



## Implications of Human Resource Practices and Other Structural Factors on Commitment of Public Medical Professionals in India

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### Abstract

*In this paper we focus on often neglected issue and inadequately studied area of commitment of public sector health professionals and some of the issues surrounding human resources as its determinants. The paper argues that success or failure of new initiatives in health sector critically hinges on the commitment of the staff. This paper is based on the questionnaire study and focused group discussion of 175 doctors working as district medical officers at district level and holding key administrative positions at state level in four states in India. These four Indian states account for nearly 22 per cent of India's population. The findings provide some important insights that would be useful in drawing future agenda of strengthening health sector and involving all stakeholders in implementation process.*

*The study finds critical linkage between human resource (HR) practices and commitment of doctors working in the government. Specifically, following HR practices are found critical in influencing organizational commitment: transparency in selection/postings, supportive training and capacity strengthening climate, recognition of performance and regular performance feedback. Further, results suggest that certain work environment and structural factors facilitate these practices. Health officials' roles need to be redefined and given complexity of coordination at various levels, officials need to be allocated higher responsibilities. There is also a need to improve interpersonal relations within departments and coordination among agencies and officials at various levels. It is also observed that the structural rigidities in the system leading to obstruction in information sharing across various levels needs to be addressed to ensure effective healthcare delivery. This study highlights the criticality of administrative and structural issues for reforms of healthcare sector in India.*

*Addressing human resources issues is critical for ensuring commitment from staff in implementing new initiatives or health reform agenda. National Rural Health Mission (NRHM) also identifies the human resources and capacities as an important challenge. Institutions that are critical vehicles to implement the NHRM would remain weak owing to low commitment of people. It would be important to focus on HR issues before any new initiative is proposed and implemented. The departments of health across states need to broaden and deepen the understanding of HR management and planning issues. For this purpose they may need to set-up HR division having appropriate competency and skill-mix to address the issues and work towards making the right changes. The papers discusses that these changes will be required at both strategic and operational levels.*

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### 1 Introduction

Health care delivery systems involve a variety of stakeholders. These include doctors, nurses, pharmacists and other staff on the one hand and communities who utilise the services on the other. They organise themselves and interact with each other in highly complex decentralised settings. The key stakeholders such as providers of services and communities are linked through the organisation structure and financing mechanisms. The outcomes of these interactions are most of the time difficult to observe particularly in state-run systems where the incentive systems are inadequate. Over the years concerns have been raised about the poor performance of public health sector in India. India, a fastest emerging economies of the world and fourth-largest in the world as measured by purchasing power parity, has not exhibited similar achievements on health side. India is currently second fastest growing economy in the world, with a GDP growth rate of 8.1 per cent at the end of the first quarter of 2005–2006 (EOI 2006), but in terms of health indicators India compares poorly. For example, UNDP's Human Development Report ranks India at 127 in a list of 177 countries, much lower than Sri Lanka which is ranked 93 on the list. The report points out that India accounts for one in five child deaths in the world, amounting to 2.5 million child deaths annually. Only 42 percent of its children are fully immunised and that 63 of every 1000 infants born in India die within a year, while the corresponding figure is 46 in Bangladesh and just 13 in Sri Lanka.

Given this and growing complexities and challenges the health sector faces, it is observed that reforms in this sector are inevitable. Most of the time the focus of reforms is to propose changes in financing mechanisms (such as developing insurance mechanisms) or addressing responsiveness of organisation structure (such as creating dedicated societies) to community needs. These reforms generally aim at making the health systems responsive through directed allocations and strengthening financial systems, ensuring local participation and public-private partnerships, and autonomy of health facilities. These developments have strengthened the health system but not produced desired results. This is because the reforms have often neglected the most important pillar of health system – its people. Often the behaviour, attitude and skills of health personnel are cited as one of the major cause of poor perceptions about the health care services (Lee 2001). Particularly, in rural areas such perception drives the population to seek treatment from traditional healers or delay in seeking the treatment. It is observed that availability

of adequate funds, equipments, and number of people to man and manage the public health programmes alone may not lead to its successful implementation and reforms.

