common attributes to these forms of leadership are concern for others, just attitude, genuineness, honesty and ethical behavior, which are very similar to the moral person aspect of ethical leadership as determined by Trevino and colleagues (Trevino et al., 2003). However, these characteristics define and describe only a part of ethical leadership.

Another important aspect of ethical leadership, given by Trevino et al., (2003) is the moral manager. As moral managers, ethical leaders use various tools such as performance appraisal, and rewards and punishments to manage the morality in followers. Basically they use transactional type influence to hold followers accountable for ethical conduct. Thus, ethical leaders demonstrate the importance of ethics among their subordinates and followers, by

using rewards and punishments as reinforcers to achieve ethical behavior, and be a role models for followers.

Theoretical foundations of ethical leadership

Primarily social learning theory (SLT) can be used to understand the influence of ethical leadership on followers. Social learning theory (Bandura, 1977; 1986) posits that individuals learn by witnessing the actions of the leaders and then striving to duplicate the values and behaviors of the role models that are deemed credible, appropriate and attractive.

The role of leaders in an organisation is extremely important as employees not just learn by experiencing things first hand, but also by observing their superiors (Bandura, 1977; 1986). Consistent with SLT, ethical leaders influence their followers to act ethically. For employees to perceive their leader ethical must also witness the ethical conduct and fairness in him/her. Thus, leaders essentially act as role models as their behaviour alone teaches the employees a lot, considering their influential position in the organisation.

Further subordinates try to emulate the ethical behaviour of their leaders. However just emulating a behavior is not necessarily equivalent to understanding it. Social cognitive theory, as an extension of SLT, helps the employees to observe the behavior of their leaders and then reflect upon their own behaviour in order to learn from the leader's behaviour. This then manifests in their ethical conduct or decision making.

Also, as per social cognitive theory (Bandura, 2001), the employees take cues from external sources (leaders) to reflect upon their internal traits (ethics, morality), thus, they behave ethically when they get reward or get punishment for unethical behavior by the leaders.. It has also been seen that employees may be cynical about ethical pronouncements coming from some organizational leaders, especially in a scandalous business climate therefore if the

leaders wish to be perceived as ethical leaders then they should be legitimate and credible by acting in a morally appropriate way such that they are able to influence the ethical conduct of the employees (Wood and Bandura, 1989).

At some point when employees at lower level, learn over the long haul that positive practices are esteemed and compensated, and deceptive, unethical practices are rebuffed, they are bound to take part in, or cease from, such practices (Brown et al., 2005; Trevino et al., 2000). If the people in organisation know that they can fully count on their ethical leaders and find fair treatment from the latter then they work constructively for the organisation and abstain from negative behaviour.

Recent ethical scandals in businesses (Chattopadhyay, 2016; Britnell, 2015) have brought the lack of ethical leadership in healthcare to the forefront. Most employees look upto the pioneers and leaders in the organisations for ethical guidance (Kohlberg, 1969; Trevino, 1986). Therefore, in the workplace, leaders should be the main source of such guidance.

The significance of ethical leadership may depend on few factors such as job context and the outcome being predicted. For example, if the employees' have to deal with ethical dilemmas in their day-to-day lives, then it is more likely that the ethical aspect of leadership will influence employee attitudes and conduct. Ethical dilemma and conflict in values are more likely to be encountered by employees in boundary spanning positions than the employees who work within the technical core of the organization (Thompson, 1967) and thus they will require better ethical guidance. Based on such criteria, doctors definitely qualify for receiving ethical guidance as they face ethical dilemmas frequently (Shrestha et al., 2021).

Also, in situations where tasks are ill-defined, and standards of practice are not well established, the need for ethical guidance by leaders become imperative. In Indian hospital

context where the hierarchy is so complex with multiple leaders over a set of employees, need for ethical guidance is highly significant.

A study by Freeman and Stewart, in (2006) described ethical leader as a person with "right values" and "strong character" that set examples for others to follow suit and can withstand temptations. Later studies have stated that ethical leaders are invested in organisations, striving to achieve the vision and the purpose of the organisation without compromising either values or self-interest. Thus ethical leaders help give meaning to their employees' work and guarantee that organizational decisions are based on strong moral virtues (Piccolo et al., 2010). Considering the profession of doctors where they are faced with ethical challenges frequently, their dependence on leaders' guidance is of utmost importance.

In another study by Jeroen et al., (2010), ethical leadership also helps in establishing a favourable work climate for employees to prevent them from being bullied and induce ethical behavior in them. In healthcare setting, where the staff is severely dependent on the top management to provide a fruitful work environment, prevention against bullying and other work climate vices acts as a major morale booster for the employees. As per another study by James et al. (2012), it was said that to a modest extent employees may be happier and more satisfied with their work when they perceive they are working with a leader who displays and reinforces normatively appropriate conduct.

Over the years the top management in medical organisations has become more effective with various achievements and developments such as better medicines, having more specific actions based on vigorous research, further reduction in the side effects of the prevalent medications. But among all these developments, the medical organisations in India are facing many ethical and legal challenges in terms of practices and procedures (Naidu, 2009).

It has been realised off late that various aspects of autonomy, justice, patient-doctor confidentiality are some of the key factors that should guide the daily decision making of a doctor in a highly competitive and unregulated environment. However in a research study by Britnell (2015), 78 doctors were interviewed and it was found that kickbacks for referrals, irrational drug prescribing and unnecessary interventions were commonplace.

It has been seen that unethical behavior by co-workers and superiors often puts an employee in a very difficult situation. Employees in such cases face challenging dilemma regarding action or non-action. Some researches indicate that in addition to actions of leaders and managers, the behavior of co-workers also acts as a significant determinant of ethical behavior of employees. Although managers act as role models and mentors, but the ethical conduct of colleagues also affect the actions of the employees (Deshpande, 2009).

Moreover, there are studies that have highlighted the importance of HRM practices in inculcating ethics among employees. For example, hospital administrators can improve the overall ethical climate of the workforce through various HRM practices such as actively recruiting and promoting ethical employees (Cordeiro, 2003). More recently researchers have uncovered differences between nurses and doctors when it comes to moral sensitivity and ethical decision making (Grundstem-Amado, 2006). As unlike nurses, doctors are more likely to be part of unethical behavior. Research suggests that this may account for the difference in how the two professions see, learn, and perceive ethics (Grundstem-Amado, 2006).

Therefore, in Indian healthcare the importance of ethical leadership lies in curbing the corruption and mal practices by doctors. Healthcare sector has been marred by many scandals in the past decade, highlighting that ethical leadership is the need of the hour, and thus making it imperative to be studied further in terms of its effects.

2.3.3 Machiavellianism

Machiavellianism is characterized by cynical view of the world; pragmatic, misanthropic, and immoral beliefs; self-servicing attitude; emotional detachment; manipulation and exploitation, and deception (Christie and Geis, 1970). According to them the Machiavellians strongly believe that end justifies the means. A Machiavellian individual is someone who can be manipulative and deceptive with others for his personal gains. Dawkins and Krebs (1978) stated that "natural selection favors individuals who successfully manipulate the behavior of other individuals, whether or not this is to the advantage of the manipulated individuals".

Machiavellianism is usually seen as negative personality. However it is characterised by practical thinking, emotional detachment and impression management (Jones and Paulhas, 2009). Research has found that individuals high on Machiavellianism (High Machs) are controlling, and dysfunctional in interpersonal relationships and morality versus those low on Machiavellianism (Low Machs) who maintain their relationships and show people skills. High Machs have low emotional involvement with people or situations, which means that they are least concerned with other's feelings and their rights. They can easily change their commitments and loyalty from one to other in an instant if it fits them (Becker and O'Hair, 2007).

Machiavellians are solely focused on their own goals, and are extremely self-centred and disregard any consequences for their immediate environment as well as people around them (Zettler et al., 2011; Wu et al., 2019). In essence, individuals with Machiavellianism show impression management, have detached interactions, are less emotional in nature and have a below par moral compass (Zettler et al., 2011). They have a tendency to ignore ethical and environmental issues while thinking of their self-interests.

Simmons et al., (2013) observed that Machiavellianism has negative correlation with the perception of business ethics. Wu et al., (2019) in their study explained the phenomenon of Machiavellianism based on the framework given by Smith et al., (2017). The social exchange theory and social cognitive theory can provide the theoretical basis to study the resultant behaviors of Machiavellian personality type.

According to social exchange theory, those who can incur highest cost in return for measly benefits provided are highly attractive to Machiavellians as they always try to obtain the maximum benefits for themselves from their intended social interactions (O'Boyle et al., 2012). According to social cognitive theory (Bandura, 1999), moral disengagement is more common in Machiavellian personality than in any other personalities.

In accordance with social cognitive theory with social exchange theory, the study proposes that High Machiavellians may have more negative perception towards system, due to their cynicism. Further such individuals are not likely to appreciate well-integrated and quality driven practices while at the same time trying to get maximum benefits with minimum efforts. Therefore, Machiavellians try to gain short-term benefits from their social exchanges at the expense of the others and work environment.

Following table 2.6 explains the linkages of Machiavellianism with various individual and organisational variables.

Table 2.6: Machiavellianism linked with various individual and organisational variables:

Authors	Variables	Findings
Fehr et al. (1992), Becker and O'Hair (2007), Jones and Paulhas (2009)	• Self-Monitoring • Impression management	Machs manipulate their emotions and control their behaviour contextually. Self- monitoring has positive relationship with Mach. Machs can control their behaviour as seen appropriate at the time. They engage in impression management. If they can appear ethical or kind or likable in order to gain advantage in a situation then they will invariably do that. This makes it difficult to identify Machs in short term.

O'Connor and Morrison (2001), Jones and Paulhas (2009)	• Locus of Control	Machs believe that people can be controlled by external sources with the right push. Machs tend to control their interpersonal relationships by manipulating the other party.
Harrell and Hartnagel (1976), Gunnthorsdottir et al. (2002), Dahling et al. (2012)	• Theft	Machs can engage in stealing from superiors and peers alike, even within trustworthy relationships for their personal gain and further deny allegations. They can steal knowledge based confidential reports easily.
Gunnthorsdottir et al. (2002), Ross and Robertson (2000), Jones and Paulhas (2009), Dahling et al., (2012)	• Lying • Cheating	Machs are opportunistic and thus use lying and cheating tactics to gain benefit in unregulated and ambiguous situations, by deceiving others, especially where retribution against them is near impossible.
Chistie and Geis (1970), Anand et al., (2004), Jones and Paulhas (2009), Dahling et al., (2012), Dahling et al., (2009)	• Unethical behaviour • Morality	Machiavellians are pragmatists and opportunists by nature, and thus engage in unethical behaviour or immorality if it benefits them. However these attributes are subject to context. If they can get better benefits by being ethical for the time being, then they will restrain from acting immorally. But they are inherently immoral. Thus, it would be better to call them politicians. They easily engage in and encourage unethical means to gain benefits and thus may induce corruption by promoting such habits.
Paulhas and William (2002), Dahling et al. (2012), Kiazad et al. (2010), Gkorezis et al. (2015)	• Well being	Machs are negatively related to well-being of others. They are less prone to feel guilty about deceiving others and thus propagate psychological stress for people. They are essentially bullies who extract gains from others and discard them afterwards, affecting the state of mind of peers and friends negatively. They have been known to induce emotional exhaustion and burnout among colleagues.
Paulhas and Williams (2002), Lee and Ashton (2005), Jones and Paulhas (2009)	• Big five personality model	Machs are highly negatively related to conscientiousness and agreeableness as well as honesty/humility.
Christie and Gies (1970), Mudrack (1995), Dahling et al., (2009, 2012). Jones and Paulhas (2009)	• Cynicism	Machs have cynical view of the world and are thus negative minded by nature. They always find negative aspects of others' jobs and qualities. Further they also spread cynicism by continually demeaning and belittling the good work around them. They always assume and believe the worst about others, as they themselves engage in negative tactics.

Eisenberg (1976), Corzine (1997), Fehr et al., (1992), Jones and Paulhas (2009), Dahling et al., (2012), O'Boyle (2012)	• Career dissatisfaction • Lack of organisational loyalty	Machs are negatively related to career satisfaction. They always believe that they are less and unfairly compensated in turn for their services and are always on the lookout for gaining more incentives as compared to the work done by them. They show high propensity to switch jobs, lack commitment and are less suitable for stringent work environments. They do not believe in fair exchange of profit or favours. Due to this behaviour they tend to engage in job hopping.

From the above mentioned studies it can be seen that Machiavellians are characterised by variety of factors. But for the purpose of this study, the Machiavellian personality structure as proposed by Dahling et al., (2009) has been adopted which are further explained below.

Distrust of other: Machs are cynical people and they engage in manipulative tactics. Therefore they believe that others are manipulative as well due to their cynic nature (Christie and Gies, 1970). Also as per Fehr et al., (1992), Machs are highly anxious and distrustful of others' behaviour towards them. Their first assumption about others is always to assume the worst of the latter.

Amoral manipulation: It is the ability of Machs to disregard moral standards and ethics and engaging in unethical behaviour to gain personal benefits at the expense of others. This propensity to act amorally is evident in various Mach researches on lying and cheating (Christie and Geis, 1970), stealing (Harrell and Hartnagel, 1976; Gunnthorsdottir et al., 2002). They have lesser fear of facing repercussion for acting immorally because of their inclination towards achieving short term benefits.

Desire for control: This is the ability of Machs to acquire dominion over their interpersonal relationships with other in such a manner that they reduce the power held by the latter. Fehr et al., (1992), says that Machs always feel threatened by people and thus they try to exert

control over people and situations. This tendency is due to the fact that Machs do not want to give any chance to others to exploit or manipulate them.

Desire for status: It is the tendency of Machs to accumulate extrinsic rewards for themselves such as wealth, power, status, as these are seen as indicators of success by others. Since Machs believe in external causality (Christie and Gies, 1970), they are likely to acquire money and status over personal development. The above dimensions of Machiavellianism are depicted in Figure 2.1.

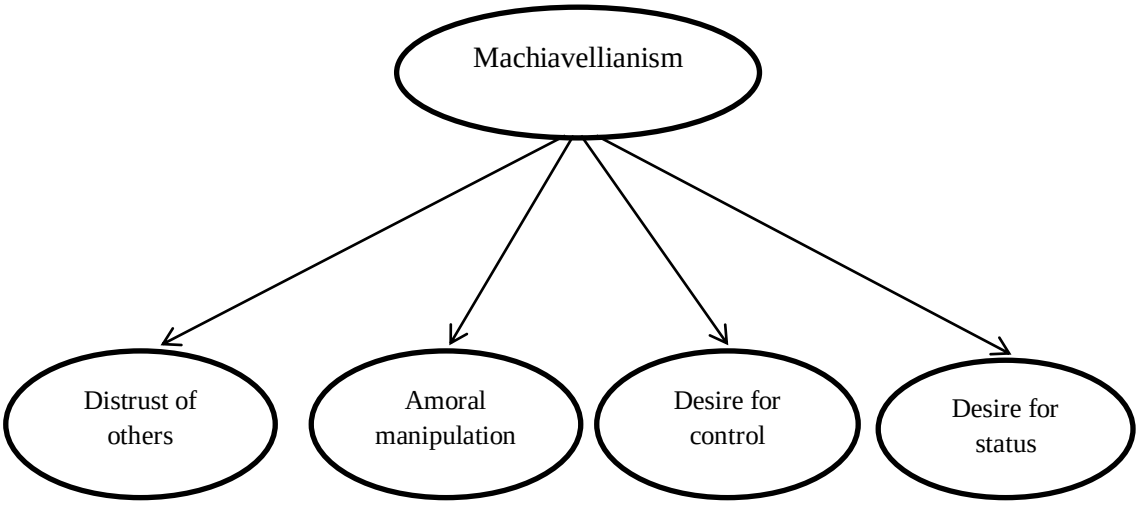

Figure 2.1: Factor structure of Machiavellianism

In extant literature, Machiavellianism has been studied in different areas and linked to different constructs such as personality, leadership, job satisfaction and ethical climate, however its relationship with organisational climate in healthcare industry is still under researched, and this will be elaborated further. Various studies in healthcare have tried to make sense of Machiavellian personality of employees.

Machiavellianism was studied by Merrill et al., (1993) in medical students, who found that 15% of all students scored positively on the Machiavellianism scale. Those students with high Machiavellianism were proved to be controlling and authoritarian in nature.

Similarly, Taylor et al., (2013) examined mental health of junior doctors and found that 49.4% exhibited significant psychological distress. Further analysis revealed that such distress was caused due to uncertainty, Machiavellianism in peers etc.

Further, Grant et al., (2013) investigated well-being and depressive symptoms in individuals beginning medical internship. The study found that increased depression and stress were caused during medical internship due to low subjective well-being and high Machiavellianism.

Considering the ill effects of Machiavellians on the well-being of the employees, it is essential to address its importance in healthcare, where doctors are suffering with burnout as well as so much work pressure that their physical and mental well-being is in question. In this regard, various studies (Kiazad et al., 2010; Gkorezis et al., 2015) stated that Machiavellianism induces emotional exhaustion as well as burnout amongst doctors. Sendjaya et al., (2016) found that Machiavellianism offsets the positive relationship between moral reasoning and authentic leadership. Specifically, when Machiavellianism is high, moral reasoning of an individual fails to be converted into moral actions.

In a recent study it was shown that practicing doctors were more distrustful of others and showed higher need for status as well as were more immoral as compared to interning doctors whereas the latter had a greater desire for control. Interning doctors, being trainees under the supervision of others during their internship could want increased control. (Pirani, and Agarwal, 2017)

The aforementioned studies highlight the importance of studying Machiavellianism among doctors. It seems important to understand that in today's scenario, how Machiavellian personality doctors cope with various aspects of working in hospitals, such as exhausting working hours, high monetary potential, interrelationships among departments etc.

Jones and Paulhas (2009) stated that Machs lack moral qualms and thus have fewer inhibitions in practicing unethical deeds. They perpetuate cynicism among fellow employees and thus create negative perceptions all over. They corroborated that Machs exhibit lack of job satisfaction and commitment leading to increased turnover and job switching. Due to their propensity to be bad they don't do well in ethical and morally biased occupations such as healthcare.

Therefore, it is essential to study Machiavellianism among doctors. By broadening the perspective regarding doctors' personality and their assumed inherent morality, the aim of the study is to understand the effect of doctors high on Machiavellianism on significant outcomes in a hospital setting, such as organisational climate.

2.4 Outcomes of organisational climate in this study

The studies highlighting the importance of organisational climate in healthcare have emphasized upon various job outcomes such as commitment, job satisfaction, trust and satisfaction with leader. Theses outcomes are further explained in detail.

2.4.1 Commitment

Commitment is a multi-faceted contextual construct which refers to an employee's loyalty, willingness to exert efforts, willingness to maintain membership and degree of goal & value congruency towards the organisation (Porter et al., 1974). The employees exhibit professional as well as organisational commitment. The professional commitment refers to loyalty to one's line of work and readiness to apply efforts to maintain the qualities and objectives of the calling. A professional like doctor may do well to provide health care out of their concern for the occupation alone.

The quality of care in health sector is dependent on both professional commitment as well as organisational commitment. The successful execution of health services requires satisfactory collaboration from health professionals. Such behaviour instigates the concern towards patients, other health service providers. This leads to better team work and strengthens team functioning in organisations. Thus it is proven that organisational commitment and one's attachment to their vocation can lead to cooperative behaviour (Lee, 2001).

Earlier in 1990, Allen and Meyer came up with a three-component model of organisational commitment. The affective component of organisational commitment determines whether an individual is emotionally attached to the organisation. This happens only if the individual identifies with the goals of the organisation, and thus shows involvement in the organisation. According to the continuance component an individual stays with an organisation as the trade-off for leaving the organisation is poor. Finally, the normative component refers to employees' feeling of obligation to remain with the organisation. These three dimensions are viewed as discernable components of commitment and the employees can experience each of these psychological states to fluctuating degrees.

Meyer and Allen (1991) further defined commitment as, "a psychological state that (a) characterizes the employee's relationship with the organisation, and (b) has implications for decisions to continue or discontinue membership in the organisation."

Many research studies pertaining to social exchange theory have shown that employees' commitment gets influenced with their perceptions regarding the employers' commitment to and support towards them (Eisenberger et al., 1990; Hutchison and Garstka, 1996; Settoon et al., 1996; Wayne et al., 1997). The research suggests that employees interpret organisational actions such as human resource practices (Settoon et al., 1996; Wayne et al., 1997) as

indicative of the personified organisation's commitment to them. They reciprocate their perceptions accordingly in being loyal to the organisation.

Organisational commitment is shown by individuals when their personal goals align with the organisational goals, then they readily exert effort on behalf of the organisation, and further wish to remain with the organisation (Mowday et al., 1979). Employees' commitment to the organisation is significantly related to their perceptions regarding employer's support and they reciprocate their perceptions in the form of their own attitudes and behaviour towards the organisation (Shore and Tetrick, 1991).

This can be easily understood as the cost (time money, effort) that the employees believe will be deemed worthless, if they leave the organisation after investing such efforts in it. Such investments might include contributions to use of organizational benefits such as reduced mortgage rates, non-vested pension plans, development of organization-specific skills or status, and so on. The apparent expense of leaving might be exacerbated by an apparent absence of choices to trade or compensate for the inevitable ventures. At any rate, it is the threat of loss and misfortune that leads to commitment in an individual towards the organisation (Eisenberger et al., 1991).

Employees with high levels of organisational commitment provide a secure and stable workforce (Steers, 1977). The working environment of the organization includes the physical infrastructure, advanced and modernised tool, technology and machinery. If the employees' experience increase in their productivity due to advanced technology and machinery provided by the organisation then that may lead to increase in their loyalty (Mahal, 2009).

Considering that there is high turnover rate among doctors, many studies have stated that a good training and development environment which teaches doctors the technical

advancements in medical field as well as properly implemented HRM practices reduces the turnover intentions and leads to commitment, (Guchait and Cho, 2010; Dhar, 2015).