In general, in any organisation employees' commitment significantly influences the organisation's capability to service its customers and therefore commitment of people working in the health sector would have significant implications for any sector reform process. However, the reform process makes some fundamental assumptions about the intrinsic organisational and professional commitment and availability of skilled and competent health care professionals. These are important assumptions because the success of healthcare reforms will critically depend on their validity.

The objective of this paper is to examine the professional and organisational commitment of district and state health officials working in public health facilities in India and discuss whether these assumptions are valid. Further, the paper investigates the effect of human resource policies on their commitment. These policies are important in developing individual's organisational and professional commitment. Specifically, the study addresses following research questions:

- What is the status of professional and organisational commitment of senior medical officers of public health system in India?
- What are the characteristics of human resource management practices in public health system in India?
- How these human resource management practices are related with professional and organisational commitment?

In addition the study also examines certain work environment and structural features typical of Indian public healthcare services, which have a bearing on effective service delivery and individual's morale and commitment. The answers to these questions are critical in designing and implementing the health sector reforms.

## **2 Constructs of Commitment**

Commitment is a multi-dimensional construct. In general terms organisational commitment refers to employee's *loyalty* - the act of binding oneself (intellectually or emotionally) to a course of action performed by the organisation. This may be measured in terms of employee's willingness to put more effort or willingness to exert to help the organisation achieve its goals. This willingness gets reflected in terms of adherence to being performance driven and/or confirming or adapting to the organisation requirements and systems. In literature the commitment is also described in terms of degree of goal and/or value congruency with the organisation and employee's desires to remain member

of the organisation (Porter, Crampon, and Smith 1976; Porter, Steers, Mowday and Boulian 1974). It is hypothesised that performance is likely to be influenced by the level of employee's commitment.

Organisations which employ professionals experience another dimension of commitment viz., professional commitment. The performance of professionals is also influenced by their commitment to the profession. For example, state-run health organisations employ professionals such as medical doctors and they may provide quality care to their patients owing to professional commitment despite inadequate organisational commitment. Further, the roles and functions of medical professionals employed in the state-run institutions assumes added complexity as a significant number of them do handle administrative and regulatory functions and the orientation and approach required for these roles is significantly different as compared to service delivery role which would be guided by professional ethics and code of conduct. At times goals and objectives of the organisation and the professional may be at variance. Inability to perform the roles effectively and degree of clarity about these aspects may have implications for commitment of employees. Therefore, it is important to understand the dynamics of organisation and professional commitment of employees in service organisation.

## **2.1 Organisational Commitment**

Allen and Meyer (1990) have proposed a three-component model to describe an employee's commitment towards organisation. They suggest that employee's commitment may emanate from three reasons. These are (a) emotional, (b) feeling of obligation, and/or (c) economic. They describe these as three components of commitment - affective, normative and continuance commitment and are defined as follows:

### **Affective Commitment**

Affective commitment refers to the affection of the employee with the organisation and its purposes. This attachment may develop owing to various factors such as brand image of the organisation, autonomy, challenging tasks, relationship with colleagues, superiors and subordinates, and other work conditions.

### **Normative Commitment**

Employees' feeling of obligation to remain with the organisation is described as normative commitment. This sense of obligation may develop owing to some favourable events that the employees value and cherish in the organisation. For example, nominating an employee to a developmental programme that is highly valued by him/her is likely to create a sense of obligation. Similarly, extending support beyond the normal policies of the organisation at the time of some crisis creates a sense of obligation.

## **Continuance Commitment**

Employees may prefer to stay in organization owing to high cost of switchover of the job. Commitment to organisation owing to these economic reasons is defined as continuance commitment.

Meyer and Allen (1991) argued that commitment is purely a psychological state that characterises the employee's relationship with the organisation and this state has implications for decisions to continue or discontinue membership in the organisation. Affective, continuance, and normative commitment are not mutually exclusive. For example, the affective and normative commitments have been found to be highly correlated whereas a negative relationship between the affective and continuance commitment has been observed (Meyer et al., 1993).

## **2.2 Professional Commitment**

Employee's professional commitment refers to employee's loyalty to the profession and willingness to put effort to uphold the values and goals of the profession, and a willingness to maintain membership in the profession (Morrow and Wirth 1989; Mueller, Wallace, and Price 1992). It is observed that a professional like medical doctor working in state-run organisation may do well to provide health care out of their concern for the profession alone (Bhat and Maheshwari, 2005).

Organisational commitment and professional commitment are related but distinct constructs. Meta analysis by Wallace (1993) has revealed a positive relationship between the two. However, they exert a unique influence on employees' work attitudes and behaviours. These attitudinal and behavioural aspects may include responses such as leaving the job, absenteeism, spending time on job search, willingness to resolve conflicts in organisation etc.

Meyer, Allen and Smith (1993) extended the three component organisational commitment concept to professional commitment as well. In their study, using confirmatory factor analysis on the samples of student and professional nurses revealed that professional commitment also has three components – affective, normative and continuance. It was also observed that the three professional commitment components are distinct from each other as well as from organisational commitment components (Meyer et al., 1993). The key characteristics of these constructs may be summarised in the following table.

Some key characteristics of commitment			
Commitment	Affective	Normative	Continuance
<b>Organisational</b>	It refers to the emotional attachment of the employee towards the organisation and its purpose.	It refers to the sense of obligation of the employee towards the organisation and its purpose.	It refers to the economic compulsions that make the employee stay with the organisation and its purpose.
<b>Professional</b>	It refers to the emotional attachment of the professional towards the profession and its values and purposes.	It refers to the sense of obligation of the professional towards the profession to uphold its values.	It refers to the economic compulsions that make the professionals stay with the profession and its values.

Despite conceptualisation provided by Meyer, Allen, & Smith (1993), research on dynamics of professional commitment has been scant compared to the organisational commitment. There are few studies which investigate the effects of professional commitment on respondents' attitudinal and behavioural responses such as leaving the job, absenteeism, spending time on job search, handling conflicts in organisation etc. For example, in case of professional accountants affective professional commitment has been found to be negatively related with the organisation and professional turnover (Aryee et al. 1991; Bline 1991; Dwyer et al. 2000; Harrell et al. 1986; Meixner and Bline 1989), positively with job and professional satisfaction (Bline 1991; Gregson 1992; Poznanski and Bline 1997), and positively with the performance (Poznanski and Bline 1997). Studies on health workers (Carmeli and Gefen 2004), human resource management specialists (Redman 2003), and sports coaches (Turner and Chelladurai 2005) show that professional commitment is negatively related to withdrawal intentions and positively related to the participation in the professional activities and promoting professional interests.

### 3 Commitment and Performance

It is observed that commitment of an employee has significant implications. It has bearing on various drivers of performance. Organisation's ability to focus on its goals and objectives and their realisation critically hinges on this. For example, high level of commitment has been found positively correlated with job satisfaction and job involvement thereby having a desirable effect on performance. Lack of commitment on the other hand has been found creating aggravating factors leading to job tension, absenteeism, turnover of employees, or employee spending time on job search activities - all organisationally undesirable experiences (Angle and Perry 1981; Bluedorn 1982; Arzu 2003; Farrell and Rusbult 1981; Marsh and Mannari 1977; Morris and Sherman 1981; Porter et al. 1976; Porter et al. 1974; Steers 1977; Hall and Schneider 1972; Hrebiniak

and Alutto 1972; Porter et al. 1974; Stevens, Beyer, and Trice 1978; Stone and Porter 1976).