Therefore, the significance of commitment of employees cannot be overlooked in health sector. The low levels of organizational commitment may be dysfunctional to both the organization as well as to the individual. The high levels of organisational commitment may lead to higher performance, greater satisfaction, lower turnover (Mathieu and Zajac, 1990). Therefore, it is important to identify the antecedents of organisational commitment (Randall, 1997). In the literature it is found that elements of an organization's climate are significantly related to organizational commitment. Ostroff (1993) found a strong relationship between dimensions of organisational climate and organizational commitment. Thus, commitment is an important outcome among doctors to study.

2.4.2 Trust

Mayer et al. (1995) defined trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). Furthermore, trust appears to be a multidimensional construct (McAllister, 1995). Specifically, interpersonal trust is derived from emotional and perceptual components (Lewis and Weigert, 1985) that are known as affective trust and cognitive trust in literature. Affective trust is formed based on personal emotional bond between individuals (Chowdhury, 2005) that allows interaction based on positive feelings (Parayitam and Dooley, 2007).

Cognitive trust, on the other hand, is formed on the basis of the evaluation of capability and reliability of the one being assessed by the assessor (McAllister, 1995). Individuals who are perceived to be highly capable in their work and have the requisite expertise are more likely to develop higher cognition-based trust by the assessor (Chowdhury, 2005).

In recent study by Jain et al., (2015), affective or cognitive trust in interpersonal relations in organisations facilitated better communication and integration across departments and vice-verse. Interpersonal trust is achieved in hospital context, by providing substantial evidence of trustworthiness and displaying professional competence, commitment and loyalty as well as respect to senior doctors (Hewett et al., 2013).

Therefore this study attempted to measure interpersonal trust at hospitals among doctors. With regard to mutually dependent work groups within hospitals, trust may be placed along two different dimensions: (i) faith in the trustworthy intentions of others, and (ii) confidence in the ability of others, channelling the affective and cognitive components of trust. From the doctors' point of view each of these dimensions can refer to either (a) peers or (b) management thereby providing a four classification (Cook and Wall, 1980).

In case of health services, trust has been related to job performance. Several studies suggest that trust acts as an indicator for quality care deliverance among doctors (Walker et al, 1998). Also, the literature providing the doctors perspective on the value and impact of trust is very limited. Trust is an important outcome in an organisation as lack of trust can give rise to increased politicking, internal strife and inter departmental conflicts among employees, therefore the management of organisations cannot afford to disregard trust (Fulmer, 2004).

In fact when interpersonal trust is fostered then the impact of trust on workplace relations in health care settings can be seen, in increased commitment to the organisation (Laschinger et al., 2000), better collaborative practice between doctors (Hallas et al., 2004) and job satisfaction (Gilson, 2003).

Indian healthcare industry has seen significant changes in the past few decades, such as rise in corruption, malpractices and an overall distrust among the stakeholders in the industry (Chattopadhyay, 2016). With the increase in corruption in healthcare there has been

subsequent erosion of trust among doctors. However the past studies have focussed mostly on patients' perspective of trust in doctors, whereby almost completely disregarding doctors' perspective and the interpersonal trust amongst doctors in the Indian hospital setting (Brennan et al., 2013).

For healthcare organisations such as hospitals to survive in an ever increasing distrustful external environment, it is imperative to realize the significance of interpersonal trust. In fact, the research on organisational climate within hospitals suggests that employee perceptions of the climate are based on a number of different factors such as wellbeing for doctors, quality of healthcare, and integration among departments as well as individual's traits such as helpful nature, political manipulations, backstabbing etc. Therefore it is essential to examine the effect of complex and dynamic organisational climate on the interpersonal trust among doctors in the hospitals.

2.4.3 Job satisfaction

The concept of job satisfaction has been developed in different ways by different researchers and practitioners. One of the most used definitions is that of Locke (1976), who defines job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304). Spector (1997) lists the following 14 common facets of job satisfaction: appreciation, communication, co-workers, fringe benefits, job conditions, nature of the work, organization, personal growth, policies and procedures, promotion opportunities, recognition, security, and supervision.

Hulin and Judge (2003), stated that job satisfaction includes multidimensional psychological responses to an individual's job, and these personal responses have cognitive (evaluative), affective (or emotional), and behavioral components. A more recent definition of job satisfaction is a measurement of a person's feelings and person's work attitude (Anari, 2012).

Furthermore, in accordance with Graham (1982), job satisfaction is an interpretation of workers feeling and perception about their job The literature shows that the benefits, team work environment, incentives and promotion opportunities are extensively related to job satisfaction.

A study by Jain et al., (2009) investigated the importance of job satisfaction in different work and environmental factors among doctors and validated its importance in healthcare. The factors such as lack of facilities, work pressure/work load, family or personal factors and better opportunities outside the hospital were most studied job de-motivating factors for the senior doctors in Indian hospitals (Koppala et al., 2014). It has been seen that active participation of workers in the decision-making process leads to improved employee's job satisfaction (Lock and Crawford, 2004). Thus, job satisfaction seems to be an important job outcome to be studied among doctors.

On the other hand, dissatisfaction with remuneration, compensation, human resource management practice differences and unpleasant behaviour of boss are some of the reasons for which workers show intention to quit (Tanke, 1990). Thus it is obvious that job dissatisfaction is a strong predictor of job turnover intention. There is a significant negative correlation between job satisfaction and job turnover intention among workers. If the workers are satisfied with their salaries, job environment, the behavior of their co-workers and promotions, they will be more committed to their job and this will decrease their turnover intentions.

Healthcare industry, where the employee turnover has been a problem for some time will certainly be benefited using ethical leadership to create a suitable work climate so as to keep the employees satisfied and improve the productivity. Studies have reported that to understand the internal functioning of the doctors, it is essential to understand the job

satisfaction among doctors. Lavanchy et al., (2004) has further highlighted this by showing the importance of job satisfaction in the retention of physicians and lack of satisfaction leading to intention of migration among physicians.

However some recent studies show contradictory results. Singh et al., (2019), stated that health workers in public sector of India are motivated and satisfied with certain aspects of their jobs such as communication and their social relationships, however they feel dissatisfied with the promotion prospects and fringe benefits. But in another study (Purohit et al., 2021) the public sector doctors and nurses were dissatisfied with their personal relations but highly satisfied with the pay. Therefore, the above mentioned studies highlight the need for further research regarding job satisfaction among doctors.

2.4.4 Satisfaction with leader/supervisor

In the literature, leadership has been studied from many different perspectives but over the last three to four decades, transactional- transformational paradigm of leadership has gained greater attention of the researchers and it has become a topic of interest in leadership research.

As trait, behavior and contingency theories could not completely explain the complexities involved in leadership and transactional-transformational leadership has gained the attention of researchers for understanding leadership more deeply (Shrestha and Mishra, 2011). Most of the researchers in the past have alluded to the transactional type of leadership as one of the most effective leadership style of them all. However with the emergence of transactional-transformational leadership, this thought process has seen a significant shift (Bass et al., 2003).

It has been seen that leaders can achieve intended goals through idealized influence (charisma), inspirational motivation, intellectual stimulation or individualized consideration.

(Erkutlu, 2008). Prior research (Bass, 1999) has shown that leaders can stimulate followers to understand the significant importance of the assignments they are liable for, inspire their general requirements for development and advancement, build up an environment of shared trust, push their workers to look past their own personal circumstance to bring about some benefit for the group, and accomplish execution past assumptions.

These aforementioned studies highlight the requisite leadership styles and helps in establishing the link between the former and the satisfaction with leader attitude.

***Leadership and satisfaction with the leader*:** There are only a few studies which have investigated the direct relationship between leadership styles and employees' satisfaction with leadership (Krishnan, 2005; Huang and Chou, 2005). Although there are certain studies which have explored the relationship between leadership and job satisfaction, but there are mixed findings of the study. Prior research has studied the importance of job satisfaction as a multi-dimensional construct and various studies have even established that satisfaction with the leader (supervisory satisfaction) is an important dimension of this construct (Hackman and Oldham, 1974). But satisfaction with leader has been rarely studied independently.

As stated above, the literature linking leadership styles with job satisfaction is disjointed. The relationship between managers' leadership styles and job satisfaction of employees is found to be strongly associated (Rad and Yarmohammadian, 2008). Whereas, no statistically significant differences in the impact of leadership styles on job satisfaction and commitment was identified by Lok and Crawford (2004).

As a result, there is no uniformity in previous research that closely relates employee satisfaction to a particular leadership style. On the one hand, Bass (1997) argued that transformational leadership is more successful in attaining job satisfaction, whilst most

theories have suggested that leaders should acclimate to the situation in order to enhance employee satisfaction.

In literature, ethical leadership, as another form of leadership which is argued to encompass the mixed traits of various leadership styles is also examined in relation to employee satisfaction. Indeed, as per ethical leadership a leader's behavior is extremely important and constructive for organizations (Treviño et al., 2003). Several studies indicate that ethical leadership has positive and significant relation with numerous outcomes especiall with job satisfaction and commitment (Brown and Treviño, 2005; Toor and Ofori, 2009; Newman et al., 2017).

The major concern regarding this construct is that in Indian medical colleges and attached hospitals the hierarchy is very complex and difficult to understand. Therefore multiple forms of leadership are likely to exist in a single environment which makes it difficult to understand the satisfaction with leader in a particular medical college and its attached hospitals. Furthermore the above mentioned studies have merged the concept of satisfaction with leader and job satisfaction of employees, wherein the former is a facet of job satisfaction. Therefore in the present study the construct of satisfaction with leader is simplified as the satisfaction with supervisor (Scarpello and Vandenberg, 1987). Scarpello and Vandenberg (1987) derived a scale for satisfaction with supervisor that provides solutions to above mentioned problems with regard to the construct "satisfaction with leader".

According to their study, supervision is an organisational role which effectively coordinates the needs and goals of work group with the requirement of the organisation. Furthermore their study reconcile the role of supervisor with that of a leader by emphasising three main domains of supervision, mainly technical know-how related to tasks and goals, people skills for maintaining human relations and administrative aspect wherein the supervisor regulates

activities of subordinate employees with the system. Also, their study establishes satisfaction with leader/supervisor as a distinct construct from job satisfaction.

Thus, considering the dynamic environment of healthcare systems it is of great importance to understand the effect of organisational climate on satisfaction of employees with the supervisor.

2.5 Climate strength

Before proceeding further it is important to understand the importance of climate strength in affecting various job outcomes. The level of analysis in climate research has been a matter of contradiction for too long. In this study however, both individual and organisational level of analysis are considered. Research on climate strength has been covered many aspects of organisational climate (Lindell and Brandt, 2000). Climate strength has been studied in terms of generic overall climate (Gonz´alez-Rom´a et al., 2002) as well as focused climate, service climate (Schneider et al., 2002).

The basis of interpretation for these works has been that climate strength will act as a moderator between the climate and outcomes specific to the study, in a way that the relationship will be stronger when climate strength is high. This interaction effect makes sense at a theoretical level because if the experiences of employees are in tandem and more consistent, then it is more likely for employees to have strongly shared perceptions and thus they are likely to behave consistently as a collective.

Resultantly in case of measuring the climate strength, a dependable mean value is obtained due to high agreement which should provide greater validity in the relationship with outcomes. However there are various studies that have shown results to the contrary and which have negated the moderating effect of climate strength in predicting outcomes (Lindell

and Brandt, 2000; Schneider et al., 2002; Zohar and Luria, 2004; Dawson et al., 2008; Rafferty and Jimmieson, 2010).

This could be because climate researchers over the years have consolidated items for climate surveys so that high agreement among the respondents is generated, enabling aggregation of the climate construct. But the researchers failed to recognise that if the variability across units is low in agreement, then the moderator effect will be nullified, because if consensus is strongly high, then climate strength will fail to act as a moderator. For instance, several studies did not find support for strength as a moderator as the level of agreement did not vary much across units (Zohar and Luria, 2004; Dawson et al., 2008). Therefore, this study attempts to understand that once the climate is formed, then the level of the resultant climate strength acts as a moderator between organisational climate and the job outcomes at organisational level or not.

2.6 Contextual qualitative insights via in-depth interviews

The most poignant aspect of this study is that after a thorough investigation of literature, the researcher further conducted in-depth interviews with doctors to understand and gain qualitative insights on organisational climate, it's antecedents and outcomes. For this purpose, 10 senior and recently retired doctors of various disciplines from both public and private sector were interviewed to collect unbiased opinion. All the interviews were recorded with their due permission. The video interviews lasted from 45 minutes to one-and-a-half-hour time. The questions were semi structured and a dialogue was considered a proper approach to gain insight about the proposed antecedents and outcomes. The doctors unequivocally reinforced the selected constructs and highlighted their need in the current healthcare scenario.

2.7 Key observations and Research gaps

Numerous investigations in the medical environment have emphasised the significance of organisational climate, and there is a rising demand in examining the relation between organisational concepts and health service outcomes (Appelbaum, 1984; Gershon et al., 2004; Jackson-Malik, 2005; Wienand et al., 2007b; Dawson et al., 2008; Carlucci et al., 2012; Carlucci, 2014). However these studies were not conducted in Indian hospital context. Furthermore it is important to highlight that majority of these studies have focussed on specific climate types rather than taking a holistic approach towards climate.

In fact some of the significant studies in Indian context have focused on motivation climate and HRD climate (Purohit and Wadhwa, 2012; Purohit and Verma, 2013) but largely the concept of organisational climate has been neglected among Indian hospitals, considering its far reaching effect on various employee job outcomes. **Thus, this study addresses this gap by understanding the organisational climate among Indian medical colleges and attached hospitals.**

The literature suggests that there is a dire need for ethics and morality among the top management in Indian medical context. Various studies have highlighted that the decision making in Indian hospitals is bureaucratic and centralized (Purohit and Wadhwa, 2012) leaving much to be desired. Over the last few years the ethical and moral failure of Indian healthcare is brought to the fore front (Gadre, 2015; Chattopadhyay, 2016), in the name of corruption.

Public health professionals face ethical dilemmas on innumerable occasions while implementing the public health programmes such as defining the authority, decision-making related to resources, managing political influence, ensuring quality of care in programmes

etc. But they lack competencies to make such decisions (Baum et al., 2009). These studies clearly identify the need for ethical leadership among Indian hospitals.

Only a few research studies have examined the impact of individual-level characteristics of employees, on organizational climate. Schminke et al., (2005) found that the cognitive moral development influenced several ethical climate types. They said that moral development of employees as well as leaders is of importance. Furthermore, Sendjaya et al., (2016), found that only moral development and reasoning is not sufficient or moral action. Sometimes Machiavellianism among individuals which embodies self-interest and manipulative tendencies, interact with moral reasoning of individuals to hinder moral action. Despite such effect of Machiavellianism, most studies have neglected to consider darker personality types such as Machiavellianism as a precursor for organisational climate. Along with this, it can be seen that there is lack of literature given the ethical leadership issues in Indian hospitals.

Among the prevalent corrupt practices in medical sphere of India, nepotism, favouritism, political influence in selection of healthcare professionals have been the most common practices (Chattopadhyay, 2016). Considering the current scenario of Indian hospitals, where the instances of corruption, politics and lack of ethics and morals (Babu and Yamuna, 2018; Gulati et al., 2019) have emerged, **the need for studying ethical leadership along with individual moral reasoning and darker personality such as Machiavellianism among doctors has been realized.**

Thus, this study tries to fulfil the gap of examining ethical leadership, moral development and Machiavellianism as the antecedents of organisational climate in Indian hospitals.

Additionally the review of literature showed the importance of organisational climate based on its effect on various job outcomes. There are studies which say that a positive organizational climate propagates less stress, low burnout amongst employees, high

commitment and lower turnover intentions (Maslach, 2001; Gelade and Young, 2005; Glisson, 2012; Morse et al., 2012). Many studies in healthcare have stated that positive organizational climate is important in daily lives of doctors for their motivation (Applebaum, 2006; Wienand, 2007; Carlucci, 2014). However none of these studies were in Indian context.

According to National Health Profile, (2018), India is facing manpower shortage among doctors due to large gap in doctor patient ratio. This has increased cases of job dissatisfaction, burnout and attrition among doctors (Bhattacharya et al., 2012). Further the side effect has been increased competition, stress and politics among doctors to do well which has led to lack of trust among doctors (Kumar, 2015).

Not only this, but in the past few years there have been many strikes by resident doctors and physicians against higher officials in India, which clearly states that there is a lack of satisfaction with leadership among Indian doctors. Lack of facilities, work pressure/work load, family or personal factors and better opportunities outside the hospital were major studied job de-motivating factors for senior executives (Koppala et al., 2014; Singh et al., 2019).

The above mentioned studies signify the need for understanding the factors or job outcomes that may lead to turnover intentions such as job satisfaction commitment, trust and satisfaction with leader among doctors in Indian hospitals. Thus, this study strives to address this gap by understanding the effect of organisational climate on the above mentioned job outcomes.

Finally, the level of analysis in understanding the effect of organisational climate on various job outcomes has been an area of interest so long. Once the climate is formed, it is important to understand if the climate is strong enough to sustain and further affect other outcomes

(Schneider et al, 2002; Dawson et al., 2008). The climate strength is therefore under researched in the context of hospitals.

The hospital system in India is marked by bureaucracy and is centrally governed. In such a case it is assumed that the overall strength of the climate should be high, considering the shared perceptions based on same policies and practices (Schneider et al., 2013). But there is a lack of literature in identifying the direct and indirect effect of climate strength in hospital sector. **This study thus, tries to bridge the gap by determining the effect of climate strength on the relationship of organisational climate with intended job outcomes.** The research gaps and the consecutive research questions and objectives are thus presented in the following table 2.7.

Table 2.7: Research gaps, research questions and objectives of the study

S. No.	Research gaps	Research questions	Objectives
1	The present literature does not sufficiently identify the antecedents/factors with underlying ethical inclination, affecting organisational climate among doctors in Indian hospitals. (Schminke et al., 2005; Mayer et al., 2007; Purohit and Verma, 2013; Gulati et al., 2019)	How do ethical leadership, Moral development and Machiavellianism affect the organisational climate in Indian hospitals among doctors?	To analyse Ethical leadership, Machiavellianism, and Moral Development as antecedents of organisational climate.
2	There is a dearth of literature explaining the effect of organisational climate on various job outcomes of doctors that may lead to turnover intention. (Bhattacharya et al., 2012; Koppala et al., 2014; Carlucci et al., 2014; Kumar, 2015; Singh et al., 2019)	What is the effect of organisational climate on various job outcomes of doctors, namely commitment, trust, job satisfaction and satisfaction with the leader?	To study the effect of organisational climate on employee job outcomes (Trust, Commitment, Job satisfaction, Satisfaction with the leader)
3	There is lack of literature in determining the direct and indirect effects of climate strength on the relationship of organisational climate and various job outcomes. (Zohar, 2000; Zohar and Luria, 2002; Dawson et al., 2008; Schneider et al., 2013)	What is the moderating effect of climate strength on the relationship of organisational climate with various job outcomes namely commitment, trust, job satisfaction and satisfaction with leader?	To study the moderating effect of climate strength on the relationship of organisational climate with various job outcomes namely commitment, trust, job satisfaction and satisfaction with leader

2.8 Concluding remarks

The thorough review of literature has helped in understanding the constructs deeply and has also helped in identifying and explaining the antecedents and outcomes of organisational climate in Indian hospital context. Furthermore the existing gaps in the literature are identified and highlighted, which has motivated the researcher to fill the gaps in the research. The next section builds the hypotheses for the identified gaps.

CHAPTER 3: PROPOSED RESEARCH MODELS AND HYPOTHESES

3.1 Introduction

This chapter discusses the underlying theoretical background for the proposed research models. First, the three primary theories namely social learning theory, social cognitive theory and social exchange theory that explain the underpinnings of the constructs that are the antecedents and the outcomes of the organisational climate are explained. Further, the relationship of each antecedent and each outcome with organisational climate is elaborated in detail and consecutively the hypotheses for each relationship are formed.

Later, in this chapter the climate strength is discussed. This was required as lately the researchers in organisational climate studies have understood the ramifications of noticing variability in agreement within the organizations being studied. Thus, it signifies the importance of relative strength of the climate contextually and also highlights the effect of the variability of climate strength. Earlier studies (Zohar, 2000; Zohar and Luria, 2005) have substantiated that if the policies and procedures are inadequately implemented then the resultant practices are weak and portray inconsistency, which results in a weak climate.

Research on climate strength has focused on molar/generic climate (Gonz´alez-Rom´a et al., 2002; Lindell and Brandt, 2000) as well as a number of specific type of climates, including procedural justice climate (Colquitt et al., 2002), service climate (Schneider et al., 2002), and safety climate (Zohar and Luria, 2004; 2005). These studies have stated that climate strength will either strengthen or weaken the relationship between the climate and outcomes of interest such that the relationship will be stronger when climate strength is high. This has further motivated the researcher to hypothesize the moderating effect of climate strength on the relationship between organisational climate and identified job outcomes (trust,

commitment, job satisfaction, satisfaction with leader). Therefore, in this chapter, two conceptual models are proposed based on the hypotheses formulated.

3.2 Theoretical background

Social cognitive theory (SCT) given by Bandura (1989), explains how individuals reflect upon their behaviour with a view to monitor and regulate their conduct by self-organising their behaviour. The theory finds its origin in health sciences and thus seemed suitable to the context. “SCT estimates the ability of an individual to engage in a targeted behaviour, based on internal and external parameters and their interrelationships” (Martin et al. (2014).

SCT posits that there are various factors such as working conditions, overall climate perceptions, ethics as well as morality of individuals that explain how their moral reasoning may lead to their moral conduct (Wood and Bandura, 1989). Thus, ‘‘social cognitive theory embraces an interactionist view to climate formation” and provides a conceptual model in which personal subjective factors, such as personality, moral reasoning and perceptions of individuals and environmental factors such as work place climate, interact with each other in deriving further outcomes (Bandura, 1986, p. 2).

It has been seen that the behavior of an individual is stimulated by certain variables which may be part of the internal aspects of the system or the external. The theory suggests that, external intimations (e.g. organisational climate) and internal intimations (e.g. individual personality) could act as influencers of employee behaviours such as being committed to one’s organisation, as well as inculcating trust amongst employees (Martin et al., 2014). Additionally, having an environment that upholds moral conduct, is probably going to impact workers' practices bringing about the inclination to act morally (for example making moral decisions).

Thus, people persistently direct their practices by self-evaluating their own standard of conduct as compared to the external environment, which incorporates working climate (Domino et al., 2009). When an employee observes the behaviours of peers and management as ethical/moral or manipulative, it results in their perception of the organisational climate which further triggers resultant outcomes such as commitment, interpersonal trust, job satisfaction and satisfaction with leader.

The explanation of social cognitive theory is in congruence with the Lewinian psychology (Lewin, 1936). Three personal variables such as individual perception of ethical leadership, Machiavellian personality and moral reasoning provide measures of the socio-cognitive individual differences, which can be considered to be important elements of SCT.

Social cognitive theory is a significant extension of social learning theory which explains how individuals learn by observing influential peers or leaders, imbibing their traits good or bad, ethical or unethical; with the difference being that in SCT, individuals also self-reflect continuously. Therefore, employees working under ethical leadership will continuously regulate their Machiavellian personality and their level of moral reasoning based on the inclination of the current organisational climate and resulting in various job outcomes.

In addition, Smith et al., (2017) said that together, social cognitive theory and social exchange theory could predict the results of dark personality, Machiavellianism. Social exchange theory poses that those who can provide us with the highest benefits are most attractive, and individuals always try to obtain maximum benefits for themselves from their social interactions. For obtaining these benefits, the corresponding price has to be paid (O'Boyle et al., 2012).

Based on moral disengagement discussed in social cognitive theory (Bandura, 1999), individuals with the Machiavellian personality may show far more lack of morality than those

with other personalities. By taking social cognitive theory with social exchange theory together, it is proposed that individuals with the High Machiavellianism may have a more negative perception of organisation. This may further lead them to believe that social exchange based on ethics and morality propagated by well integrated climate will provide them lesser benefits, whereas they intend to obtain higher returns in the short term.

It is proposed that the perception of employees is guided by both internal values as well as external sources. Internal values are personal traits like Machiavellianism and moral reasoning, as well as individual perception of ethical leadership while external sources include the overall climate of the organisation. Thus, it is expected that an employee's perception about organizational climate is predictive of job outcomes such as organizational commitment, trust, job satisfaction, and satisfaction with the leader.

Therefore proceeding forward with the aforementioned theories, the authors delve further into organisational climate literature explaining the effect of various antecedents on climate formation and its subsequent effect on employee job outcomes.

3.3 Research models and hypotheses

In this study two research models have been proposed. The conceptual Model 1 depicts the hypothesized relationships between the antecedents of organisational climate and its subsequent relationship with job outcomes. Secondly, the conceptual model 2 determines how the variation in climate strength can moderate the effect of organisational climate on the job outcomes of doctors.

3.3.1 Hypothesized relationship between the antecedents and organisational climate

This section hypothesises the relationship between the antecedents (moral development, ethical leadership, Machiavellianism) and the organisational climate, based on the underlying theories as mentioned above.

Moral development and organisational climate

Many researchers have studied moral behaviour just like Kohlberg (Trevino, 1986; Weber and Green, 1991) and have realized the importance of moral reasoning in inculcation of moral behavior (Maclagan and Snell, 1992). Self et al., (1993) stated that medical students during the tenure of medical education develop cynicism and detachment and loose idealism and empathy. Thus, as per Kohlberg's theory it is essential to understand the moral reasoning and the level of moral development amongst the doctors after their medical education, since that may contribute to the overall climate of the hospital.

Schminke et al., (2005) found that the highest level of moral development in leaders as well as that of employees influenced several ethical climate types in an organisation. As, the higher the position the more is the formal authority possessed by that person, to be able to foster climate and bring a change.

Thus while leadership surely is not the only determinant of the moral reasoning capacity of followers, the examples that leaders set, their morality, can influence followers' moral development in a variety of ways. Thus the resultant moral action in the employees becomes far more significant in a healthcare setup.

Social cognitive theory (SCT) (Bandura, 1991) indicates that individual's personal characteristics interact with their environment to affect their behaviour. Bandura (2001) stated that employees may learn through education, constant policy updates or through

observing their superiors and peers to alter their personal characteristics (moral reasoning) based on the rewards for morally appropriate behaviour and punishments for morally inappropriate behaviour. This phenomenon in SCT helps the employees to navigate the stages of moral development as given by Kohlberg, which in turn will subsequently affect the overall climate.

In this regard it is essential to consider how individuals internalize morals and convert their moral reasoning into moral action because of their ability to judge right from wrong (Walumbwa et al., 2008). When confronted with difficult ethical challenges, people with higher levels of moral perspective are expected to think more broadly and deeply about ethical issues (Werhane, 1999). This is important to understand because not always, leadership is responsible for moral reasoning.

It is essential to study the cause of a doctor's morality, which is either fuelled by the social desirability as is portrayed in the conventional stage or his activated innate moral compass which comes with maturity and understanding as is portrayed in post conventional stage by Kohlberg.

Given that individuals in an organisation learn from observing the superiors and peers as is propagated by social cognitive theory and further reflect upon the learning therefore integrating the learned aspects into their personal characteristics (moral development) that may further influence the corresponding environment (organisational climate) the hypothesis formulated is as follows:

H1: Moral development in doctors has positive effect on the organisational climate.

Ethical leadership and organisational climate

For a well-functioning organisational climate, leaders are of utmost importance (Yasir and Rasli, 2018). Shin, (2012) determined that social learning theory can explain the relationship between ethical leadership and ethical climate. This study draws on social cognitive theory to explain that people learn via observation and role modelling vicariously and determine suitable ways to behave and further affect their environment based on their personal learnings (Bandura, 1991; 2001).

In 2002, Stringer determined that leadership in an organisation is an important factor influencing the day-to-day climate of the organisation. Therefore, ethical leadership should play a pertinent role in the formation of organizational climate. However, there is a dearth of literature examining the relationship between ethical leadership and organizational climate. Indeed a large portion of the past examinations have explored the relationship of ethical leadership with ethical climate rather than the overall organisational climate. For example, Lu and Lin (2014) identified that a positive ethical climate can be created by the individuals who accentuates moral norms and display ethical leadership qualities, such as fairness, integrity, support and reward employees.

Demirtas and Akdogan (2015) distinguished that ethical leadership behavior influences employees' turnover intention and their affective commitment, straightforwardly and in a roundabout way through forming ethical climate. Zhang and Zhang (2016) further corroborated a positive relationship between ethical leadership and ethical climate.

Recently some studies (Aryati et al., 2018; Yasir and Rasli, 2018) have also analysed the relationship of ethical leadership with ethical climate in public sector employees as well as healthcare employees. Therefore, while a number of studies have investigated the association between ethical leadership and ethical climate, many scholars argue that further research is

needed regarding the relationship between ethical leadership and overall organisational climate, especially in hospital setting (Mayer et al., 2012; Shin, 2012).

By definition, ethical leaders exhibit normatively fitting behavior through their activities and relational associations with representatives in work units (Brown et al., 2005). Also ethical leaders always have best interests of their employees at heart and exhibit social responsiveness and concern to the employees (Brown et al., 2005). They additionally stress the significance of two-way correspondence such that they are concerned with offering their own viewpoints, and also with paying attention to and coexisting with others (Brown et al., 2005).

Therefore, this study intends to further investigate the relationship between ethical leadership and organizational climate in Indian hospitals and proposes the following hypothesis:

H2: Ethical leadership has positive effect on the organizational climate.

Machiavellianism and organisational climate

Machiavellians are characterized by cynical world view, manipulation, cheating, and impression management as well as need to gain success by any means necessary. Interestingly, organisational climate is formed by shared perceptions of employees. Since Machiavellians perpetuate cynicism among the peers and also create a frustrating environment through their manipulative tactics, it would be prudent to assume they have a negative relationship.

Schneider (2011) had realized the importance of personality in climate formation, asserting that personality of individuals helps in interpreting the work environment irrespective of the context. Considering the recent studies, where doctors are facing work overload along with

abusive peer practices (Purohit and Wadhwa, 2012), it is essential to take the darker personality of doctors into account, such as Machiavellianism.

Regarding attrition rate, of 50% amongst doctors (Report by KPMG, 2014) and increase in number of medical scandals and corruption (Gadre, 2015; Britnell, 2015), the importance of studying Machiavellianism in doctors has been realized off late. Machiavellians are considered as politicians who maintain impressions, have cynical view point (Jones and Paulhus, 2009) which they preach that may spread negativity in work climate.

Machiavellian personality type of individuals being highly political in nature display impression management and conspicuous coercion rather than hostile impulsive aggression (Jones and Paulhus, 2009). Since this study is driven by the ethics and morals of the doctors, which may help in creating and sustaining a positive organisational climate; it is imperative to discuss morality in Machiavellians. It has been seen that people high on Machiavellianism have lower ethical standards, fewer qualms about unethical behaviour and are unafraid to act bad and thus easily develop intentions for future unethical behaviour as they feel detached from their actions (Corzine et al., 2005).

It has been seen that a personality style encompassing manipulation or distrust in others is inconsistent with organisational effectiveness. For instance, O'Boyle et al., (2012) has substantiated the assumption of a negative association of Machiavellianism and social exchange theory. Also, Wu et al., (2019) has studied negative association of Machiavellianism with social cognitive theory.

More precisely, 'social exchange theory explains how relationships are formulated and maintained through the exchange of rewards via cost-benefit analysis among individuals (O'Boyle et al., 2012), and people high in Machiavellianism act against the principles of social exchange in various regards: such as Machiavellianism constraints a person's ability to

form and maintain functional relationships with subordinates, peers, supervisors or clients (at least, in the long run) given the self-centered attitude (instead of mutual exchange). Also, Machiavellians prefer politicking and manipulation rather than exerting efforts in fulfilling their duties and might generally show less effort due to their distrust regarding the organisational reward system for good work.

Furthermore, as per social cognitive theory, Machs show moral disengagement and are likely to engage in short term beneficial relationships rather than a long term one, especially marked by an organisational climate where, employee well-being and interdepartmental communication is important. The personal characteristics specific to Machiavellian personality when interact with an open and well-integrated organisational climate, the resultant behaviour is likely to be negative as per the social cognitive theory. Consequently, a negative association between Machiavellianism and organisational climate seems to be plausible for testing.

Studies have shown that a motivational organisational climate is conducive to physical well-being of the individuals (Cohen, 2006) it will be interesting to understand the contradictory outcome of Machiavellianism. Considering the ill effects of Machiavellians on the well-being of the employees, it is essential to address its importance in healthcare, where doctors are suffering with burnout as well as so much work pressure that their physical and mental well-being is in question. In this regard, various studies (Kiazad et al., 2012; Gkorezis et al., 2015) stated that Machiavellianism induces emotional exhaustion as well as burnout amongst doctors.

Therefore given the above studies, it is clear that Machiavellians are either immoral or pragmatists, who are least concerned with other's well-being and do not even feel guilt for

politicking and their behaviour for inducing emotional exhaustion. Considering these negative aspects, the hypothesis formulated is as follows:

H3: Machiavellianism in doctors has negative effect on the organisational climate.

3.3.2. Hypothesized relationship between organisational climate and job outcomes

Social exchange theory underlines the relationship of the organisational climate and the identified job outcomes, which are further hypothesized as follows.

Organisational climate and commitment

Although there are multiple definitions of commitment in literature, most of them state that committed individuals have utter faith in organizational goals so much so that they accept them and, are willing to go beyond the call of duty for the organisation as well as show loyalty by staying with their organizations, (Mowday et al., 1979). Hence, the organizational commitment of an individual acts as a ‘‘psychological bond’’ with the organization that may further influence an individual to act in alignment with the interests of the organization (Porter et al., 1974; Mowday, 1979).

So far, research suggests that lower organizational commitment among individuals affects the organisations abysmally, while high levels may have positive effects (i.e., lower turnover, better performance, greater satisfaction) (Mathieu and Zajac, 1990). Therefore, in order to foster positive organizational commitment among employees, its antecedents must first be identified. Evidentiary support from literature has suggested that various aspects of organizational climate may significantly affect the organizational commitment (Ostroff, 1993).

Many years of research embedded in social exchange theory has shown that employees’ commitment to the organization derives from their perceptions of the employers’

commitment to and support of them (Eisenberger et al., 1990; Wayne et al., 1997; Mousa and Puhakka, 2019; Nangoli et al., 2020). The research indicates that supportive HRM practices by organisations such as participative decision making, career growth etc. (Settoon et al., 1996; Wayne et al., 1997) are perceived by the employees as organization's commitment to them. They reciprocate their perceptions accordingly by being loyal to the organisation.

It has been suggested that a steady and stable workforce is generated through higher levels of commitment (Steers, 1977). Since there is high turnover rate of doctors, various studies signify that good HRM practices such as training and development foster employee friendly environment such that the intention to leave in the employees is reduced (Guchait and Cho, 2010; Dhar, 2015). These aspects are extremely important to consider in delivering adequate quality of health care services. Therefore, commitment of employees in healthcare is o extreme significance.

Maheshwari et al., (2007) and Bhat and Maheshwari (2005) in their study regarding human resource issues in health sector reforms, focused on the commitment of the healthcare providers. The study indicates that the doctors prefer professional growth to financial gains. The results of their study showed that affective and normative commitment levels are higher than continuance types.

It has been seen that if the leaders show concern for the employees by ensuring participative decision-making, providing better training, ensuring better communication and treating employees fairly, then they help in fostering higher commitment among employees (Cullen et al., 2003; Walumbwa and Lawler, 2003; Zhu et al., 2004). These characteristics are similar to attributes of ethical leaders. Ethical leaders not only display moral traits such as honesty and integrity, but they reinforce ethical behavior among employees in their organizations. It is possible that this consistency of behavior and positive environment found in ethical

leadership is consistent with increased employee organizational commitment (Yates, 2014; Nangoli et al., 2020). The evidence suggests that Organisational climate may be related to commitment in doctors as follows:

H4: Organisational climate is positively associated with commitment among doctors.

Organisational climate and Trust

It has been seen that employees constantly seek and monitor their immediate working environment in order to evaluate the dignity and the integrity of the organisation and thus their interpersonal trust relationships are based on organisational processes and policies (Brown et al., 2015). Trust is an essential parameter conducive to good employer-employee relationships as it facilitates a sense of security and belongingness in employees and also fosters loyalty among them (Ikonen et al., 2016). Liu et al., (2013) elucidate that trust is a positive belief of one party that another party will uphold their end of the bargain in a relationship.

According to Coyle-Shapiro and Parzefall (2008), if organisations do not manage to live up to employees` perceived benefits against their costs incurred; employees often act to restore the balance of the psychological contract, of which interpersonal trust is an integral part. This also suggests that if the organisational climate is poor, there will be lack of trust and high intentions to leave the organisation among employees. However the vice versa is also true, that a positive organisational climate improves the job outcomes of the employees and helps to retain them (Giles, 2010).

Integration, wellbeing of employees, quality provided to the patients, emotional demands of the job are the dimensions that contribute to the organisational climate in this study. Trust manifests itself as a result of the aforementioned components of the climate. Another study

indicated that employees who feel empowered in their organisational climate tend to have higher levels of interpersonal-level trust (Moye and Henkin, 2006). Considering that hospitals are part of knowledge intensive industry, interpersonal trust is of utmost importance in hospitals to facilitate interdepartmental coordination and information sharing.

Over the years many studies have researched trust with respect to various facets of organisational climate, such as ethical climate. Studies linking ethical climate with supervisor trust (Simha and Stachowicz-Stanusch, 2015), with co-worker trust (Ascigil and Parlakgumus, 2012), and with leader trust (Engelbrech et al., 2014) have indicated that a correlation exists between these variables. Thus, based on the literature authors believe that organisational climate and trust have positive association.

H5: Organisational climate is positively associated with trust among doctors.

Organisational climate and job satisfaction and satisfaction with leader/supervisor

Locke (1969) defined job satisfaction as, ‘‘the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values.’’ Job satisfaction may be derived both intrinsically, (personal growth, achievements, better training and learning curve) and extrinsically (satisfaction with pay, position and status, company policies, supervision, peer support) (Walker et al., 1977). Basically job satisfaction is derived from fair policy implementation and fair supervision. Thus, based on this definition, it can be concluded that the work climate can have a significant impact on one’s job satisfaction.

The importance of job satisfaction among doctors has been realized off late, considering their increasing work pressure and burnout (Morse et al., 2012). Hence the researchers deemed it necessary to study the effect of organisational climate on job satisfaction among Indian doctors. Research (Johnson and McIntye, 1998), has shown that organizational climate

perceptions are significantly linked to employees' job satisfaction (Schulte et al., 2006; Tsai, 2014). Various other studies (Carr et al., 2003) substantiated the relationship between organizational climate and employees' work outcomes such as job satisfaction (Parker et al., 2003).

In a review of studies investigating organizational climate and job satisfaction, Peek (2003) found that organizational climates exhibiting a high degree of autonomy, providing opportunities for employees, showing interest in well-being and concern for their employees, recognizing employees' achievements result in more satisfied workers. Similarly, Brief (1998) found that better pay, benefits and career growth opportunities were components of organizational climate that had a direct influence on job satisfaction. Avram et al., (2015) found significant relationships between job satisfaction and organizational culture. They also said that if the employees perceive organisational climate to be good then they show their job satisfaction in terms of appreciation which is based on mutual trust.

This tendency is in lieu with social exchange theory, where cost benefit analysis of a good work climate is paid off as better job satisfaction. If the doctors are subjected to a well-integrated climate which provides recognition, communication, training and development, quality care delivery, and supervisor support, then the doctors' satisfaction with the job and the leader should improve.

According to Rivera and Zapata (2019), the physical work environment, rules and procedures implemented by the company, supervisor support are some of the factors that influence job satisfaction, which show the influence that the organizational climate has on the level of motivation.

In addition to this the Scarpello and Vandenberg (1987), have studied that the way a leader/supervisor defines roles, rules and procedures to employees directly influences their

perception of role clarity and through it their satisfaction with supervisor. In this study the dimensions of organisational climate involve technical prowess of the organisation to provide quality care to patients, integration among departments through role clarity and task dependence, well-being of employees through care and concern about their career and taking care of emotional demands of jobs among doctors (Dawson et al., 2008).

Thus it can be seen that proper implementation of such organisational climate will adequately influence the employees' perception of their job satisfaction and further their satisfaction with the top management and supervisor. Moreover the dimensions to assess satisfaction with leader/supervisor in this study cover three areas, such as the technical know-how of the supervisor among doctors, ability to establish and maintain human relations through care and concern and further the ability for administrative tasks.

Considering the subsequent dimensions of organisational climate (Dawson et al., 2008), used in this study, where supervisory support, technical support and well-being support are part of the organisation system, then it can be proposed that the effective maintenance of former organisational climate will influence the overall satisfaction with leader/supervisor among doctors. Therefore, based on the above mentioned studies, the following hypotheses are formulated:

H6: Organisational climate is positively associated with job satisfaction of doctors.

H7: Organisational climate is positively associated with satisfaction with leader/supervisor of doctors.

Based on above mentioned hypotheses following conceptual model 1 is depicted in Figure 3.1

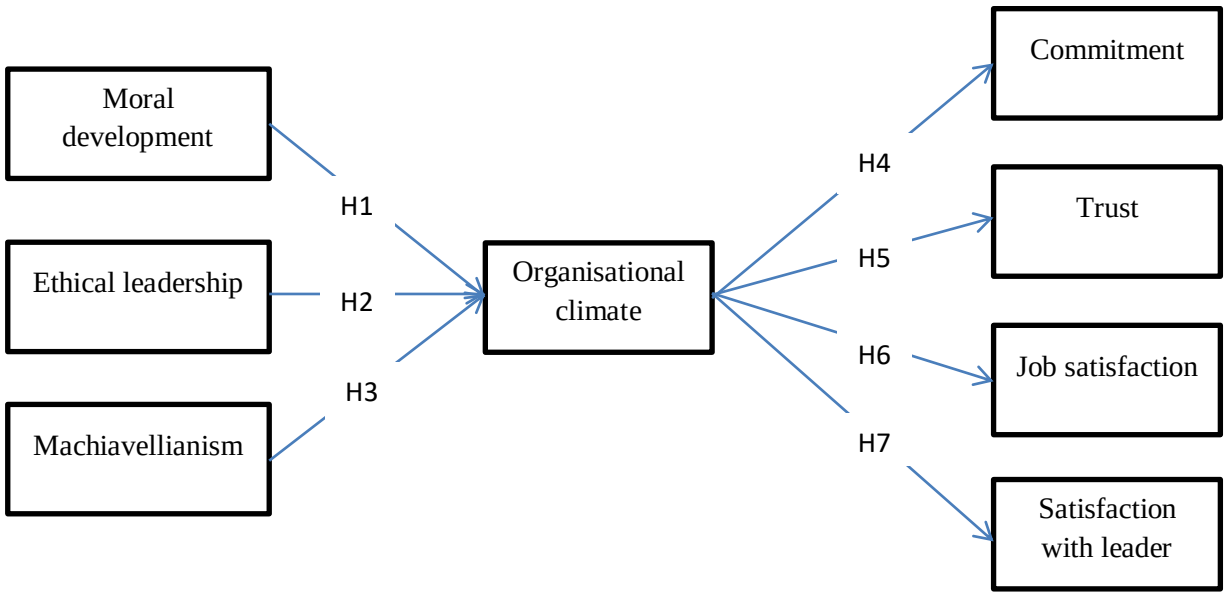

Figure 3.1: Conceptual model 1 - Antecedents and outcomes of organisational climate at individual level

3.3.3 Hypothesized relationship between organisational climate, climate strength and job outcomes

Climate strength has emerged as an interesting topic of research among scholars in the past few decades. Incidentally it is about the relative strength of the climate in a particular context and the impact of the differences in climate strength may have on various job outcomes. As Zohar (2000), Zohar and Luria (2005) have noted, that a weak climate can be formed when practices, and norms implemented in the organisations are inconsistent and/or when the perception about the same are disjointed.