It has been observed that employees with high levels of organisational commitment provide a secure and stable work force (Steers 1977). Employees with high levels of commitment do strongly identify themselves with the organisation and willingly accept the organisation's demand for better outputs (Etzioni 1975). This assures high levels of performance and task completion (Mowday, Lyman, and Robert 1974; Van 1975).

High organisational commitment has been found promoting the positive work culture. There is evidence that it positively relates to various desirable outcomes such as the perception of a warm and supportive organisational climate (Fred, Wahl and Carol 1992). Given the characteristics of service organisation where the provider of service has to feel empowered and enjoy the process of delivering services, the higher organisational commitment drives employees' intrinsic desire of contributing more to the improved service quality, and reduces the need for intensive external monitoring mechanisms. It has been observed that committed employees need lesser supervision to control their behaviour.

The reviews on state-run health service delivery facilities are replete with observations of poor quality of care, inadequate monitoring and poor performance outcomes. The public policy goals to improve the performance of programmes stress improving performance and expect employees to strengthen organisation's image among its client groups through service orientation and cooperative behaviour. High civic virtues and responding to the needs of clients is given significant importance. However, the processes to achieve this are generally not elaborated or described. The literature on organisational commitment portrays employees with high organisational commitment not only as more productive (Mowday, Lyman and Robert 1974) and satisfied, but also possessing high civic virtue (Nico, Agnes and Martin 1999). The effective implementation of health services require concern among the service providers towards patients, their relatives, peers and other health service providers. Such concern facilitates team working and strengthens cooperative behaviour. The cooperative behaviour is an outcome of professional and organisational commitment (Lee, 2001). Hence, the quality of care in health sector is dependent on both professional commitment and organisational commitment. All these are therefore important prerequisites to ensure provision of adequate quality of health care services. Therefore addressing commitment of public sector employees in health should form an integral and core part of health reform strategy.

#### **4 Human Resource Practices and Commitment**

Human resource (HR) policies of the organisation do have determining effect on employees' attitudinal and affective reactions in performing various tasks and activities and therefore affecting commitment. It also influences the effectiveness with which the

organisation achieves its objectives. Using social exchange theory perspective (Blau 2003), organisations which are perceived as fair by its employees in its interactions with them, supportive of their professional growth, conscious of their rights (e.g., voice), promoting merit will elicit positive response from the employees. This response manifests in form of better task performance, higher organisational commitment, more citizenship behaviours etc.

HR practices encouraging merit, employee inputs or voice, employee development, internal and external equity in general increase employees' belongingness to the organization. It is important that these are communicated well and understood by employees. Focus on such HR practices influence employee organisational commitment positively.

How do HR practices influence employees' professional commitment? This is less explored area. It is hypothesised that professional commitment develops more due to individuals upholding and accepting the values salient to their profession, than due to organisation specific HR practices. But it so happens that successful organisations also uphold similar professional values and HR practices are attuned to these values. Thus HR practices of organisation may have an indirect effect on employees' professional commitment as these practices reinforce similar values. For example, medical profession upholds selfless service of patients as an important value, and doctors may be professionally driven by this aspect. HR practices such as placement of competent support staff may help doctor provide better service, thus reinforcing their professional as well as organisational commitment.

We propose to develop some key hypothesis about relation of HR practices with employee's organizational and professional commitment in this section. Here HR practices include: HR planning, recruitment and induction of new entrants, career growth practices, performance appraisal, compensation policy, and work environment. While stating hypotheses we use organisation commitment (OC) representing all three dimension/constructs of employee's organisational commitment and we make an attempt to test these hypotheses for all three dimensions. As discussed earlier that professional commitment and its three components, are closely related to organisation commitment. HR practices do have therefore direct bearing on employees' professional commitment. Thus we test hypotheses presented for both organisation and professional commitment in the next section of the paper.

#### **4.1 HR Planning Practices**

Human resource planning aspects investigated in the current study includes involvement of an employee in department's HR planning, aspect of fairness in posting and transfers, and clarity about one's own job responsibilities.