Few studies in the past have analysed the strength of a molar climate (Gonz´alez-Rom´a et al., 2002, Lindell and Brandt, 2000) and various studies have investigated the climate

strength of specific climates like justice climate (Colquitt et al., 2002), service climate (Schneider et al., 2002).

The studies so far have tried to conceptualise the effect of climate strength on the relationship of organisational climate and intended job outcomes in a manner where the effect is stronger if the strength is high. Conceptually this model makes sense because the employees are exposed to same policies and the consistency in their experiences should lead to consistent and strongly shared perceptions leading to high climate strength. High agreement regarding climate strength should result in a better and dependable mean value which should validate the effect of climate strength on job outcomes.

Colquitt et al., (2002), has supported the moderating effect of climate strength on the relationship between organisational climate level and various outcomes. But on the other hand various studies showed contradictory results and found that climate strength failed to act as a moderator in predicting outcomes (Lindell and Brandt, 2000; Schneider et al., 2002; Dawson et al., 2008; Rafferty and Jimmieson, 2010).

This inconsistency could be reasoned as specifically written items for climate surveys so that the consensus indicators (r_{wg}, ICC) discussed further would be high, validating aggregation. Therefore, high consensus is generated with lack of variability across consensus resulting in linear and strongly high climate strength, removing its moderating effect. In fact, several of the studies in which climate strength did not show moderator effect had quite low variability in the level of agreement across units (Dawson et al., 2008; Zohar and Luria 2004).

Therefore clearly there is lack of consistency in climate strength research especially in hospital context in India. Though there have been explanations for achieving high climate strength among various studies, such as climate strength is high when within unit social interaction is high (Gonz´alez-Rom´a et al., 2002), when the unit's communication network is

more concentrated (Zohar and Tenne- Gazit, 2008), when units are more interdependent and have higher group/department identifications (Roberson, 2006).

These explanations are applicable in terms of hospitals due to the fact that these conditions seem to exist in Indian hospitals. Consequently, when work units interact more, are more communicative more, and are more interdependent, then the climate in those units will be stronger. Although progress has been made in research on climate strength, there are still gaps that need to be addressed. Therefore based on Chan's (1998) direct-consensus composition model the study tries to understand the effect of organisational climate and climate strength on intended job outcomes by simply aggregating the constructs to a composite value based on the assumptions of aggregation as explained in the next chapter.

The effect of organisational climate on the job outcomes namely commitment, trust, job satisfaction and satisfaction with leader at organisational level is based on the previously discussed social exchange theory. The constructs are merely being aggregated but the essence of the constructs remains same. Thus, this study proposes following hypotheses:

H8a: Organisational climate is positively associated with commitment at organisational level.

H9a: Organisational climate is positively associated with trust at organisational level.

H10a: Organisational climate is positively associated with job satisfaction at organisational level.

H11a: Organisational climate is positively associated with satisfaction with leader at organisational level.

H8b: Climate strength moderates the relationship between organisational climate and commitment at organisational level.

H9b: Climate strength moderates the relationship between organisational climate and trust at organisational level.

H10b: Climate strength moderates the relationship between organisational climate and job satisfaction at organisational level.

H11b: Climate strength moderates the relationship between organisational climate and satisfaction with leader at organisational level.

Thus, based on Chan's (1998) direct consensus composition model (Dawson et al., 2008), this study tries to understand how to calculate climate strength and its subsequent effect on various job outcomes at organisational level.

The following Figure 3.2 demonstrates the conceptual model 2 encompassing the proposed hypotheses.

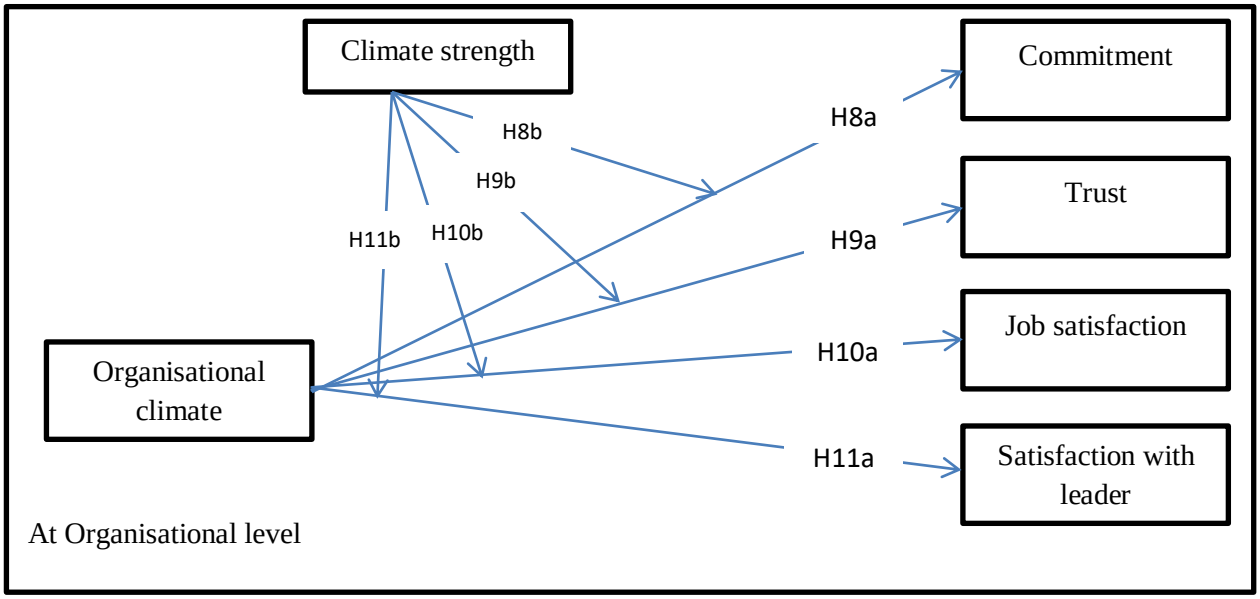

Figure 3.2: Conceptual Model 2 - Moderating effect of climate strength at organisational level

3.4 Concluding remarks

In this chapter the hypotheses linking the identified antecedents and outcomes with the organisational climate were explained with theoretical basis and literature support. Further the moderating effect of climate strength was also hypothesised based on past studies. This led to the conceptualization of two models. The next chapter describes the methodology adopted by the researchers for proving these models statistically in the context of Indian hospitals.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The chapter provides an overview of the research process and methodology adopted to achieve the objectives of the study. This chapter outlines the nature of the investigation, research design/s and the methods of collecting and analysing data, required to address the proposed research objectives. The chapter covers the description of the scope of the study as well as the sampling method, sampling frame, sampling unit and sample size, followed by the development of the measurement instrument.

The chapter further explains the pilot test conducted for the main study. In the successive sections, the process of data collection is described in detail, along with the challenges faced during the data collection. Lastly, the chapter is concluded by providing the description of appropriate statistical techniques considered for the analysis of the data in this study.

4.2 Overview of the research process

The research process followed to carry out this study is presented in Figure 4.1. The conceptual models taken in this study are developed based on an extensive literature review. To test the proposed models, survey method has been used. A questionnaire was developed to collect responses regarding organisational climate and its antecedents and outcomes.

The questionnaire was pre-tested with 25 respondents and further pilot-tested with 100 respondents with the responses given by 100 doctors. Based on the pre-test, the questionnaire was further fine-tuned. The questionnaire was personally administered among doctors by the researcher. The final data was collected from 537 doctors. For data analysis both exploratory factor analysis and confirmatory factor analysis has been used. Based on data analysis the findings are discussed.

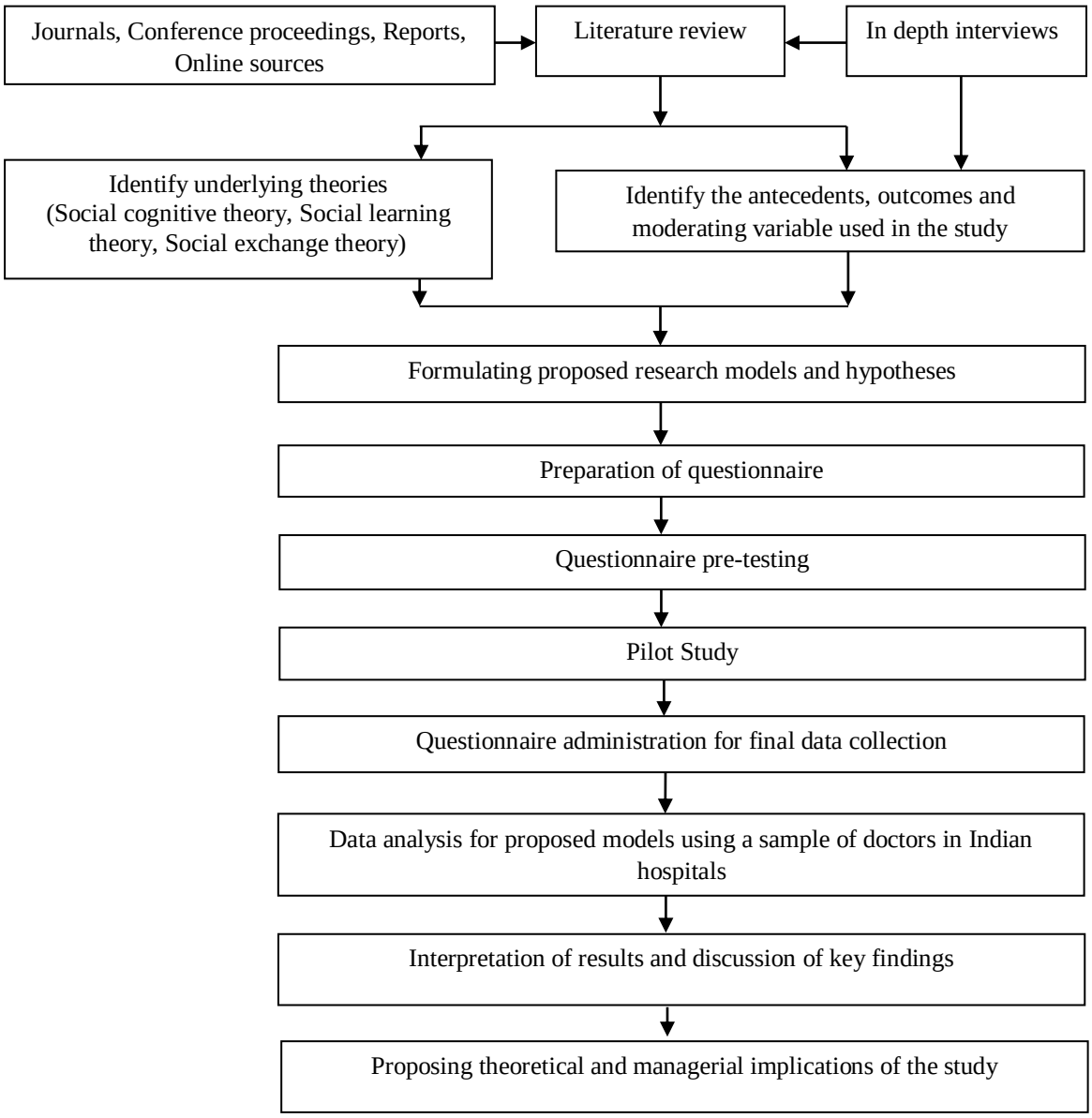

Figure 4.1: Research Process

4.3 Scope of the study

In this study, a mix of public and private, tertiary care hospitals, that are attached with medical colleges having the capacity of 500 beds and above are taken, covering the state of Rajasthan in India. It has been seen that the state of Rajasthan, ranks 11th in India in terms of the number of public and private medical colleges and attached hospitals and ranks 3rd among

the northern states with currently having 23 medical colleges and attached hospitals (https://www.nmc.org.in, National Medical Commission). Also, the state has AIIMS medical college, which comes under central government, and also ranks 4th among all the AIIMS established in India. Thus, the state provides a wide assortment of tertiary care hospitals.

Rajasthan, contributes to 5.7 percent of total Indian population with an accounted population of 68.6 million. Thus, the state has large number of young people, with most of the population under the age of 19 years, so it is expected that the population of Rajasthan will further continue to grow (Health Vision 2025, Govt. of Rajasthan). According to a study the average population served per government hospital bed in Rajasthan is, 1521 (National Health Profile, 2016), which is lower than the targeted ratio of 1000 per bed. Resultantly, Rajasthan is facing poor manpower resources due to poor doctor-population ratio. Also the state is facing shortage of super specialists at various cadres.

Furthermore, the admission of patients isn't just from inside the state however patients from adjoining states are additionally arriving at the hospitals in Rajasthan in an alarming number. Indeed, the annual OPD of SMS Hospital has crossed 30 lakhs and is largest in country (Health vision, Rajasthan Govt., Ranjan et al., 2018). Consecutively, the patient load in tertiary hospitals is heavy and the admissions in medical colleges and attached hospitals is more than 100% whereas the average occupancy in peripheral hospitals and health centres is less than 50% which is resulting in increasing expenditure of tertiary health care system.

Also, the issues of resident strike due to disturbed security arrangements, dissatisfaction with the government policies, etc. add to the overall problem facing tertiary care hospitals. In fact, in the past decade the state has seen a staggering increase in the number of strikes by medical personnel (Health Vision 2025, Government of Rajasthan, Department of Medical Education;

Ranjan et al., 2018). Therefore, based on the above mentioned problems, the medical colleges and hospitals in Rajasthan seemed pertinent for the purpose of this study.

4.4 Research design

Based on the extensive literature review conducted in Chapter 2, research objectives and hypotheses are framed. Consequently, two conceptual research models are proposed in Chapter 3, for investigation of the relationships between the antecedents of organisational climate and its subsequent effect on various job outcomes of doctors. Thus, a descriptive research design is adopted because this type of design is considered appropriate when the objective of the study is to determine the relationships between different variables taken in the study (Dunlock, 1993).

The main purpose of descriptive research is to discover inferences or causal relationships. Descriptive research methods are typically to describe situations. It is aimed at finding out 'what is', in order to describe events, people's behaviors, etc. A typical descriptive study is marked by prior formulation of specified hypotheses and a pre-planned & structured design. This research design comprises of surveys followed by quantitative analysis of data. Survey method is used to collect the data with a structured questionnaire (Cooper and Schindler, 2014). The instrument used for data collection is developed based on the existing scales identified from the literature. The primary data collected through the survey method is used for empirically testing the hypotheses in the study.

4.5 Sampling

This section discusses the sampling method, sampling frame and sample unit, considered for the study.

4.5.1 Sampling method

The study has employed snowball-sampling method for collecting the data. It is a non-probability sampling technique used by researchers to identify potential subjects when the subjects are hard to access. It provides a means of accessing vulnerable and more impenetrable social groups (Browne, 2005). Since the respondents constitute a relatively small proportion of the Indian population and are strictly bound by time and resources, snowball sampling was deemed appropriate for obtaining respondents. Also, to reach the doctors, some degree of trust is essential to initiate the contact.

Chain referral method, aided entry to the settings when the conventional approaches failed to succeed (Penrod et al., 2003). On one hand, seeking an appointment from the doctors' busy schedule in order to undertake the survey was a daunting task. On the other hand, procurement of management's permission to conduct surveys was challenging as the medical colleges are under frequent scrutiny by media and public. The management of the colleges and hospitals did not seem comfortable sharing details about their doctors and their functioning. Thus, personal linkages and networks as a means of accessing the doctors proved useful.

4.5.2 Sampling frame

According to the proposed model, it is essential to consider the common grounds of functioning and policies running the hospitals in order to understand the overall organisational climate. Therefore, the hospitals and colleges recognised by Medical Council of India are considered for the study, as they follow the objectives of Medical Council of India and thus their operations and ground functioning are conducted at same level. This results in commonality of general practices and procedures employed by the hospitals.

Medical council of India

The Medical Council of India was set up in 1934 under the Indian Medical Council Act, 1933, presently revoked, with the fundamental capacity of setting up uniform guidelines of higher qualifications in medicine and acknowledgment of medical qualifications in India and abroad. The number of medical colleges had expanded consistently since Independence. It was felt that the arrangements of Indian Medical Council Act were not satisfactory to address with the difficulties presented by the extremely quick turn of events and the advancement of medical education in the country. Accordingly, in 1956, the old Act was repealed and another one was established. This was additionally altered in 1964, 1993 and 2001.

The objectives of the council are to:

i. Maintain uniform standards of medical education for both undergraduate and postgraduate.
ii. Recommend for the recognition/de-recognition of medical qualifications of medical institutions of India or foreign countries.
iii. Provide permanent registration/provisional registration of doctors with recognized medical qualifications.
iv. Reciprocate with foreign countries in the matter of mutual recognition of medical qualifications.

Therefore, the hospitals that are 500 bedded and above, that is tertiary care hospitals, attached to medical colleges in Rajasthan from both public and private sectors, which are recognised by the medical council of India, were deemed suitable for the study. The medical colleges and attached hospitals recognised by MCI (Medical Council of India) till 2017 were considered for the study. The medical colleges and attached hospitals that are not recognised by the MCI were excluded from the study. In total 10 medical colleges and attached hospitals

were covered. The list of medical colleges and attached hospitals that are covered in this study is as follows:

Public medical colleges and attached hospitals:

i. SMS Medical College, Jaipur
ii. Jhalawar Medical College, Jhalawar
iii. Rajasthan University of Health Sciences, Jaipur
iv. S. N. Medical college, Jodhpur
v. All India Institute of Medical Sciences, Jodhpur
vi. Sardar Patel Medical College, Bikaner
vii. RNT Medical College, Udaipur
viii. Government Medical College, Kota

Private medical colleges and attached hospitals:

i. Mahatma Gandhi University of Medical Sciences & Technology, Jaipur
ii. Jaipur National University, Jaipur

4.5.3 Sampling unit

The proposed model based on the antecedents and outcomes of organisational climate is tested on a sample drawn from various medical colleges and attached hospitals in Rajasthan, India. Sampling unit for this study is the doctors working in these hospitals. The respondents are determined based on certain preconditions. For instance, operational staff and interns were excluded from the study.

Only the full time doctors of assistant professor grade and above were included among the respondents, who have been working in the hospital organisations for more than a year at

least. This ensured that the respondents had enough experience in a particular organisation to form valid perceptions regarding the climate of the organisation. Thus the doctors are identified as the unit of analysis for the study. For the conceptual model 2 of the study at the organisational level, the medical colleges and attached hospitals are considered as the unit of analysis.

4.6 Scales and measures for data collection

The aim of the study is to understand the relationships of organisational climate with its antecedents and outcomes. For this purpose an original set of 120 scale items of all the variables in the proposed model was generated from extensive literature review (presented in Table 4.1). During the literature study it was found that multiple set of measurement instruments have been used based on different study context and across disciplines. The present questionnaire also included questions to gather information about the respondent's demographic and job related profile, for instance, their work experience (in years), age, and gender.

Table 4.1: Scale of measures used in this study

Constructs	Scales used by	No. of scale items
Moral development	MDSP moral development scale by Skisland A. et al., 2012	12
Machiavellianism	Mach Scale by Dahling J. et al., 2009	16
Ethical leadership	Ethical Leadership Scale by Brown et al., 2005	10
Organisational climate	Organisational climate scale by Dawson et al., 2008	27
Trust	Trust scale by Cook and Wall, 1980	12
Commitment	Commitment scale by Cook and Wall, 1980	9
Job satisfaction	Job satisfaction scale by Bhandari et al., 2010	16
Satisfaction with leader	Satisfaction with leader scale by Scarpello and Vandenberg, 1987	18

Moral development scale for professionals (MDSP) was used in Scandinavian hospital context among nurses by Skisland et al. (2012). The scale measured the moral reasoning among the nursing staff originally. Thus, the scale seemed suitable to measure the moral reasoning in hospitals among doctors in Indian context based on the content and ease of capturing responses.

Similarly the Machiavellian scale by Dahling et al. (2009) was considered suitable for measuring the level of Machiavellianism among doctors as it measured the suitable parameters of self-interest and cynicism towards others; which are predominant in the definition of Machiavellianism. The ethical leadership scale as described by Brown and colleagues is the most popular scale among researchers to capture this construct and thus was deemed suitable for this study.

Similarly the scale proposed by Dawson et al. (2008) for measuring organisational climate was considered appropriate for the study. It measured various parameters that seemed important from the doctors' point of view such as quality of the hospital, integration among departments and various sections in the hospital and most importantly well-being of doctors such as their need for development emotional needs and acknowledgement of their queries and complaints. Incidentally, this scale was used among doctors working in National Health Service (NHS) organisations in the UK. The researchers had adapted the dimensions of the scale from the similar studies in the UK context. Thus, the authors of the study considered this scale pertinent to understand the perception of doctors in Indian context.

For measuring trust among doctors, the scale by Cook and Wall, (1980) was used as it measures the confidence of the doctors in the abilities and responsibilities of their colleagues as well as their faith in the management. Similarly the scale given by Cook and Wall, (1980) for commitment, measures the loyalty, job involvement of the employees and the level of

their identification with the organisation. This scale has been derived from the Buchanan (1974) and it captures how the employees associate themselves with the organisation and even go beyond the call of duty for the latter. Therefore, this scale seemed suitable for capturing the level of commitment among doctors in Indian context.

Also, the job satisfaction scale was adapted from Bhandari et al. (2010), in which it captures the job satisfaction of doctors in Indian context and was thus found appropriate for the present study. Additionally the scale for measuring the satisfaction with leader/supervisor was adapted from Scarpello and Vandenberg (1987). In case of medical colleges and attached hospitals, it was seen that there was an ambiguity among the leader and supervisor role, as many of the deans of the colleges were also acting heads of the departments where they actively participated in the role of doctors such as physician, obstetrician, surgeon etc. Thus, the doctors working under them treated the former as leader as well as supervisor. Therefore, the scale by Scarpello and Vandenberg (1987) was deemed suitable for the current study.

However it is important to determine the reliability and validity of the chosen scales. Hence the following section illustrates the pre-testing of the questionnaire for the data collection.

4.7 Pre-test and Pilot study

In order to pre-test the survey instrument, 25 respondents are selected from the target group to fill the questionnaire. Pre-testing helped in identifying and deleting the ambiguous statements in the questionnaire by thoroughly examining the respondents' interpretation of the questionnaire (Converse & Presser, 1986). Feedback provided by the respondents facilitated the modification of the research instrument by removing the seemingly redundant questions.

It is also seen during the pre-testing of questionnaire that the length of the questionnaire needs to be reduced as it affected the response rate. The factor analysis is conducted in the study for scale reduction. The changes are incorporated in the final questionnaire. It is ensured that the respondents do not face any difficulty in understanding and filling the questionnaire. In the next step, a pilot test was conducted to test the validity and reliability of the questionnaire. It was carried out among 100 doctors from public and private hospitals.

The results were drawn using SPSS 22. The Cronbach alpha coefficients were noted to be above 0.60. This indicated that the instrument is reliable (Hair et al, 2017). During factor analysis, some of the scale items that had factor loadings of less than 0.5 were dropped. Furthermore, the items that cross loaded on other factors were also dropped. The resultant questionnaire consisted of 99 scale items for further data collection. The pilot study has helped to evaluate the challenges and potential problems in data collection, data entry and data analysis.

4.8 Data collection

The data collection was conducted over a period of 9 months from June, 2018 to February, 2019, after questionnaire formation based on thorough review of literature. During the data collection period, all the questionnaires were self-administered by the researcher. It had been seen during the pilot study that the doctors are reticent in sharing information regarding their job. Thus, it seemed prudent to proceed further after establishing a basic trust foundation.

Doctors being a niche population are generally distrustful of outsiders and hence they responded to the request of other colleagues for sharing information. For this purpose the management of the medical colleges and attached hospitals was approached with a research proposal draft along with a structured questionnaire to persuade them for conducting the survey among the staff.

The management was made up of Dean of the college as well as PMO (Principal medical officer) of the attached hospitals. However, the PMOs deferred to the decision of the respective Deans as they are the ultimate authority in the organisation. This was a vital step in survey as the Deans were also part of the various departments and were actively pursuing doctoral duties as well. Therefore, after receiving permission from the authority figures, it was easier to collect data from the HODs and the doctors working in different departments through top-down snowball sampling.

For some medical colleges, the researcher was granted permission after joining the college as part of external research team for a fee, while for others the Deans and the PMOs granted permission as per their discretion. Seeking doctors' time for the survey was also very difficult and hence, approaching them through proper channel was vital. Sometimes the HODs and the doctors of the departments would fill the questionnaire and further refer other doctors to fill the questionnaire, while other times they would refer the survey but, would refuse to fill the questionnaire due to lack of time or workload.

Especially during OPD (outpatient department), which is the first contact point between patients and the doctors. The OPD timings in all the hospitals are usually from 9:00 am to 2:00 pm. These were considered suitable timings to distribute survey forms to the doctors and simultaneously observe them in their working conditions, without affecting their time with the patients. Similarly for non-clinical doctors, these hours were dedicated to lecture halls and laboratories. Thus, the survey questionnaire was administered to them during laboratory hours as they could devote time to filling the questionnaire at a stretch.

It was seen that the patient inflow varied from department to department however so did the number of doctors per department thus maintaining the average doctor-patient ratio. Therefore, the constant tug of war between the doctors' time devoted to patients and the time

devoted to filling survey questionnaires was one of the major challenges faced during data collection. Due to this, many survey questionnaires were received partly filled which defeated the purpose of collecting information via forms.

Also, many doctors though initially consented to fill the forms but later they renegaded on their consent and refused to fill the forms due to inhibitions regarding sharing the information. In such a scenario, observation method proved to be extremely useful in understanding the doctors' response to their working climate.

There were times when doctors referred to their friends and colleagues in other medical colleges and hospitals, which proved to be immensely helpful. Additionally, some doctors felt comfortable filling the questionnaire survey after working hours at their residences and thus, home-calls were made by the researcher for the same, but it was an impractical way to collect survey forms and seemed unsuitable to be carried out for the purpose. Only limited sample was generated through this technique.

Even then the data collected for this study proved to be very costly. Such high expenses were inescapable because of the nature of the study. Initially, a set of 700 responses were generated through the process. The incomplete questionnaires and disqualified responses were discarded from the study through manual inspection. The questionnaires with missing information were filtered from the final set of questionnaires. Finally, a usable sample of 537 responses was considered for the analysis.

4.9 Overview of statistical techniques for data analysis

This section provides a brief description of the statistical techniques used for data analysis in this study. A preliminary data analysis is conducted after collecting the questionnaire from all

the respondents included in the study. Next, the multivariate statistical techniques employed in this research for the final data analysis are described.

4.9.1 Preliminary data analysis

The retained questionnaires are then processed to check for inconsistencies and inaccuracies in the responses. The collected data is fed to the excel sheet manually while eliminating the incomplete responses, treating the missing values, coding and reverse coding the responses required as per the scales used and further tabulating the data. In the preliminary data analysis, descriptive statistics of the data, cross tabulations and histograms are generated to study the patterns in the data. Pearson Correlation was calculated among each of the variables using SPSS software. Correlation helped us to understand the association between the variables.

4.9.2 Techniques used for data analysis

The study uses various techniques to analyse the data such as EFA (exploratory factor analysis), SEM (structural equation modelling), and moderation analysis as discussed below.

Exploratory factor analysis (EFA)

EFA technique is used most commonly for reducing a relatively large set of variables into manageable and simpler ones, to develop and refine new instrument's scale, and to explore relations among variables to build theory (Malhotra and Dash, 2017). Thus, exploratory factor analysis is conducted to identify and eliminate scale items irrelevant to this study's context and to develop a relevant and valid questionnaire. KMO and Bartlet's test of sphercity is used to check the appropriateness of data. In the factor analysis, it is observed that KMO value for all constructs is above 0.50 and Bartlet's test was $p<0.001$, which suggests the data is fit for conducting factor analysis.

Principal components analysis, with varimax rotation was applied to the data, to assign the factor score coefficients, in order to find out the minimum number of factors accounting for maximum variance. Nunnaly (1978) has suggested a cut-off of 0.40 or 0.50 as sufficient for factor loadings of a scale item to be considered in a particular factor. In this study, the items that loaded at a value of 0.40 or above are retained for further analysis. This led to removing items that loaded low on various factors or cross loaded on other factors reducing the scale items from 99 items to 52 items. Later, CFA was conducted which lead to the reduction of items to 48 items. The items used in the study and their consecutive factor loadings are shown in Table 4.2.

The overall Cronbach' alpha value of all the scales is 0.871, and cumulatively the items are explaining 71.8% variance. The convergent and discriminant validity are shown in next chapter.

Table 4.2: Items used in the questionnaire

S. No.	Moral development scale items	Factor Loadings
1	To meet with expectations from others has its own value	.678
2	It is important to listen to what people mean, in moral issues	.711
3	Consideration and kindness are most important values in a community	.835
4	It's a value in itself to treat authorities with respect	.599
5	It is reasonable to listen to what most people mean is right or wrong	.649
6	It is usually possible to reach consensus in moral issues	.864
7	Good moral rules must be able to be put in a context	.581
S. No.	**Machiavellianism scale items**	
1	I believe that lying is necessary to maintain a competitive advantage over others.	.696
2	I am willing to be unethical if I believe it will help me succeed.	.774
3	I would cheat if there was a low chance of getting caught.	.703
4	I like to give the orders in interpersonal situations.	.771
5	I enjoy having control over other people.	.781
6	Status is a good sign of success in life.	.516
7	Accumulating wealth is an important goal for me.	.784
8	I want to be rich and powerful someday.	.795
9	People are only motivated by personal gain.	.658
10	Team members backstab each other all the time to get ahead.	.875

S. No.	Ethical leadership scale items	
1	Have the best interests of employees in mind	.689
2	Discuss business ethics or values with employees	.756
3	Set an example of how to do things the right way in terms of ethics	.833
4	Define success not just by results but also the way they are obtained	.772
5	When making decisions, ask "What is the right thing to do"?	.833
S. No.	**Organisational climate scale items**	
1	My hospital sets extremely high standards for its staff	.809
2	As a patient, I would be happy to have care provided by my hospital	.783
3	Quality is taken very seriously here in my hospital	.788
4	Different sections of my hospital do not keep each other informed about what's going on*	.825
5	There are often breakdowns in communication here in my hospital*	.786
6	My team/work group finds itself in conflict with other teams or departments in this hospital*	.630
7	My hospital has created a safe working environment	.539
8	My hospital strongly believes in the importance of training and development	.641
9	People here are strongly encouraged to develop their skills	.533
S. No.	**Trust scale items**	
1	Most of my workmates can be relied upon to do as they say they will do.	.759
2	I have full confidence in the skills of my workmates.	.772
3	Most of my fellow workers would get on with their work even if supervisors were not around.	.727
S. No.	**Commitment scale items**	
1	I am quite proud to be able to tell people about my hospital, I work for	.465
2	I sometimes feel like leaving this employment for good*	.525
3	I'm not willing to put myself out just to help the hospital*	.795
4	I feel myself to be part of this hospital.	.579
5	In my work I like to feel I am making some effort, not just for myself but for the hospital as well	.873
6	I would not recommend a close friend to join our staff*	.586
S. No.	**Job satisfaction scale items**	
1	Chances of Promotion.	.728
2	Amount of Variety in the Job.	.684
3	Job security.	.719
S. No.	**Satisfaction with leadership/supervisor scale items**	
1	The way my supervisor sets clear goals.	.736
2	The way my supervisor gives me credit for my ideas.	.857
3	The way my supervisor follows through to get problems solved.	.846
4	The way my supervisor shows concern for my career progress.	.797
5	The technical competence of my supervisor.	.826

As per the discretion of researchers as well as thorough review of literature each scale was kept as short as possible – without compromising the validity or reliability of the constructs. Specifically, the following criteria were assessed: a scale as short as possible, ideally maintaining Cronbach's alpha over $\alpha = .0.60$ (Hair et al., 2017), retaining the relevant content. Previously existing scales were used and modified on the basis of the nature of the research study. If multiple scales existed, the scale was used which suited best regarding content and showed good empirical results in the previously used studies.

Structural equation modelling

Structural Equation modelling is a multivariate statistical analysis technique which is essentially a combination of factor analysis and multiple regression equation analysis that assists in investigating the relationship between different variables and latent constructs (Tabachnick and Fidell, 2011).

One of the limitations of multiple regression techniques such as ANOVA and MANOVA is that they can only analyse one layer of a relationship between independent and dependent variable (Tabachnick and Fidell, 2011). In this research study, SEM is used, as it allows simultaneous analysis for all independent variables with the dependent variable instead of doing them separately. Structural equation modelling is a two-step process: measurement model and structural model.

The measurement model used to identify the relationship between measured variables and latent variables (Kline, 2011). Confirmatory factor analysis (CFA) is a statistical technique used to confirm or reject the measurement model. The CFA was carried out with Amos 20 using maximum likelihood as the estimation method**.** As a first test model fit the chi-square ($\chi 2$) value was calculated. A good fit model is achieved if the value of the $\chi 2$ test is insignificant (Hu and Bentler, 1998). Absolute fit indices that show if models are good it or

not, are the Chi-Squared test, GFI, AGFI, the RMR, and the RMSEA. The comparative fit index (CFI) is most used of fit indices. The value of CFI varies from 0 to one.

The structural model used to identify the relationship only between latent variables. The major advantage of SEM in relation to other statistical techniques is that it makes provision of the measurement error in the model. In this research statistical software package, SPSS version 22 and AMOS 20 was utilised to carry out the calculations.

Moderation analysis

The study conducts a moderation analysis to determine whether and to what extent the relationship between an independent (organisational climate) and dependent variables (commitment, trust, job satisfaction, satisfaction with leader) is affected by a third variable (climate strength). Statistically, a moderation analysis is a multi-step hierarchical linear regression, where we test the relationship between a predictor variable and an outcome variable using an interaction variable.

In this study, the predictor variable is organisational climate which leads to various job outcomes such as trust, commitment, job satisfaction and satisfaction with leader/supervisor; where climate strength as moderator interacts with level of organisational climate perceptions of the individuals. The moderation effect has been tested by satisfying the conditions proposed by (Baron and Kenny, 1986). In this study SPSS 22 has been used to conduct the moderation analysis.

4.9.3 Data aggregation

Organizational climate and the various job outcomes in this study are measured on organisational level however for testing the conceptual model 2, where the moderating effect of climate strength is tested, the data aggregation of independent and dependent variables, at

organisational level is done. Individual scores, therefore, need to be aggregated to higher/organisational level. Aggregation however is only justifiable when the scores show certain within group agreement (Dawson et al., 2008). Various indicators for data aggregation are IRR (Interrater reliability), IRA (Interrater agreement), AD_M index (average deviation index) and so on, which are discussed later in this section.

Data aggregation is done on the basis of composition. Based on the theoretical nature of the aggregated construct, such as climate perceptions, it is important to first determine that the data obtained at the individual level are similar enough to one another before aggregating the data at the organisational level construct (e.g., shared climate perceptions within organisations).

The basic assumption of composition model is that the lower level construct should be in congruence with the higher level construct (Lebreton and Senter, 2008). As a result, in order to justify the aggregation of lower-level data to a higher-level construct, it is necessary to first determine if the data collected at lower level is in accordance with each other and shows considerable agreement (e.g., doctors working in a medical college have greatly similar perceptions that are different from doctors' perceptions in another medical college or hospital).

At this juncture it is necessary to understand the estimates for measuring such agreements such as Interrater reliability and agreement. IRR (Interrater reliability) refers to the relative consistency in ratings provided by multiple respondents of multiple organisations (Bliese, 2000; Lebreton and Senter, 2008). Measures of IRR are thus used to determine whether respondents rank order organisations in a manner that is fairly congruous with other respondents. The important point of consideration is not the interchangeability of scores but rather with the interchangeability of relative rankings. In contrast, IRA (Interrater agreement)

examines the within group agreement. The extent to which respondents (doctors) ascribe the same raw scores to a rated object is referred to as interrater agreement in this study (i.e. the scores allotted by doctors to organisational climate). The "average deviation" (AD) index is used to ascertain interrater agreement. This index can be used to analyse average deviation indices of organisational climate and job outcomes.

Thus it is evident that both IRR and IRA compares whether the ratings generated by one respondent are in congruence with the ratings generated by other respondents (LeBreton and Senter, 2008). IRA and IRR are distinguished from each other in defining interrater similarity. Agreement emphasizes the equivalence or the absolute consensus between respondents.

Estimates of Interrater reliability and agreement

Since the composition models are based on the equivalence of lower-level data, IRA (interrater agreement) measures are used to ascertain the degree of agreement, or absence of same, among lower-level observations. When multiple organisations are assessed, empirical support for aggregation can be obtained through IRA indices such as rWG and IRR + IRA indices such as intraclass correlation coefficients (ICCs).

r_{WG} indices

The most popular estimates of IRA have been given by James et al. (1984), which is multi-item $r_{WG(J)}$ indices. When various doctors rate a single organisation on a single variable using an interval scale of measurement, the IRA can be evaluated using the rWG index, which defines agreement as the marked decline in error variance. If respondents agree with each other completely then technically there is no variance, thus the observed variance would be equal to 0 (i.e., $S_x^2 = 0$) and r_{WG} would be equal to 1, denoting perfect consensus (i.e., r_{WG}

=1−S_x^2/ σ_E^2 = 1− 0/ σ_E^2 = 1). In contrast, if respondents lack consistency and do not agree with each other then, the variance would be resultantly high, such that it's equal to the variance of a theoretical null error distribution (i.e., $S_x^2 = \sigma_E^2$), and r_{WG} would be equal to 0, denoting perfect lack of agreement. The same applies for $r_{WG(j)}$.

$$r_{WG(j)} = \frac{J\,(1 - S_{X_j}^{-2}/\sigma_E^2)}{J\,(1 - S_{X_j}^{-2}/\sigma_E^2) + (S_{X_j}^{-2}/\sigma_E^2)}$$

The above equation estimates the multi item $r_{WG(j)}$, where $S_{X_j}^{-2}$ is the mean of the observed variances for J essentially parallel items and σ_E^2 is the variance of the null distribution. Most commonly used standards for a valid aggregation which is based on agreement are 0.70 or higher (LeBreton and Senter 2008).

Measures of IRA+IRR

Interrater reliability and agreement can be measured using, the one-way random effects ICCs (Intraclass correlations) and two-way random effects (Lebreton and Senter, 2008).

In case of multilevel modeling, the ICC based on the one-way random effects ANOVA is the most common estimate of IRR + IRA. In this case, the targets (e.g., organizations) are treated as the random effect. This ICC is estimated when one is interested in understanding the IRR + IRA among multiple targets (e.g., organizations) rated by a different set of judges (e.g., different doctors in each organization) on an interval measurement scale (e.g., 5 point Likert-type scale).

Lower values might be generated when there is low uniormity, low accord, or both among respondent ratings, but on the other hand if there is an ultimate prevailing opinion resulting in both relative uniformity and absolute consensus in respondents' ratings, then the higher

values are generated, considering that this index calculates both IRA and IRR at the same time (LeBreton et al., 2003). ICC(1) values reveals the level of consensus + consistency in data, by comparing the scores of the randomly selected judges to the mean score (i.e., estimated true score) obtained from the sample of judges (Bliese, 2000). ICC(1) values further highlight if the social conformity of the members an organisation is interfering with their ratings of the climate (Bliese, 2000).

In multilevel modeling, however, it is also important to understand the reliability of the mean rating assigned by a group of (K) judges. This index is labeled as the ICC(2) which tests the reliability of the group mean.

It can be noted that past climate studies have reported ICC(1), along with ANOVA results (Bliese, 2000), as a measure of both interrater reliability and interrater agreement (LeBreton and Senter, 2008). Although no firm cutoffs exist for ICC(1), LeBreton and Senter (2008) suggested that values of 0.01, 0.10, and 0.25 might be considered small, medium, and large effects, respectively. Further the researchers may report ICC(2), which is the reliability of group means and is related to ICC(1) as a function of group size (Bliese, 2000), with a value of 0.70 or higher deemed adequate (Bliese, 2000; LeBreton and Senter, 2008).

AD index/ Climate strength

Based on the research of climate strength conducted by Gonza´lez- Roma´ et al., (2002), this study calculated climate strength using Burke, Finkelstein, and Dusig's (1999) ADM measure, which calculates the average deviation from the mean of all individuals in a unit using the following formula:

$$AD_{(M)} = \frac{\sum_{i=1}^{N} | xi - \overline{x} |}{N}$$

where xi represents the individual climate scale score, and x the overall organizational climate score for that variable. This measure is more advantageous that other measures of dispersion because it can be more readily interpreted in terms of the original response scales (Burke and Dunlap, 2002). That is, a value of AD = 1 represents a group where, on average, group members score exactly one response scale point away from the group mean. For calculating climate strength the value of ADJ was multiplied b (-1).

4.10 Concluding remarks

This chapter has provided the overview of the research methodology adopted in the study. All the mentioned indices in this study are calculated using SPSS 22 using the syntax as described by Lebreton and Senter, 2008. Consequently the data analysis is conducted as shown in the next chapter, where it is described further.

CHAPTER 5: DATA ANALYSIS

5.1 Introduction

This chapter describes the statistical analysis conducted to test the hypotheses relevant to the conceptual research models of the organisational climate proposed in the chapter 3. Data analysis was conducted on a sample of data collected from 537 doctors as the respondents. The chapter follows an overview of the steps in the data preparation further followed by the description of preliminary data analysis, which is inclusive of descriptive statistics *i.e.* the demographic profile of the respondents, dispersion and skewness of the data along with the statistical measures to check for and correct for non-normality of the distribution.

Furthermore, it entails the details of correlation analysis carried out between various independent and dependent variables. Following this the chapter provides details of Exploratory Factor Analysis employed using SPSS and Confirmatory Factor Analysis conducted to determine the reliability, validity and overall fit of the model using AMOS 20 statistical package. The proposed structural models are then, specified and tested using regression technique. The results are further described in the chapter.

5.2 Data preparation

The data thus collected from the respondents is checked for the inconsistencies and inaccuracies before employing further analysis by treating the missing values, recoding the reverse values, and tabulating. First the filled-in questionnaires are examined for completeness and the incomplete questionnaires are discarded from the dataset. Then, the data is tabulated and formatted in Microsoft excel, where the variable scales items form the columns and the respondents constitute the rows.

Further, dataset is cleaned to remove incomplete and incorrect data from the dataset. A comprehensive manual inspection is done to identify any inconsistencies in the dataset, which is a time taking part of the data analysis process.

For instance, various demographic variables are coded into numeric formats, such as gender is coded as: male (1) and female (2). Along with this, duplicity in the data is removed in excel worksheet. Following this, the data is exported to SPSS file, where it is checked for missing values. The missing data is imputed using multiple imputations in SPSS to fill in the missing values with the estimated ones. A set of 537 usable samples is finalized for consideration of further analysis.

Five-point likert scale items were used to measure the doctor responses where the responses are coded with 1 as strongly disagree and 5 as strongly agree. The responses for job satisfaction and satisfaction with leader are coded with 1 as strongly dissatisfied and 5 as strongly satisfied. The negative worded questions are reverse coded because the same scoring cannot be used for the negative worded questions. Thus, the data is prepared for preliminary analysis.

5.3 Preliminary analysis

The preliminary data analysis consisted of demographic profile of the respondents as well as the basic descriptive statistics.

5.3.1 Demographic profile of respondents

A total sample of 700 doctors is collected, from 10 public and private medical colleges and attached hospitals, in Rajasthan, out of which, 537 responses are retained producing a response rate of 76.7%. The sample population comprises of 61% males and 39% females. About 46% of the respondents lay between the age bracket of 30-40 years and around 67% of

the total respondents had upto or above 5 years of work experience in the current hospital and 26% of the total respondents had total work experience of 6-10 years. The Table 5.1 represents the demographic profiles of the respondents included in the study. The demographic profile shows that the majority of the sample lies in the age bracket of 20-40 years.