Past research shows positive effect of these factors on employees' reactions. For example, involvement in decision making positively affects job satisfaction (Bakan, Suseno, Pinnington, and Money, 2004; Cotton et al., 1988) and organisation commitment (Bakan et al., 2004). Participation in critical decisions affecting employees' own outcomes evoke sense of control on the decision. Employees' role clarity also shapes these perceptions. Thus, organisation's conscious efforts to bring role clarity through job descriptions evoke positive response from the employees. Role clarity has also been found positively correlated to organisation commitment (Adkins, 1995; Bauer and Green, 1998). Similarly, fairness in job allocation and transfer decisions has positive effect on employee reactions such as organisational commitment. Based on above discussion following hypotheses are stated:

**Hypothesis 1:** Organisation's fair human resource planning practices will influence employees' organisational commitment (OC) and professional commitment (PC) significantly. Specifically,

- **Hypothesis 1a:** Involvement in human resource planning decisions of the department will be positively related to OC and PC.
- **Hypothesis 1b:** Perceived fairness in transfer and job allocation decisions will be positively related to OC and PC.
- **Hypothesis 1c:** Employees' awareness of own job details will be positively related to OC and PC.

#### 4.2 Recruitment/Induction of New Entrants

HR management practices like fair and transparent hiring, induction and socialisation play critical roles in building employee commitment. Procedurally fair hiring practices which are transparent, merit-based and follow rigorous selection process will have deep and long-lasting influence on new entrants (Flood, Turner, Ramamoorthy and Pearson 2001; Lemons and Jones, 2001). Further, well planned socialisation and induction process fosters better understanding of organisational values, norms and objectives in new employees (Pascale 1985; Van and Schein 1979). This leads to employees' identification with the organisation (Jones 1986). Similarly, factors such as confirmation of pre-entry expectations (Arnold and Feldman 1982; Premack and Wanous 1985) and role clarity at the time of hiring employees are important to enhance organisational commitment (Morris and Koch, 1979). Based on above discussion following hypotheses are stated:

**Hypothesis 2:** Organisation's fair hiring practices will influence employees OC and PC significantly.

- **Hypothesis 2a:** Fair selection process (rigorous, transparent and merit-based) will be positively related to OC and PC.
- **Hypothesis 2b:** Role clarity at the time of joining will be positively related to OC and PC.

### 4.3 Career Growth Practices

Organisation's investment in employees' career development and growth evokes positive employee reactions. This is consistent with social exchange theory's argument. Employees' perceive growth opportunities are adequate when their organisation provides them enough developmental opportunities, promotion opportunities, and some job security. These policies help employees grow from within and develop OC owing to sense of belongingness and obligation towards organisation. Promotions also result in higher compensation and status, thus affecting OC positively. But to be effective, promotion practices should be perceived fair. Fair procedures, such as merit based promotion, say in training decisions, are an important factor in eliciting employee's OC (Lemons and Jones 2001). Employees' training and development not only enhances their promotional chances but also enhances their job market value. Past research supports above hypotheses. Existence of adequate promotional opportunities and fair promotional decisions affect employee's OC positively (Jago and Deery 2004; Randall 1987; Romzek 1989) and intention to quit negatively (Stumpf and Dawley 1981).

But what is fair can differ between individuals and between organisations. For example, merit-based promotion may be fair in one context, but seniority based promotions may be fair in other settings. So in the current paper both types of promotion criteria are tested for its fairness. Further, perceived investment in employee development positively affects their OC (Lee and Bruvold 2003). Ahmad and Bakar (2003) found positive relation between training support, training environment, and perceived training benefits on employee OC. Based on the above discussion following hypotheses are stated:

**Hypothesis 3:** Organisation's fair and adequate career growth and development practices will influence employees OC and PC significantly.