Table 5.1: Demographic profile of the respondents

Demographic Variables	% of Respondents
Gender	Male (61%) Female (39%)
Age	20-30 years (21%) 30-40 years (46%) 40-50 years (19%) Above 50 years (14%)
Current work experience	1 to 5 years (67%) 6 to 10 years (17%) 11 to 15 years (5%) 16 to 20 years (3%) Above 20 years (6%)
Total work experience	1 to 5 years (36%) 6 to 10 years (26%) 11 to 15 years (13%) 16 to 20 years (7%) Above 20 years (18%)

5.3.2 Descriptive statistics

Descriptive statistics basically identify patterns in the raw data; essentially it summarizes the data quantitatively in a manner that we can assign meaning to various data attributes. For the purpose of this study, mean as a measure of central tendency and standard deviation as a measure of dispersion, have been considered.

Also, skewness (measures of symmetry) and kurtosis (measure of peak pointedness) in the distribution have been measured to test the normality of the data. The Table 5.2 represents the measures of central tendency, dispersion and symmetry calculated in the study.

Table 5.2: Measures of central tendency, dispersion and symmetry

Variables	Mean	SD	Skewness	Kurtosis
Moral development (MD)	3.8537	.42524	-1.163	4.553
Machiavellianism (MA)	2.5682	.52803	-.143	.371
Ethical leadership (EL)	3.9426	.60817	-1.325	4.140
Organisational climate (OC)	3.4149	.52596	-.670	1.044
Trust (T)	3.6159	.52002	-1.001	2.581
Commitment (CO)	3.6036	.46227	.017	.552
Job satisfaction (JS)	3.5602	.63168	-.767	1.738
Satisfaction with leader (SWL)	3.6875	.71877	-1.074	2.090

Mean and standard deviation

The mean values of the variables are greater than 3, except for Machiavellianism. The mean value of Machiavellianism (2.56) being lower than 3 means that the respondents are low Machiavellians, with less manipulative tendencies and less cynicism. The high mean values of 3.94 (Ethical leadership) and 3.85 (Moral development) show that respondents have high moral reasoning and they perceive their leaders to be ethical. Furthermore, mean value (3.41) of organisational climate shows that it is perceived to be favourable by the respondents. The Standard Deviation (SD) values closer to the mean values are considered acceptable for analysis. Therefore data must be normally distributed and large standard deviations must be avoided.

Skewness and kurtosis

Skewness is the measure of distortion from the symmetrical bell curve used to examine normal distribution. It is a measure of lack of symmetry in data distribution. For a normal distributed data, the values of skewness must range from -1 to 1. Similarly, kurtosis measures the tails of the distribution and not the flatness or peak of it. It is a measure of outliers present

in the distribution of data (Groeneveld and Meeden, 1984). The acceptable range of skewness and kurtosis is -2 to +2 for normally distributed data (Field, 2013).

However a few researches state that range of -5 to +5 and -3 to +3 are acceptable values for kurtosis and skewness in data respectively (Kline, 2011). The skewness and kurtosis in this study are considered to be out of the acceptable range. The results show that the data is not normally distributed. We thus, reject the null hypothesis that the data is normally distributed. The data is deemed unfit, as it does not meet the normality assumption for multivariate analysis. Therefore, data transformation technique proposed by Templeton (2011) popularly known as, fractional ranking, is applied to the current data, that qualifies it to be used for conducting parametric tests.

Fractional ranking for data transformation to normal distribution

Data transformation to normal distribution is achieved by using data transformation method given by Templeton (2011), performed in two steps.

First, the data is converted into fractional rank to transform the original variables into percentile ranks, for the purpose of achieving uniformity in the distribution probabilities. Next, inverse normal transformation is done on the fractional rank scores to obtain normally distributed z-scores. The data transformation is performed using SPSS version 22 software. The Shapiro-Wilk test for normality is conducted on the transformed data (see Table 5.3).

The significance value ($p>0.05$) of Shapiro-Wilk test qualifies the constructs as normally distributed. The descriptive statistics show that the values of skewness and kurtosis now lie between the acceptable range of +2/-2 and hence the data is considered as normally distributed. Thus, the null hypothesis is now accepted that the data is normally distributed and further parametric test can be performed on the transformed data (see Table 5.4).

Table 5.3: Test for normality after data transformation

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Moral development (MD)	.995	537	.074
Machiavellianism (MA)	.997	537	.457
Ethical leadership (EL)	.991	537	.002
Organisational climate (OC)	.998	537	.891
Trust (T)	.996	537	.175
Commitment (CO)	.994	537	.025
Job satisfaction (JS)	.994	537	.031
Satisfaction with leader (SWL)	.986	537	.000

Table 5.4: Skewness and Kutosis after data transformation

Variables	**Skewness**	**Kurtosis**
Moral development (MD)	.066	.078
Machiavellianism (MA)	.074	.073
Ethical leadership (EL)	-.019	-.230
Organisational climate (OC)	.074	.081
Trust (T)	.044	-.016
Commitment (CO)	.032	-.075
Job satisfaction (JS)	-.005	-.173
Satisfaction with leader (SWL)	-.032	-.255

Correlations

The transformed data is now used to test the strength of association among all the variables employed in the study. For this purpose, Pearson correlation coefficient has been calculated using SPSS. Pearson correlation coefficient, denoted by *r*, is used when the data distribution is normal and the variables are numerical (Williams, 1996). Table 5.5 shows the Pearson correlation coefficient for the variables in the study.

Table 5.5: Correlation matrix of all variables

	MD	MA	EL	OC	T	CO	JS	SWL
MD	1							
MA	-.135**	1						
EL	.353**	-.144**	1					
OC	.324**	-.094*	.361**	1				
T	.349**	-.241**	.356**	.644**	1			
CO	.324**	-.195**	.328**	.392**	.564**	1		
JS	.285**	-.142**	.359**	.502**	.599**	.540**	1	
SWL	.243**	-.182**	.407**	.426**	.522**	.467**	.626**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

It is evident from the correlation matrix that Machiavellianism is negatively correlated with all the other constructs significantly, providing evidence that Machiavellian personality among doctors is negatively related to their moral reasoning, ethical leadership, organisational climate and their job outcomes. Organisational climate is strongly and significantly correlated (r = .644, .392, .502 and .426) with employee job outcomes of trust, commitment, job satisfaction and satisfaction with leader respectively. Furthermore, the proposed antecedents of Ethical leadership (r = .361) and Moral development (r = .324) are also positively and significantly associated with organisational climate. The table 5.5 also shows that independent variables are not highly correlated to each other, thus negating the presence of multicollinearity in the data.

5.4 Exploratory factor analysis

The exploratory factor analysis (EFA) is conducted on the data set to determine the factor structure of the variables studied in the context of doctors working in Indian medical colleges and attached hospitals. This analysis is helpful in identifying and retaining the scale items, in the questionnaire that are relevant to context of the study. Essentially the KMO and Bartlett's test of sphericity is conducted to test the suitability of EFA, wherein the values of KMO test

should be above 0.50 at the significance of $p < 0.05$ (Nunnaly, 1978). The table 5.6 shows the KMO-Bartlett's test results for this study, which are statistically significant.

Table 5.6: KMO and Bartlett's Test of Sphericity

KMO	Bartlett's test of sphericity	Df	Sig.
0.873	10769.64	1128	0.00

The study used principal component analysis employing varimax rotation, to extract minimum number of factors accounting for maximum variance. The resultant solution explained 71.8% variance in the entire model based on Eigen values. According to Nunnaly (1978), factor loadings of 0.4 and above are considered as cut-off values for scale items to be included in the model. Thus, scale items with factors loadings below 0.4 are removed from the study along with the items that cross loaded on other factors. This resulted in the dimension/factor reduction of 99 scale items used in the questionnaire representing various independent and dependent variables, to a set of 52 scale items, as shown in Appendix 1.

Cronbach's alpha is also calculated to check the reliability of the reduced scales. Cronbach's alpha is an estimate of the internal consistency associated with scores that can be derived from a scale. The results from the study reported a value of 0.871, which is within the acceptable value for reliability (Nunnaly, 1978).

5.5 Confirmatory factor analysis (CFA)/Measurement model

The purpose of conducting CFA for each variable used in the study is to determine if the scales used for each variable succinctly represent the latter respectively. Also based on CFA, the reliability and validity of the data is determined, which provide the measurement model fit and determines if the model is fit for structural equation modelling. This is of extreme

importance as the scales are adapted from other contexts and are being tested in Indian context, therefore it is essential to identify if the adapted scales capture the underlying meaning of the variables significantly. The CFA of each construct/variable is further summarised.

Organisational climate scale as adapted from Dawson et al. (2008), consisted of three factors namely 'quality', 'integration', 'well-being' and was used in hospital context in NHS organisations in the UK. Incidentally, in Indian context among doctors the scale is also spilt into the same three factors, each consisting of three items and explaining how doctors in India associated, quality of care, safe working environment, skill development and training and development opportunities with the organisational climate of the hospital.

Additionally, Moral development scale for professionals (MDSP) as adapted from Skisland et al., (2012), has four factors, namely "authoritative standards', public meaning', 'moral practice', 'common values', used among nurses in Scandinavian context. However in Indian context among doctors, the four factors are reduced to three factors i.e., items explaining 'common values' are removed as their factor loadings are less than 0.4. Thus, CFA of the three factors structure of moral development showed better fit indices. This could be due to the fact that each society has its own set of unspoken norms and values that may or may not hold same significance for others. Furthermore, doctors are considered to be less moral/ethical than nurses (Cordeiro et al., 2003). The original scale was tested among nurses, which could be one of the reasons for the different factor structure.

Similarly Machiavellianism scale which is adapted from Dahling et al., (2009), shows that Machiavellianism is a second order construct/variable explaining four factors, 'ammorality', 'desire for control', 'desire for status', 'distrust of others' among doctors in Indian context.

Furthermore, commitment is measured by 9 items scale given by Cook and Wall (1980), based on the original scale as derived by Buchanan (1974), which consists of three dimensions namely 'identification', 'loyalty' and 'involvement'. However for this study the best model fit is achieved by deriving new commitment dimensions, wherein the old scale items cross loaded to form two new dimensions namely 'belongingness' and 'engagement' while retaining old dimension of 'identification'. The items explaining involvement of employees in an organisation along with their loyalty, explain the 'engagement' factor. This is in congruence with the continuance factor of Allen and Meyer's (1990) commitment scale. Furthermore the third factor of 'belongingness' explains the willingness of employees to exert efforts in the organisation along with how much they identify with the organisation, and want to be associated with it.

The emergence of the new factor structure is also due to the fact that doctors in Indian context exhibit professional commitment. They are committed to the medicine as profession rather than as a job. Moreover they are mostly driven by affective commitment (Bhat and Maheshwari, 2005), as is evident in the new factor structure highlighting their level of engagement and belongingness in the organisation. Thus, for the purpose of this study, a new factor structure for employee commitment has emerged.

Moreover the trust scale as adapted from Cook and Wall (1980) which explains the interpersonal trust among individuals from perspectives of peers and management in UK context, loads on a single factor. The interpersonal trust as explained by Cook and Wall (1980) shows faith in the trustworthy intentions of others as well as the confidence in their abilities. In case of doctors, where they work so closely with their colleagues, as their work is inter-dependent on the capability of others, it is evident that the trust scale items load on the interpersonal trust among peers.

The scale items of trust in management are removed as they had insufficient factor loadings or they cross loaded on other factors, thus disturbing the parsimony of the data. This could be because in bureaucratic organisations, the interactions with the management are either in adherence to rules or are still governed by authority and respect. Therefore, the chance of identifying trustworthiness in management is very weak. The CFA based on 'trust in peers' resulted in a single factor in the measurement model.

The remaining constructs are also tested for their factor structure, and are found to be in congruence with their adapted scales and their respective CFA result indices are portrayed in the further section of measurement model.

5.5.1 Reliability, convergent and discriminant validity

Convergent validity signifies the common variance between items and their constructs, and it represents that a set of items are measuring the same construct (Henseler et. al., 2015). Fornell and Larcker (1981) discussed that in order to measure the validity, average variance extracted (AVE) should be used. The higher the value of AVE, the more representative the items are of the construct on which they load. In general, its value should be above .50 (Fornell and Larcker, 1981), which is achieved in the study. Moreover, discriminant validity for each construct is calculated by taking square root of AVE, which explains the maximum shared variance (MSV) and is found to be well within range.

Although, the Cronbach's alpha was calculated for each construct, but for more comprehensive knowledge composite reliability is calculated as it takes into consideration the internal consistency of the scale items with the constructs (Hair et al., 2017). All values for composite reliability (CR) scores for each of the constructs are above 0.60 which falls within the acceptable range for further analysis. The results are presented in Table 5.7.

Table 5.7: Reliability and validity scores for each construct

Constructs	CR	AVE	MSV
Organisational climate (OC)	0.787	0.566	0.457
Ethical leadership (EL)	0.866	0.566	0.201
Machiavellianism (MA)	0.819	0.531	0.078
Moral development(MD)	0.800	0.573	0.201
Commitment (CO)	0.844	0.649	0.457
Job satisfaction (JS)	0.767	0.524	0.444
Satisfaction with leader (SWL)	0.910	0.670	0.371
Trust (T)	0.757	0.512	0.372

5.5.2 Common method bias (CMB)

Common method bias is often found in social science research wherein, using a common method to measure two or more constructs, examining their inter-relationships in the same study. Common method bias could affect the results of the study in a detrimental way, such as biased estimates of construct validity or reliability or parameter estimates of the relationship between two constructs (Podsakoff et al., 2012). However, procedural remedies were used before administering the questionnaires to the respondents. For instance, questionnaire language was modified to make it clear and concise, along with guaranteed anonymity of respondents as well as collecting data over period of time.

Furthermore, after the CFA, the measurement model is treated with the common method bias test using the common latent factor approach. For the CMB test, the unconstrained common method factor model (Chi square = 2398.9, df = 1232) is compared to the fully constrained (zero constrained) common method factor model (Chi square = 2399, df = 1233). In the chi square test, the results are found to be statistically insignificant (p = .752), stating lack of common method bias, as the shared variance is insignificant.

5.5.3 Measurement model fit indices

The assumption of linearity and multivariate normality are evaluated and sufficiently met with. Since the data is normally distributed, maximum likelihood method is chosen for the study (Kline, 2011). The CMIN/DF (chi square over degrees of freedom) value is 2.023 which is within the acceptable range. The CFI (comparative fit index) is 0.891, GFI (goodness of fit index) is 0.861, AGFI (adjusted goodness of fit index) is 0.843, TLI (Tucker-Lewis index) is 0.882 and RMSEA (root mean square error of approximation) is 0.044. The fit measures indicate that the hypothesized model is a good fit to the data. Thus, further analysis can be conducted on the measured model.

5.6 Structural equation modelling

The relationships proposed in the structural models are based on extant theories, as discussed earlier in the study. In this section, the structural relationships among the independent variables and the dependent variables are specified.

The aim of the model is to empirically test the relationships of antecedents (moral development, ethical Leadership and Machiavellianism) with the organisational climate and its subsequent relationship with the employee outcomes (commitment, trust, job satisfaction and satisfaction with leader).

For the purpose of data analysis, the study has used maximum likelihood procedure. Chi-square value is calculated to determine the model fit (Hu and Bentler, 1998). The Absolute fit indices i.e. Chi-square test, the goodness of fit statistic (GFI), the Adjusted goodness of fit (AGFI) and root mean square error of approximation (RMSEA) are reported in the study.

The comparative fit indices (CFI) and TLI were also evaluated for the model fit. The fit indices for the model are represented in Table 5.8.

Table 5.8: Model fit indices for structural model

Model fit measures						
CMIN/DF	CFI	TLI	GFI	AGFI	RMR	RMSEA
2.064	0.885	0.877	0.856	0.840	0.043	0.045

The CMIN/DF (i.e. chi square value relative to degrees of freedom) is within the acceptable range of less than 3. The incremental fit measure (CFI= 0.885), the Tucker-Lewis Coefficient (TLI = 0.877) and the absolute measures (GFI= 0.856 and AGFI= 0.840) suggest that the hypothesized model is a good fit to the data. Even the RMSEA is within the acceptable limit of less than 0.05, which is 0.045 and so is RMR.

Model testing

The results of the study indicate that moral development affects organisational climate positively and significantly ($p = 0.001$) along with ethical leadership which also affects the organisational climate positively and significantly ($p = 0.001$). Furthermore, Machiavellianism among doctors affects organisational climate negatively and significantly ($p = 0.05$). The total effect of all three proposed antecedents on organisational climate is also significant ($R^2 = 0.305$, $p < 0.05$). Therefore, hypotheses, H1, H2 and H3 are not rejected.

Moreover, the results also indicate that organisational climate affects employee job outcomes of commitment ($p = 0.001$; $R^2 = 0.605$, $p < 0.05$), trust ($p = 0.001$; $R^2 = 0.380$, $p < 0.05$), job satisfaction ($p = 0.001$; $R^2 = 0.506$, $p < 0.05$) and satisfaction with leader ($p = 0.001$; $R^2 = 0.480$, $p < 0.05$), positively and significantly. Thus, the proposed hypotheses, H4, H5, H6 and H7 are not rejected. The results of the hypotheses are shown in Table 5.9.

Table 5.9: Results of hypotheses testing from conceptual model 1

Hypothesised relationships	Standardised regression weights	P Value	Remark
H1: Moral development has positive association with organisational climate	0.250	0.001	Not rejected
H2: Ethical Leadership has positive association with organisational climate	0.338	0.001	Not rejected
H3: Machiavellianism has negative association with organisational climate	-0.130	0.050	Not rejected
H4: Organisational climate is positively associated with commitment	0.778	0.001	Not rejected
H5: Organisational climate is positively associated with trust.	0.616	0.001	Not rejected
H6: Organisational climate is positively associated with job satisfaction	0.711	0.001	Not rejected
H7: Organisational climate is positively associated with satisfaction with leader	0.693	0.001	Not rejected

The above results state that the proposed hypotheses are all statistically significant and these results are further reflected diagrammatically in Figure 5.2.

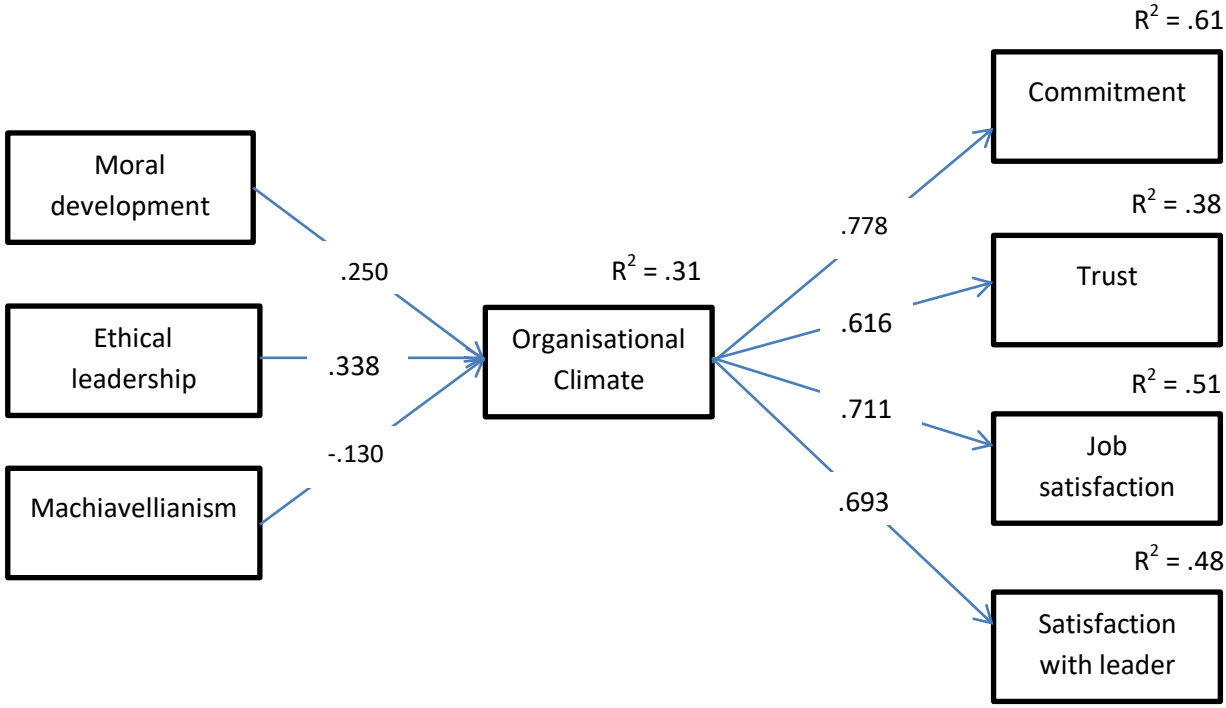

Figure 5.2: Path diagram representing structural scores

5.7 Composition model

The bottom-up composition model aggregates lower levels construct into higher level construct such that the resultant aggregate construct is related to and different from the lower level construct (Bliese, 2000; Koslowski and Klein, 2001). In an ideal simulation, the aggregated construct and its effect on outcomes are same as that of individual level construct, however in social science research, such compositions are not likely to occur. Consequently, the major reason for forming composition models is that the higher level constructs are likely to give rise to relationships that differ from individual level constructs.

Organisational climate research has been rooted in composition models (James et al., 1984; Chan, 1998; Dawson et al., 2008; Chaudhary et al., 2012). The point to be considered here is that climates exist due to shared perceptions. The extant literature of organisational climate emphasizes upon the climate strength, which can provide better comprehension of organisational climate as a shared perception and its subsequent effect on various job outcomes.

Thus, based on Chan's (1998) direct consensus composition model (Dawson et al., 2008), this study tries to understand how to calculate climate strength and its subsequent effect on various job outcomes at organisational level. But before proceeding with compositional analysis, it is essential to identify if the variables can be aggregated at higher level or not. According to this study, the data is collected from 10 various public and private hospitals, thus, the unit of analysis for further analysis is hospital organisations.

5.7.1 Data aggregation

To validate and justify aggregating individual data to a group (or, in this case, organizational) mean, it is first necessary to demonstrate both reliable differences between groups, and

agreement with groups (James, 1982). For this purpose, ICC(2) and ICC(1) (intraclass correlations; to measure interrater reliability), and AD_M and $r_{WG(j)}$ (to measure interrater agreement) for each organization (James et al., 1984; Gonzales et al., 2002; Dawson et al., 2008) for the climate scale and the outcomes scales, are calculated.

The results obtained show good interrater reliability (ICC(1) = 0.36; ICC(2) = 0.84) as the values fall within acceptable range for both the indices (Bliese, 2000). Also, the agreement indices are calculated for each of the 10 organisations for organisational climate. The values for $r_{WG(j)}$ are found to be in the range of 0.87 to 0.94 for organisational climate (mean = 0.94) which is well above the cut off value of 0.70 (James et al., 1984; Chaudhary et al., 2012) and represents very strong within group agreement and hence justifies aggregation.

Lastly, based on the various researches on climate strength (Gonzalez et al., 2002; Dawson et al., 2008), it is calculated using Burke et al's., (1999) AD_M measure, which calculates the average deviation from the mean of all individuals in a unit. As this measure can be comprehended in terms of original scale, thus, it considered more favorable than other measures of dispersion (Burke and Dunlap, 2002).

Along with this the measure of $AD_{M(j)}$ is indicative of data aggregation as well. The values of $AD_{M(j)}$ (0.25 to 0.44), (mean = 0.33), for each organisation (hospital) are all lower than the suggested Burke and Dunlap (2002) cut off criterion of c/6 = 0.83 (where c, the number of response options, is 5 in this case), again supporting aggregation to the organizational level. Thus, the organisational climate variable can be aggregated to hospital level.

Before performing further analysis, the values for aggregate climate score are grand mean centered. Similarly, The ICC(1) and ICC(2) values for outcome variables are given in the Table 5.10.

Table 5.10: Data aggregation statistics

Constructs	ICC(1)	ICC(2)	$r_{wg(j)}$ (mean)	F Ratio	P value
Organisational climate	0.36	0.84	0.94	3.38	0.001
Commitment	0.31	0.73	0.91	3.97	0.001
Trust	0.50	0.75	0.82	1.78	0.05
Job satisfaction	0.52	0.76	0.87	6.14	0.001
Satisfaction with leader	0.67	0.90	0.91	2.95	0.001

The ICC(1) and ICC(2) statistics are within range (Bliese, 2000), however according to some researchers (James et al., 1984; LeBreton, 2007), the ICC(1) statistics are inflated which suggest that the ratings for outcome variables are heavily influenced by organisational membership (Le Breton, 2007). But considering the mean values of $r_{wg(j)}$ and F ratio significance of ANNOVA test, the authors of this study are comfortable in aggregating the individual level variables to organisational level.

5.7.2 Correlations statistics

The transformed multilevel dataset is now used to test the strength of association between organisational climate and its outcomes (commitment, trust, job satisfaction and satisfaction with leader) to determine the provisional results for the proposed hypotheses H8a, H9a, H10a, H11a. For this purpose, Pearson's coefficient of correlation is used in SPSS, to calculate the inter-correlations among variables, which are presented in Table 5.11.

It can be seen that there are significant relationships between employee outcome variables and organisational climate. The results show positive and significant association of organisational climate at hospital level with individual outcomes i.e. the better the climate, the better the commitment, trust, job satisfaction and satisfaction with leader and the

correlations are 0.604, 0.866, 0.566 and 0.660 respectively, representing very strong and positive associations.

Table 5.11: Correlations matrix

Constructs	agg_CO	agg_T	agg_JS	agg_SWL	CS	agg_OC
Commitment (agg_CO)	1					
Trust (agg_T)	.740**	1				
Job satisfaction (agg_JS)	.720**	.574**	1			
Satisfaction with leader (agg_SWL)	.841**	.601**	.675**	1		
Climate strength (CS)	.100*	-.038	-.063	.467**	1	
Organisational climate (agg_OC)	.604**	.866**	.566**	.660**	.245**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Therefore, we can summarize the results for hypotheses H8a, H9a, H10a and H11a from the correlations matrix. It is important to note that at hospital level the correlation among the variables is higher than at the individual level (Bliese, 2000; Koslowski and Klein, 2001). Also, it can be seen that climate strength has significant relationships with all outcome variables except for trust and job satisfaction at organisational level.

5.7.3 Hierarchical linear regression

A hierarchical linear regression is a special form of a multiple linear regression analysis in which more variables are added to the model in separate steps called “blocks.” This is often done to statistically “control” for certain variables, to see whether adding variables significantly improves a model’s ability to predict the criterion variable and/or to investigate

a moderating effect of a variable (i.e., does one variable impact the relationship between two other variables?). Thus, HLR is implemented to calculate the results for the proposed hypotheses H8b, H9b, H10b and H11b. The results of the regression are reported in Table 5.12.

Table 5.12: Results of regression analysis of aggregate outcome variables on organisational climate and climate strength

Predictors	Commitment (Aggregated)		
	Model		
	1	2	3
Step 1			
Organisational climate	0.489*	0.521*	0.514*
Step 2			
Climate Strength		-0.110*	-0.108*
Step 3			
Interaction (OC X CS)			-0.071*
F Value	176.6*	93.7*	63.9*
F Value change		8.33*	3.59*
R square	0.248*	0.260*	0.265*
R square change		0.012*	0.005*
	Trust (Aggregated)		
Step 1			
Organisational climate	0.429*	0.419*	0.418*
Step 2			
Climate Strength		0.047	0.047
Step 3			
Interaction (OC X CS)			0.012
F Value	120.7*	61.09*	40.69*
F Value change		1.385	0.086
R square	0.184*	0.186	0.186
R square change		0.002	0.000
	Job Satisfaction (Aggregated)		
Step 1			
Organisational climate	0.412*	0.428*	0.431*
Step 2			
Climate Strength		-0.076*	-0.077*
Step 3			
Interaction (OC X CS)			-0.03
F Value	109.1*	5.59*	37.88*

F Value change		3.54	0.576
R square	0.169*	0.175	0.176
R square change		0.005	0.001
	Satisfaction with leader (Aggregated)		
Step 1			
Organisational climate	0.503*	0.523*	0.530*
Step 2			
Climate Strength		-0.094*	-0.096*
Step 3			
Interaction (OC X CS)			-0.061
F Value	181.45*	94.60*	64.15*
F Value change		6.05*	2.663
R square	0.253*	0.262*	0.265
R square change		0.008*	0.004

The significance level is at $p < 0.001$. Organisational climate was found to predict aggregate level job outcomes significantly (Commitment ($b = 0.514$), Trust ($b = 0.418$), Job satisfaction ($b = 0.431$) and Satisfaction with leader ($b = 0.530$)).

The results show that climate strength significantly moderates the relationship between organisational climate and commitment ($r = 0.071$). However it has no effect on the relationship between organisational climate and other studied job outcomes.

The results for the proposed hypotheses of conceptual model 2 are depicted in Table 5.13.

Table 5.13: Results of the proposed hypotheses for conceptual model 2

Hypothesised relationships	Standardised Regression weights	P Value	Remark
H8a: Organisational climate is positively associated with commitment at organisational level	0.514	0.001	Not rejected
H9a: Organisational climate is positively associated with trust at organisational level	0.418	0.001	Not rejected
H10a: Organisational climate is positively associated with job satisfaction at organisational level	0.431	0.001	Not rejected

H11a: Organisational climate is positively associated with satisfaction with leader at organisational level.	0.530	0.001	Not rejected
H8b: Climate strength moderates the relationship between organisational climate and commitment at organisational level	0.071	0.05	Not rejected
H9b: Climate strength moderates the relationship between organisational climate and trust at organisational level	0.012	0.769	Rejected
H10b: Climate strength moderates the relationship between organisational climate and job satisfaction at organisational level	-0.030	0.448	Rejected
H11b: Climate strength moderates the relationship between organisational climate and satisfaction with leader at organisational level	-0.061	0.103	Rejected

5.8 Concluding remarks

The results of the hierarchical regression show that climate strength is a moderator between the relationship of organisational climate and commitment among doctors at organisational level. The results also show that even at higher level, the organisational climate has significant and positive effect on job outcomes.

The climate strength has direct effect on job satisfaction and satisfaction with leader. The negative effect means the higher the consensus among doctors about climate, the lower is their rating for respective outcome. Furthermore there is no significant change in the R square value in the third step, signifying that the additive terms do not make much of a difference to the existing model, except or commitment. With the reporting of the results and the hypotheses, this chapter is concluded. The results are further discussed in the next section along with the findings.

CHAPTER 6: DISCUSSION AND FINDINGS

6.1 Introduction

In this chapter, the results from data analysis are discussed in detail. The statistical analyses of both the proposed conceptual models were described in previous chapter. Based on the statistical results obtained for both the models, the interpretation has been made and discussed in detail in this chapter. Further the major findings, theoretical and practical implications of research, limitations of the study are elaborated. Directions for future research have also been suggested.

6.2 Discussion of results

In this section, first the results obtained for the effect of antecedents (moral development, Machiavellianism, and ethical leadership) on organisational climate are discussed. Following which, the effect of organisational climate on the intended job outcomes (commitment, trust, job satisfaction and satisfaction with leader) is elaborated. Lastly, the moderating effect of climate strength on the relationship of organisational climate on job outcomes has been explained.

6.2.1 The effect of the antecedents as moral development, Machiavellianism and ethical leadership on organisational climate

The regression results (as shown in Table 5.9 of previous chapter) show that moral development and ethical leadership have a positive effect on organisational climate in hospital context. In contrast Machiavellianism has a negative effect on organisational climate. These results are in congruence with the social learning theory (Bandura, 1977) and social cognitive theory (Bandura, 2000).

Various studies in the past have demonstrated that the moral reasoning of individuals (Walumba et al., 2008) and leaders (Schminke et al., 2005) infuse ethics and morals in the overall work climate. Given the nature of social cognitive theory it has been seen that the individuals' personal beliefs and traits interact with their environment and they learn and imbibe from the various aspects of the environment which affects their attitude and behaviour. The current results of this study have reinforced the same. The moral development scale used in the study captures the moral reasoning of doctors in India, and shows that the doctors' logic and reasons for morality are high. Therefore, such doctors should perceive a well-integrated, quality care concerned climate as positive. And it was seen in regression analysis that the due to high moral reasoning, the effect of moral development on the organisational climate is significantly positive. Thus, a better sense of morality can improve the overall perception about the organisational climate.

The results of this study also demonstrate the importance of leadership in formulating an organisational climate conducive to better work attitudes. Interestingly, a study by Schminke et al., (2005) determined that moral development of leaders can influence the ethics and morals of employees. According to this study, if the doctors' perceive their leaders to be ethical in nature then their individual sense of morality is reinforced. Brown et al., (2005) explained that ethical leaders are also moral managers. They not only act ethically but also enforce ethical conduct. This distinguishes ethical leadership from its other counterparts.

When the doctors perceive their leaders to be ethical then it enhances their ethical conduct in a manner that it has positive effect on organisational climate. Considering that doctors are facing ethical dilemmas in their daily lives (Baum et al., 2009), support and training from ethical leaders (Singh et al., 2016; Velsor and Ascalon, 2008) is likely to improve their competencies in dealing with ethical challenges at workplace, leading to positive outlook for the climate. Recent studies (Yasir and Rasli, 2018; Shin, 2012) have emphasized upon the

importance of ethical leadership in formation of organisational climate. The present study thus, provides support for the underlying theories linking ethical leadership with climate, positively.

But, it is also necessary to understand that not all individuals are driven by high morality and ethics. The results of the study further address this aspect. Earlier studies (Self et al., 1993) have found that medical students become more cynical and show increase in detachment during the course of their training. But an increase in moral reasoning of medical students was also seen with the introduction of medical ethics as a subject (Shrestha et al., 2021).

However in India, medical ethics was taught by only a handful of colleges in 2015 and has been only under consideration since then (Akoijam, 2015). Evidently even the most ethical people succumb to unethical intentions under external pressures and their own self-interests (Kiazad et al., 2012). This has been seen in the present study when doctors under the extreme work load, facing issues of burnout (Morse et al., 2012) may use manipulation to get their way. The people who are high on self- interest and manipulation and show casual cynicism are hindered in their ventures when they interact with highly moral colleagues and leaders (Jones and Paulhus, 2009). Such characteristics are definitive of Machiavellian personality type. Based on the social cognitive theory, high Machiavellians react negatively when they interact with other people.

The Machiavellians are distrustful and cynical in nature, therefore when they interact with moral people or ethical leaders; they tend to be on guard and are less appreciative of others. Due to this, they fail to observe and learn from others sense of morality (Wu et al., 2019; O'Boyle et al., 2012). This study shows that doctors that are high Machs show easy moral disengagement, higher need for control and status and are distrustful of others (Dahling et al., 2009). Their manipulative tendencies are used to gaining faster short term gains rather than

forming meaningful relations. Due to this Machs believe that a favourable organisational climate based on good interdepartmental integration, driven to provide quality care will not generate a good cost benefit return for them. This was also seen in a study by Sendjaya et al., (2016), that self-interest and personal gain motives among Machs weakens the positive effect of moral reasoning among employees.

The results of this study are in accordance with the above mentioned studies and show that Machiavellianism among doctors has a negative effect on the organisational climate. Furthermore the three antecedents in this study showed significant direct effect on organisational climate and no indirect effect was seen in the sample.

6.2.2 The effect of the organisational climate on job outcomes as commitment, trust, job satisfaction and satisfaction with leader/supervisor

The results of the study showed that organisational climate has a significant and positive effect on various job outcomes (Commitment, $R^2 = 0.61$; Trust, $R^2 = 0.38$; Job satisfaction, $R^2 = 0.51$; Satisfaction with leader, $R^2 = 0.48$, as described in section 5.6 of the previous chapter). Drawing on the social exchange theory (Blau, 1964) the hypothesised relationships are proven to be true in this study.

This study verifies the underlying theoretical foundations of the constructs. It has been seen in the past that doctors showed lack of commitment and satisfaction; high turnover rates due to various reasons such as unethical bosses and unsuitable competencies such a poor interdepartmental coordination as well as mismanaged hospital practices such as poorly implemented training programs, poor adherence to quality standards, which are critically important in hospital setting (Gadre, 2015; Chattopadhyay, 2016; Gulati et al., 2019; Beena, 2013). According to social exchange theory, the employees in an organisation conduct cost-

benefit analysis in terms of rewards received (tangible/intangible) for the services rendered (job roles/job attitudes).

The results of this study are in support of other studies (Eisenberger et al., 1990; Ostroff, 1993; Nangoli et al., 2020) that have indicated that employees reciprocate to the organisation after ascertaining the support and commitment shown by the organisation. Therefore it can be seen that shared perceptions of the doctors based on a highly integrated and quality driven hospital organisations helps in fostering better commitment, trust, satisfaction and satisfaction with leader/supervisor among the employees. The trust among employees is also based on the perceived benefits received by them against costs incurred in any organisation (Liu et al., 2013; Cole-Shapiro and Parzefall 2008).

The results of this study are in congruence with other studies (Demirtas and Akdogan, 2015; Ascigil and Parlakgumus, 2012; Giles, 2010; Moye and Henkin, 2008) such that when the doctors are facilitated with an organisational climate that is characterised by communicative and supportive teams and departments, where their colleagues inspire confidence in their abilities, then it is pertinent for them to show commitment and trust among themselves. During data collection it was seen that the doctors workload was immense for which they trusted their colleagues to share the duties responsibly.

Also, the common needs among various doctors were good training and development opportunities along with supportive management and capable supervisors; which were indeed fulfilled as per the organisational climate perceptions by the doctors. The doctors resultantly showed better satisfaction with their job aspects as well as their leaders/supervisors. These results reinforce some other studies as well (Ambrose et al., 2008; Rivera and Zapata, 2019; Avram et al., 2015). Thus, it was verified through the results of this study that an integrated

organisational climate has a positive effect on the commitment, trust, job satisfaction and satisfaction with leader.

6.2.3 The effect of the organisational climate and climate strength on various job outcomes at organisational level

The past few decades have been marked by the emergence of a new concept in climate research namely climate strength. It signifies the level of shared perceptions among the employees of an organisation (James et al., 1984). This means that if the perceptions regarding the organisational policies and practices among majority of the employees are similar, then their shared perceptions show high conformity and a strong organisational climate is formed (Bliese, 2000).

However if their perceptions are disjointed and lack conformity then it represents a weak climate. This strength of climate or lack thereof then affects the attitudes or the job outcomes such that a strong climate has clear and linear associations with the outcomes and vice versa (Schneider et al., 2002, Gonazalez-Roma et al., 2002; Choudhary et al., 2012). The results of the study show that even at aggregate level the organisational climate has positive effect on all the job outcomes. This is evident from the correlation statistics as well.

The linear effects of climate strength are observed in this study. Further results also show that the climate strength significantly moderates the relationship between organisational climate and commitment ($b = -0.071$, $P < 0.001$, as shown in Table 5.12 in the previous chapter) as R square values increased significantly and the interaction term displayed significant beta coefficient. Thus it shows that climate strength improves and strengthens the positive relationship between organisational climate and commitment. The results support other researches where significant interaction between climate and climate strength were found for different attitudinal outcomes (Walumba et al., 2008; Gonazalez-Roma et al., 2002;

Schneider et al., 2002). Since, climate strength is operationalized in terms of $AD_{M(j)}$, which represents the variability in climate perceptions, negative/lower values of climate strength represented higher consensus and hence higher situational strength and vice versa.

On the other hand the results showed that the climate strength has no interaction effect for the other three outcomes. These findings are in congruence with older studies (Lindell and Brandt, 2000; Dawson et al., 2008; Rafferty and Jimmieson, 2010). Furthermore it has been seen that climate strength has a significant direct effect on the commitment, job satisfaction and satisfaction with leader but no effect on trust after controlling for organisational climate in step 1. The negative effect means, the higher the agreement about climate among doctors, the lower is their rating for the respective outcomes.

The reason for high consensus among doctors could be due to the fact that the medical organisations under Medical council of India follow strict guidelines and practices as directed by top-down approach. Since the format of such organisations is more or less bureaucratic the perceptions of individuals differ rarely (Dawson et al., 2008; Lebreton and Senter, 2008). This explains the lack of interaction effect on job outcomes. The lack of direct effect of climate strength and its interaction on trust could be because the dimensions of trust that are retained examine the perception of doctors about their confidence and faith in other doctors, but such perceptions may differ from department to department and team to team leading to a weaker climate with no direct effect on trust (Hewlett et al., 2013).

This discrepancy in climate research has been addressed by Schneider et al., (2013), where it has been explained that the studies pertaining to measuring the organisational climate are disjointed in their analysis. The scales for measuring climates in different contexts are different. This may lead to weak support for climate strength and its effect on various job outcomes.

6.3 Major findings

The study has the following major findings:

- The results establish the moral development, ethical leadership and Machiavellianism as the antecedents of organisational climate in Indian hospital context. These predictors do not explain the variance in organisational climate completely therefore based on the literature review, it is prudent to consider these antecedents as ethical antecedents due to the common underlying ethical inclination.
- The results also explain the studied unidirectional effect of organisational climate on select job outcomes such as commitment, trust, job satisfaction and satisfaction with leader based on the social exchange theory. The results describe that organisational climate among doctors in India has positive effect on a wide spectrum of job outcomes. Apart from focussing on facet specific climate and outcome, this study determines the far reaching effect of organisational climate in medical colleges and attached hospitals. The theoretical basis was reinforced through the results of the study, that a favourable and positive organisational climate will induce better commitment and interpersonal trust among doctors along with improving their job satisfaction and satisfaction with leader/supervisor. These outcomes invariably prevent the intention to leave among doctors.
- The results re-establish the importance of climate strength in the climate research. Once the climate is formed based on various factors, the significance of the organisational climate lies in its effect on attitudinal outcomes which is determined by its strength. The doctors show high consensus in their perceptions regarding organisational policies and practices, which leads to stronger climate that has direct effect on various job outcomes. Furthermore, the research corroborates older studies thereby clearly establishing that

climate strength affects commitment, job satisfaction and satisfaction with leader/supervisor significantly.

- Finally the results also reaffirm the interaction effect of organisational climate with climate strength on various job outcomes is indecisive at best. The climate strength is higher in medical colleges and attached hospitals due to centralized formation of policies and practices. Thus it is clear that doctors' perceptions show high conformity and this disrupts the interaction effect of climate strength and climate.

Thus, the results of the study determine the importance of establishing a communicative and integrated overall climate formed on the basis of ethics and morals of doctors as well as management, so that it can be conducive to better job outcomes among doctors.

6.4 Implications of the research

This section describes the theoretical implications for researchers and top management of hospitals as practitioners and the government policy makers based on the above research findings. Also, the study provides post COVID implications.

6.4.1 Theoretical implications for researchers

The study has come up with various important theoretical implications for the researchers which are as follows:

- The study provides great insight regarding the antecedents and outcomes of organisational climate, especially in Indian hospital context. Over the years the climate research has been focussed on facet specific climates (Neubaum et al., 2004; Shin, 2012; Walumba et al., 2008; Mayer et al., 2007) wherein the studies have identified various antecedents specific to a particular climate type that are either external contextual factors or internal structural factors such as firm size, human resource factors etc. Rarely the

studies have focussed on organisational climate (Lindel and Brandt, 2000; Glisson and James, 2002). This study fills this gap by studying the individual perceptual factors with underling ethical considerations as the antecedents to organisational climate among doctors.