- **Hypothesis 3a:** Adequate promotional opportunities will be positively related to OC and PC.
- **Hypothesis 3b:** Promotion practices based on merit will be positively related to OC and PC.
- **Hypothesis 3c:** Promotion practices based on seniority will be positively related to OC and PC.
- **Hypothesis 3d:** Organisation's support for employee development (higher responsibilities, job enrichment, adequate training) will be positively related to OC and PC.
- **Hypothesis 3e:** Conducive training climate (e.g. Transfer of newly learnt skills to job) will be positively related to OC and PC.

#### 4.4 Performance Appraisal

Performance appraisal is a critical HR practice which affects several employee related decisions such as salary raise, promotion, training needs, task allocation, transfer decisions etc. Thus its perceived fairness and utility evoke positive employee reactions. Past empirical research shows that a performance appraisal would be perceived fair if employee has clarity on performance objectives (Jackson, John and William 1995), knows appraisal system well (William and Levy 2000), and is involved in the process (Brown and Peterson 1994; Mowen et al. 1985; Thomas and Bretz 1994). Also developmental feedback and close performance-reward relation affects fairness perception positively (Greenberg 1986). This research also shows that fair appraisal system positively affects employee reactions, including their organisational commitment (Babakus et al. 1996). Based on above discussion following hypotheses are stated:

**Hypothesis 4:** Fair performance appraisal practices of the organisation significantly influence OC and PC of its employees.

- **Hypothesis 4a:** Employee's clarity of performance objectives, appraisal criteria and standards will be positively related to the employee's OC and PC.
- **Hypothesis 4b:** Employees' involvement in performance appraisal process will be positively related to their OC and PC.
- **Hypothesis 4c:** Developmental feedback will be positively related to OC and PC.
- **Hypothesis 4d:** Perceived appraisal's utility (in determining rewards, responsibilities, training needs etc) will be positively related to OC and PC.

#### 4.5 Compensation Policy

Reward systems and forms of pay structures have their own implications on commitment. Long-term benefits and retained benefits like provident fund and pension scheme (also including employee stock options), and tenure-linked bonus are useful in eliciting continuance commitment (Klein 1987; Klein and Hall 1988; Tucker, Nock and Toscano 1989; Wetzel and Gallagher 1990). Similarly, benefits like medical facilities, educational loans for children etc., elicit affective and normative employee commitment. Compensation structure is an important determinant of employee reactions. The compensation structure may be either based on seniority or it may be based on performance. There may be differences in preference between employees and organisation on this. Current study tests which basis is preferred by government health services employees. Based on the above discussion following hypotheses are stated:

**Hypothesis 5:** Organisation's compensation policies significantly influence OC and PC of its employees.

- **Hypothesis 5a:** Pay-for-performance policies will be positively related to OC and PC.
- **Hypothesis 5b:** Seniority based compensation will be positively related to OC and PC.

#### 4.6 Work Environment

Apart from HR policies, the work environment has significant effect on employees' OC perceptions. Two aspects examined in the current study are relationship with their superiors and job autonomy. These two aspects are particularly important in case of health professionals in India because in conditions lacking in hard infrastructure and facilities, such softer aspects related to work environment are critical. Empirical research shows that good relationship with superiors' develops employee's OC (Varona 2002; Tsui et al. 1997). Employees perceive superior's actions in the context of organisation's policy framework. Thus, they attribute good relations partially to the organisation and its policies, which are reflected in higher OC. Similarly, job autonomy positively influences employee's OC (Marsh and Mannari 1977), because of sense of ownership and control on the work place and work related decisions. Based on the above discussion following hypotheses are stated:

- **Hypothesis 6a:** Good relations with superiors will be positively related to OC and PC.
- **Hypothesis 6b:** Job autonomy will be positively related to OC and PC.

We have not considered personal factors e.g., personality, because this study focuses more on the HR policy aspects, and such individual factors are assumed to be randomized in the model. But we have included one factor, employee's self-efficacy, because in medical profession it is critical that doctors are confident about their ability to handle medical exigencies, especially when supportive infrastructure is lacking. A confident and competent person is likely to be successful and feel contented on the job and for this we present the following hypothesis.