- This study comprehensively develops and documents the construct of organisational climate in terms of its definition and dimensions most relevant in the context of Indian hospitals. This study has reinforced the idea of climate formation through symbolic interaction by virtue of social cognitive theory and its application in organisational climate formulation (Blumer, 1969; Bandura, 2000). Furthermore the study has identified suitable dimensions for organisational climate in Indian hospital context based on earlier significant research in this area (Patterson and West, 2005; Dawson et al., 2008).
- Very few studies have focussed on individual factors that affect organisational climate (Schminke et al., 2005; Shin, 2012; Mayer et al., 2007). The key contribution of the study is to provide robust support for establishing the individual perceptual factors such as moral development, ethical leadership and Machiavellianism as the antecedents to organisational climate in hospital context. This research successfully determines the usage of social cognitive theory in establishing the aforementioned factors as antecedents with ethical considerations to organisational climate.
- Also, this study contributes in theorizing of achieving job outcomes of organisational climate via social exchange theory (Blau, 1964). The study clearly bridges the connection between organisational climate and job outcomes such as commitment, trust, satisfaction and satisfaction with leaders/supervisor based on exchange of efforts with rewards and recognition.
- Finally, this research has contributed to the theory of climate strength and its importance in affecting various job outcomes. The research adds to the extant literature on

composition model of organisational climate and job outcomes moderated by climate strength and explain the theory underlying the direct and indirect effect of climate strength among doctors in hospitals.

6.4.2 Practical implications

The study has several important implications for the top management in hospitals and the government policy makers for forming a favourable organisational climate which is conducive to desirable job outcomes among doctors in the hospitals. It cautions the hospital administrators to work at the operational and middle level for enforcing ethical practices. If the employees are engaging in interpersonal politics at work, then the overall work climate suffers.

Implications for top management

The key implications from this study for the top management of the hospitals are as follows:

- The most important implication for the top management is implementation of an induction/orientation program for teaching ethics to the doctors. The program could be divided into modules for imparting ethical training by various means such as case studies, role play simulations, focus group discussions etc. In practice medical ethics as a subject is not a part of medical education curriculum in the studied medical colleges and attached hospitals. Therefore, implementing such a customised program for fresh doctors, out of college will be a helpful tool in inculcating ethical sense into them. Such a program would also set ethical boundaries for the doctors, teaching them that unethical practices will be frowned upon.
- This study has important HRM implications. HR functions of recruitment and training are of utmost importance here. The findings also suggest that organisations should filter

and then recruit and select doctors who possess low Machiavellianism through personality tests. A thorough investigation consisting of ethical dilemmas can also reveal the level of morality in the candidate. However, this may have certain moral implications of its own especially considering lack of doctors. But an initial personality examination can at least rule out a few extremely high Machs and may also help in personality profiling of existing staff that can help during their frequent evaluations and internal hierarchical succession.

- After recruitment, the career planning and training should go hand in hand, infusing the sessions with sensitivity training/T-training to encourage doctors to grow in their careers but also learn empathy and use of ethics while stepping the ladder to success.
- There are various challenges in training and development programs pertaining to doctors. The doctors are constantly trained regarding new technology (Carlucci et al., 2020), new research findings of their respective areas, as well as training for super specialization. But their roles such as involvement with patients in "Chuchak Yojna" to celebrate the birth of girl child; ordering heavy machinery and controlling finances, are deemed to be unsuitable by doctors (personal communication).

  So, the top management should provide frequent training programs to the doctors for enhancing their administrative know-how as well. This will not only eradicate their frustration with day-to-day administration but will also equip them for future managerial roles such as Head of the department, Principal medical officer and so on. Organisational support catering to these needs of the doctors will prove to be beneficial exchange for them, solidifying the psychological contract between doctors and hospital and motivate them to stay. The fulfilment of psychological contract invariably satisfies the underlying social exchange theory between organisational climate and job outcomes.

- Another important aspect to consider here is the contribution of management in inculcating ethics and morals among doctors, who may take up mantle of the organisation as leaders, eventually. It has been noticed that doctors face many ethical challenges such as managing departmental or organisational finances, managing internal politics within the hospitals for which they are not trained suitably (Gulati et al., 2019). This causes emotional exhaustion as well as demotivation (Morse et al., 2012).
- Moreover, along with emotional exhaustion, doctors face physical burnout, with the high patient influx per smaller number of doctors. Thus, the top management needs to identify means of improving manpower shortage among doctors and decrease their physical and emotional exhaustion, by making rigorous changes in recruitment and staffing policies by recruiting more doctors and peripheral staff such as health managers, which will further reduce the burnout of existing doctors.
- In fact the hospital administration can make a statement by identifying the suitably ethically inclined doctors and promoting them to fill positions via succession planning. This will not only encourage others to follow suit in order to grow in their careers but will also be a developmental tool for doctors, teaching them that along with specialization and technical know-how they need to understand and uphold ethics and morals to grow internally in the hospital. Thus, the study provides implications for management to cater to individual doctoral needs and aligning them with organisational needs by making the doctors suitable for succession planning, thereby facilitating personal as well as professional growth and development (Howieson and Grant, 2020).
- It has been seen that the ethical leadership among the top management influences the behaviour of staff in terms of quality service delivery where patients and their respective needs are catered to such as pre and post operation treatment, quality of nurse care and so on (Zhang et al., 2018). A quality service creates positive perception among patients and

doctors alike, regarding the organisation and its functionality, so much so that it creates a sense of pride and commitment among doctors and leads to a positive image among patients thereby creating a positive societal impact.

- For quality service delivery and a positively motivated workforce, the hospitals need to function impeccably based on various set policies and procedures (guidelines by Medical council of India) which determine everything from day-to-day theatre regulations, to doctors' safety regulations, to lab confidentialities and pharmacy practices etc. These practices are generally influenced by work integration of staff and doctors in various departments.

  For instance, during surgeries and post care, nurses and physicians work closely with specialists and anaesthetists and surgeons, and mutual understanding creates a smooth flow of work. This requires smooth interdepartmental cooperation and communication however, if there are ethical and moral dilemmas and the policies are improperly implemented, it can disrupt the organisational work flow and create negative perception among doctors leading to demotivation and lack of commitment, trust and overall satisfaction with job and the supervisor. Therefore the top management needs to understand how to implement the predetermined policies and set examples of acceptable ethics standards.

Implications for the government policy makers

This study has the following implications for the government policy makers:

- This research highlights the importance of doctor-patient supply and demand gap. This has led to physical and mental burnout among doctors and overall level of frustration among doctors. Thus the central and state government policy makers should increase the

number of medical colleges as well as medical seats in existing colleges to churn out more doctors to fulfill their manpower shortage.

- The central and state government policy makers need to improve investment in healthcare infrastructure to further improve the working conditions of the doctors, thereby increasing their satisfaction and reducing stress, so as to retain quality workforce and foster commitment amongst doctors and staff.
- There is a common practice among public hospitals, that doctors are frequently transferred with the change in higher government. Such practices induce lack of job satisfaction, reduced morale and increased frustration among doctors. Thus, the ruling government should work with the directorate officials to implement a better administrative policy for transfers in public hospitals, along with better recruitment policy, creating better job security and satisfaction among doctors.
- The power roles in health administration are disjointed and ambiguous in nature. Thus the government should further work on power dispersion and power autonomy in various health administration bodies such as, clarifying the established rights and authority for directorate of medical officers and deans and staff of underlying colleges and hospitals. And ensure strict adherence to those powers, as this will ease the roles and responsibilities of the doctors and clarify their authority figures.
- Finally the government should also enhance the budgeting devoted to various aspects of medical colleges and attached hospitals. Such as budgets for services to be outsourced to reduce workload on doctors, as well as budgets for various training programs, budgets for a separate counseling cell for each department etc. should be allotted, or inducing a better organisational climate.

Post COVID implications

Last but not the least this study has implications in post COVID scenario as follows:

- Although the data was collected pre COVID, the results of the study are still very relevant. This is due to the fact that during COVID battle in India, the rules and regulations administered in the hospitals across country, especially tertiary sector are pre-determined via central government and are uniform in nature for public and private both hospitals.
- For, instance establishing a separate COVID unit in hospitals, shift rotation of doctors assigned in these units, 7 days quarantine for doctors and staff alike after serving in these units, after which their work will be taken up by another team in rotation. In such cases the individual perceptions regarding the newly implemented policies and practices along with regular practices will determine the overall climate in the organisation. It has been seen that doctors have religiously adhered to the new policies and practices in lieu of pandemic for providing necessary patient care.
- This shows their professional and job commitment (Maheshwari et al., 2007) as well as their trust in each other to help maintain a seamless work flow. The hectic work hours caused severe physical and emotional burnout among doctors, leading to job dissatisfaction (Kaur et al., 2009) on one hand and being rewarded and recognized on saving lives leading to some trade-off for dissatisfaction on the other side, especially when doctors are being called ‘corona warrior’ in newspapers every now and then. In such scenario, it is easier for doctors to succumb to self-interest and manipulate situations in their favour.
- Thus, as per the results of this study the role of leaders has never been more important than now. According to the results of this study, the leaders can role model ethical

behaviour and curb any Machiavellian tendencies among doctors and staff. Moreover the strict governance and stringent guidelines set by the central government are pivotal in curbing Machiavellian tendencies among employees and perhaps give way to moral competencies among doctors in this need of hour.

- Therefore, it can be seen that this study has relevant and important implications for hospital administration and doctors to imbibe the warranted findings suitable to their situations.

6.5 Novelty of the research

The novelty/uniqueness of this research is on the basis of following aspects:

- This research shows novelty in the sample of the study which constitutes the doctors working in the medical colleges and attached hospitals that are of assistant professor grade and above. Earlier researches in hospital context have focussed on either the nursing staff or the interns mostly. Other studies focused on doctors working in Primary health centres or district hospitals. Thus, this is one of the few studies that has covered doctors from tertiary care hospitals in such a comparable number (N1 = 537).
- Another novelty of the research is that this study is one of its kind that has attempted to analyse moral development, ethical leadership and Machiavellianism as the antecedents to organisational climate in the context of Indian hospitals. Past studies have analysed ethical leadership and moral development as factors affecting ethical climate. Machiavellianism has also rarely been studied as a factor affecting organisational climate.
- Also, this study has analysed climate strength and its moderating effect on the relationship of organisational climate and various job outcomes in Indian hospital context, at organisational level (N2 = 10) whereby the study determined that due to the

bureaucratic governance of the hospitals the over climate strength is high as the social conformity is high.

- Lastly this study has another novel aspect where it explains the construct of organisational climate at both individual as well as organisational level.

6.6 Major contributions of the research

The major contributions of this study are:

- A comprehensive literature survey on the subject of organisational climate studies has been done. The study has added to contribution to the underlying explanatory theories such as social cognitive theory and social exchange theory.
- The study has given two conceptual models explaining the formation and effect of organisational climate at individual level as well as moderating effect of climate strength at organisational level.

6.7 Limitations and the future scope of the study

This study has a few limitations and correspondingly the future scope of research has been suggested as follows:

- The study has been confined to doctors in medical colleges and attached hospitals, recognized by MCI (Medical council of India), in Rajasthan, India. The MCI guidelines and norms as well as required policies are uniform for medical colleges and hospitals across the country. And, since the organisational climate is based on the shared perceptions regarding policies and practices, the authors deemed Rajasthan a suitable representative of the medical colleges and hospitals across India.

  Also, one of the hospitals in the sample was AIIMS, Jodhpur, which is under central government but the policies and procedures are run as per the rules of Medical council of

India. Thus, the sample seemed suitable for generalization. However, the results may vary from state to state; therefore the future researchers can test the construct in other tiers among hospitals as well as other states, in India.

- Theoretically the study has focused on only Machiavellianism, however observation during data collection yielded that doctors not only have difficult temperament but also show signs of narcissism and extreme pride. Therefore the researchers can explore myriad personalities among doctors with underlying ethical inclinations, such as conscientiousness etc.
- Another limitation of the study was lack of multi-group analysis based on age, organisation type and gender. This was caused due to incomparable sample sizes, as the assumption for normal distribution or similar sample size is not tenable (Vinzi et al., 2010). Therefore in future larger sample size can be drawn from larger number of organisations for comparable multi-group analysis.
- In case of climate strength, the results are in congruence with some of the past studies, and yet differ from other studies. Basically the results of interaction effect of climate strength show disjointed effects. The future researchers can test for curvilinear effect of climate strength, instead of the linear effect on the job outcomes of organisational climate and try to bridge the gap between estimation and theory.
- Furthermore, the researchers can also empirically test the constructs in different industries and contexts. This study has determined the outcomes of organisational climate in a unidirectional way based on social exchange theory. However, other theoretical explanations can be used to derive meaningful relationships in different directions.
- Additionally, the current research can be tested longitudinally, as the cause and effect results of the cross-sectional study are robustly corroborated through longitudinal

research. The future researchers can also, conduct focus group interviews to determine other forms of leadership or constructs that can ensure an organisational climate which facilitates desirable job outcomes among employees. The current study focused on limited number of job outcomes based on the contextual environment, but myriad outcomes can be studied specific to the objectives set by other researchers.

- Last but not the least, this study was focused on pre COVID data. So, the future researchers can conduct comparative study on pre and post COVID data.

6.8 Concluding remarks

The study has led to in depth understanding of the organisational climate construct pertaining to Indian hospital context. The study has provided 2 research models that have explained the relationship of the antecedents and outcomes of organisational climate on the basis of social cognitive theory and social exchange theory and the moderating effect of climate strength on the relationship of organisational climate with job outcomes, on the basis of Chan's (1998) composition model.

The findings of the study suggest that moral development, ethical leadership and have a positive effect on organisational climate while Machiavellianism has a significant negative effect on organisational climate in Indian hospitals, thus establishing them as antecedents of organisational climate. Further the study highlights that an organisational climate characterized by employee well-being, interdepartmental integration as well as quality care delivery will lead to positive job outcomes such as increased commitment, trust, job satisfaction and satisfaction with leader among doctors.

The study also clarifies, that in Indian hospitals that are governed by bureaucratic ways, the social conformity as well as common practices and procedures may lead to highly shared

perceptions with low variability thereby increasing climate strength. Thus, the moderating effect of climate strength is not found for various job outcomes.

Most importantly, the study highlights that a positive and a favorable work climate is essential in hospital context in India, which is determined by leader ethics and employee morals. This is because an organisational climate encompassing well-being integration and quality care dimensions will be favourably enhanced under ethical leaders and moral employees, which will lead to improved job outcomes. As doctors are already suffering with patient overload and mental exhaustion, such a climate is necessary for them to work and flourish in the hospitals.

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APPENDIX 1- FINAL QUESTIONNAIRE

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI

Dear Participant,

This questionnaire has been designed as a part of my doctoral research. Area of research is focusing on "Factors affecting organizational climate". I assure you that information collected will remain anonymous and solely used for **RESEARCH PURPOSE ONLY.** Thank you so much for your time & effort for filling this questionnaire.

BHANU MISHRA
PhD Scholar

Section A – Demographic Details

Please answer the following questions

1. Name: ……
2. Age: ……years
3. Gender (please tick mark): Male/Female
4. Total number of years in the current organization: ……
5. Total work experience: ……

Section B

B1. In your opinion, please tick the most appropriate response on a scale of 1 to 5, where 1 stands for "Strongly Disagree" and 5 for "Strongly Agree". An item score of 3 was assigned the neutral value "Neutral".

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	To meet with expectations from others has its own value					
2	It is important to listen to what people mean, in moral issues					

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
3	Consideration and kindness are most important values in a community					
4	It's a value in itself to treat authorities with respect					
5	It is reasonable to listen to what most people mean whether right or wrong					
6	It is usually possible to reach consensus in moral issues					
7	Good moral rules must be able to be put in a context					

B2. In your opinion, please tick the most appropriate response on a scale of 1 to 5, where 1 stands for "Strongly disagree" and 5 for "Strongly agree". An item score of 3 was assigned the "Neutral".

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	I believe that lying is necessary to maintain a competitive advantage over others.					
2	I am willing to be unethical if I believe it will help me succeed.					
3	I would cheat if there was a low chance of getting caught.					
4	I like to give the orders in interpersonal situations.					
5	I enjoy having control over other people.					
6	Status is a good sign of success in life.					
7	Accumulating wealth is an important goal for me.					
8	I want to be rich and powerful someday.					
9	People are only motivated by personal gain.					
10	Team members backstab each other all the time to get ahead.					

B3. In your opinion, please tick the most appropriate response on a scale of 1 to 5, regarding your leader, where 1 stands for "Strongly disagree" and 5 for "Strongly agree" and 3 for "Neutral".

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Have the best interests of employees in mind					
2	Discuss business ethics or values with employees					
3	Set an example of how to do things the right way in terms of ethics					
4	Define success not just by results but also the way they are obtained					
5	When making decisions, ask "What is the right thing to do"?					

B4. In your opinion, please tick the most appropriate response on a scale of 1 to 5, where 1 stands for "Strongly disagree" and 5 for "Strongly agree".

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	My hospital/college sets extremely high standards for its staff					
2	As a patient, I would be happy to have care provided by my hospital					
3	Quality is taken very seriously here in my work place					
4	Different sections of my workplace do not keep each other informed about what's going on*					
5	There are often breakdowns in communication here in my workplace*					
6	I have the opportunity to talk to someone at work about the emotional demands of the job					
7	Training is provided in how to cope with the emotional demands of the job					
8	Doctors are encouraged to be open about the emotional demands of their work					
9	My hospital/college has created a safe working environment					
10	My hospital/college strongly believes in the importance of training and development					
11	Doctors here are strongly encouraged to develop their skills					

B5. In your opinion, please tick the most appropriate response on a scale of 1 to 5, where 1 stands for "Strongly disagree" and 5 for "Strongly agree".

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	If I got into difficulties at work I know my colleagues would try and help me out.					
2	Most of my colleagues can be relied upon to do as they say they will do.					
3	I have full confidence in the skills of my colleagues.					
4	Most of my colleagues would get on with their work even if supervisors were not around.					
5	I can rely on other doctors not to make my job more difficult by careless work.					

B6. In your opinion, please tick the most appropriate response on a scale of 1 to 5, where 1 stands for "Strongly disagree" and 5 for "Strongly agree".

	Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	I am quite proud to be able to tell people about my hospital, I work for					
2	I would not recommend a close friend to join our staff*					
3	I sometimes feel like leaving this employment for good*					
4	I'm not willing to put myself out just to help the hospital*					
5	I feel myself to be part of this hospital.					
6	In my work I like to feel I am making some effort, not just for myself but for the hospital as well					

B7. In your opinion, please tick the most appropriate response on a scale of 1 to 5, regarding your organization where 1 = "Strongly dissatisfied" and 5 = "Strongly Satisfied" and 3 = "Neutral".

	Items	Strongly dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Strongly Satisfied (5)
1	Rate of Pay.					
2	Chances of Promotion.					
3	Hours of work.					
4	Amount of Variety in the Job.					
5	Job security.					

B8. In your opinion, please tick the most appropriate response on a scale of 1 to 5, regarding your organization where 1 = "Strongly dissatisfied" and 5 = "Strongly Satisfied" and 3 = "Neutral".

	Items	Strongly dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Strongly Satisfied (5)
1	The way my supervisor sets clear goals.					
2	The way my supervisor gives me credit for my ideas.					
3	The way my supervisor follows through to get problems solved.					
4	The way my supervisor shows concern for my career progress.					
5	The technical competence of my supervisor.					

List of publications and conferences

Paper published in international journal

- Mishra, B. and Tikoria, J. (2021), "Impact of ethical leadership on organizational climate and its subsequent influence on job commitment: a study in hospital context", *Journal of Management Development*, Vol. 40 No. 5, pp. 438-452. https://doi.org/10.1108/JMD-08-2020-0245 (SCOPUS Indexed, ABDC – C category)

Paper presented in international conferences

- Mishra, B. and Tikoria J. (2019), "Relationship of Moral development and Machiavellianism with Organizational Climate: HRM Implications for Indian Hospitals". Presented paper in AICAR (Aston India Centre for Applied Research), 2019, 3rd Annual Conference Aston Business School, Birmingham, UK., held on 30-31 August, 2019.
- Mishra, B. and Tikoria, J. (2018), "Effect of ethical leadership on organisational climate and its subsequent influence on commitment: A study of Indian Doctors". Presented paper in PANIITIMC 2018, Department of Management Studies, IIT Roorkee, held on 30th November – 2nd December, 2018.
- Mishra, B. and Dadhich, A., (2017), "Role of ethical leadership and Organisational climate: A study of Indian healthcare sector". Presented paper in International conference on Evidence based management, 2017, in BITS Pilani, held on 17-18 March, 2017. Paper was also published in conference proceedings.

BRIEF BIOGRAPHY OF THE CANDIDATE

Bhanu Mishra is a research scholar at Department of Management, BITS Pilani – Pilani Campus worked under the supervision of Dr. Jyoti Tikoria. She specializes in the areas of organisational climate, ethical leadership, Machiavellianism and moral development. She has attended several national/international conferences and has authored research papers on the subject of interests.

She is a silver medallist holder in her post gradation (MBA) from Jain University, Bengaluru. Previously she has taught as a lecturer, in the areas of General HRM, Training and Development, Business Communications. Her current teaching interests lie in the area of Organisational Behavior and HRM. She has also attended several workshops on research methodology and recently attended a workshop on 'Advanced Research Methods using R' from IIT Roorkee.

BRIEF BIOGRAPHY OF THE SUPERVISOR

Dr. Jyoti Tikoria is currently Associate Professor in Department of Management at BITS Pilani - Pilani Campus in the area of Strategy & Entrepreneurship. She did her Ph. D in R&D Management from IIT Delhi and MBA from Kurukshetra University.

Her primary areas of teaching and research are: Strategy & Entrepreneurship, Technology Management, R&D Management, Intellectual Property Rights Management and General Management. She has over 45 publications in journals and conferences of repute.

She has been involved in several R&D projects sponsored by Government, ICSSR and BITS Pilani. Previously she had been Faculty-In-Charge for Centre for Entrepreneurial Leadership (CEL) and Entrepreneurship Development & IPR Unit. She has guided and mentored more than 100 budding entrepreneurs and has facilitated more than 30 faculty members in their patent filing process. Presently she is nodal officer for Gender Advancement for Transforming Institutions (GATI) at BITS Pilani which is an initiative of KIRAN WISE division of DST, GoI.