**Hypothesis 7:** Employee's self-efficacy on the job is hypothesized to be positively related to OC and PC.

## 5 Methodology, Data and Results

The study focused on medical professionals working as health officials in government service at district and state level in four Indian states. These states are Maharashtra, Madhya Pradesh, Chattisgarh, and Gujarat. Table 1 provides summary of each state's socio-economic and healthcare indicators. These indicators clearly suggest that Maharashtra and Gujarat are better performers in terms of both economic and healthcare compared to Chattisgarh and Madhya Pradesh. In fact the first two states rank among the most progressive states and last two among the least progressive states in India, especially on economic front. Therefore, the sample from these four states represents health officers' population across India.

Madhya Pradesh is the largest, and according to interstate comparisons, one of the less developed states in India. The delivery of effective public health services is the most daunting challenge facing Madhya Pradesh, as it ranks at the bottom of the national average. Given the geographical vastness of the State and its sharp social, cultural and economic diversity, it is clear that substantial inputs are needed for the development of the health sector. Chattisgarh is a newly created state carved out from Madhya Pradesh in the year 2000. Health policies of the state are still evolving. A study of this kind provides adequate direction for this newly formed state. The state comprises more than 70 percent of its population in tribal areas. Hence, the findings of this state could be applicable to many other low-income states. Gujarat stands second (after Kerala) among 15 major states of India with respect to density of hospitals and dispensaries. Gujarat is also known for many innovative models of healthcare delivery system involving non-government sector.

In all 175 medical professionals from government services participated in the study. Their state-wise distribution is as follows: 42 from Maharashtra, 31 from Madhya Pradesh, 70 from Chattisgarh, and 32 from Gujarat. The average respondent age and work experience

are 49 and 21 years respectively. The average experience in medical profession for the sample is 24 years. The sample includes officers from both state and district levels (at district medical officer level), and thus provided responses from officers working at strategic/planning and operational levels.

Data was collected using self-administered questionnaire. This questionnaire had both open-ended questions, and close ended Likert type (5 point scale) items with choices varying from strongly disagree (1) to strongly agree (5). Further, focused group discussions sessions were carried out with the state and district health officials to validate the findings of the survey. These discussions also explored important structural features which have an impact on the effective service delivery and officers' commitment. These discussions have enabled the authors to explain the study findings.

### **5.1 Measures**

Questionnaire was divided in two parts. First part of the questionnaire contained questions about personal details - age, gender, qualification, work experience, and experience in profession. The second part of the questionnaire contained 81 items measuring human resource practices in the respondents' organisation, 23 items measuring respondents' organisational commitment, 24 items measuring respondents' professional commitment, 9 items measuring work climate, and 2 items measuring respondent's self efficacy.

#### **Organisational Commitment**

Employee's Organisational Commitment (OC) was measured using a modified version of Allen and Meyer (1990) scale adapted to the Indian context. Three forms of OC - affective, normative, and continuance, were measured using seven, seven, and nine item scales respectively. Cronbach alpha for three components are 0.75, 0.66 and 0.76 respectively.

#### **Professional Commitment**

Employees Professional Commitment (PC) was measured by adapting Allen and Meyer's (1990) and Meyer, Allen, & Smith's (1993) on organisation and professional commitment scales respectively to Indian healthcare context. Three forms of professional commitment - affective, normative, and continuance, were measured using seven, eight, and nine item scales respectively. Cronbach alpha for three components are 0.69, 0.56 and 0.78 respectively.

#### **Human Resource Practices**

HR practices scale was developed based on HR literature discussed above and discussions held by authors with the healthcare officers over the years. Those HR practices which enhance employee's commitment (as supported by past research) were included in the scale. The items measure the extent of presence of these practices in the respondents'

organisations as they perceive it. The HR practices were classified under following five groups:

- human resource planning
- career growth
- training
- performance appraisal
- compensation

The items under each group were measured using a five-point (strongly disagree 1 to strongly agree 5) Likert scale. HR items under each of five groupings were subjected to exploratory principal component analysis (PCA) with varimax rotation to identify underlying factors. Items with factor loadings  $> 0.50$  were considered for grouping, while items with loading  $< 0.50$  and/or with cross loadings  $> 0.35$  were dropped. The analysis yielded 19 independent factors. Correlation analysis between 19 factors revealed that many of these factors are highly correlated. Also, it was observed that some of these factors were measuring similar variables. For example, consultation in planning and consultation in posting, and support for growth and development and support for training. Thus, after combining similar variables, and removing redundant variables, and using theoretical justification 12 factors were extracted. These factors were tested for unidimensionality and internal consistency. Table 2 gives the detail of the factors, number of items, and their Cronbach alpha.

### **Work Climate**

Two aspects of work climate were considered. These are relationship with superior, and job autonomy. These were measured using 2 and 7 items scale specifically developed for the study based on discussions held with healthcare officials.

### **5.2 Results**

While discussing the results organisation here refers to Department of Health and Family Welfare and 'organisation' and 'department' has been used interchangeably.

The results suggest that four states differ significantly on following variables:

- continuance commitment to organisation
- normative commitment to profession,
- conducive training climate,
- clarity of performance objectives,
- reward performance relationship,
- job clarity before joining, and
- seniority based compensation

Interestingly Maharashtra-Gujarat (referred as Cluster 1) and Madhya Pradesh-Chattisgarh (referred as Cluster 2) tended to cluster together for all above variables. This result is expected because these states were part of one state and therefore are closer in terms of healthcare indicators and infrastructure (see Table 1). We use ANOVA followed by ‘DUNCAN multiple range test’ to compare all commitment and HR variables across four states.

Regarding HR practices, Cluster 1 shows higher presence of reward-performance relation and expectedly lower seniority based compensation, higher presence of clarity of performance objectives, better training climate, but lesser job clarity at the time of joining. However, medical professionals working in state health departments in Gujarat show significantly lower normative and continuance commitment to profession and department. Gujarat is followed by Maharashtra, Chattisgarh, and Madhya Pradesh in that order. This implies that though HR practices in Cluster 1 states are more progressive, it is not reflected in significant effect on respondents’ normative and continuance commitment.

Further analysis is based on combined data for four states.

Descriptive data in Table 3 shows that respondents’ commitment to their profession is significantly higher than their commitment to the department. This implies that respondents execute their professional responsibilities even if their commitment to department is lower. But lower commitment to department still means a weaker identification with the department. Consequently, doctors and state officials are unlikely to take many proactive actions or suggest useful ideas or support change. Their willingness to take initiatives is likely to be restricted. Thus, any reform process in health sector that seeks high involvement of medical professionals at these levels is less likely to succeed.

The affective and normative types in both organisation and professional context are higher than continuance types. It is a positive indicator, because emotional and moral bonding is beneficial to the department in terms of more sincere efforts put by the health officers. Higher continuance commitment would mean that officers are working because they do not have alternatives, and/or it is too costly to leave the organisation; this may be because of accumulated benefits. However, such employees would not be motivated enough to contribute to work in significant manner, but to just keep their association with the department going. This inference is also supported by negative correlation found in current study between affective and continuance commitment, which is consistent with our previous work focusing on one state in India (Bhat and Maheshwari, 2005). A person who is emotionally attached to organisation/profession won’t be looking for alternative opportunities.

Analysis of HR practices data (Table 4) provides the status of progressive HR practices in healthcare sector. The mean values for HR practices range from 2.47 for close reward performance relation to 3.70 for clarity on performance objectives. If a mean value of 3.5 (on a scale of 1 to 5) is assumed as threshold value indicating satisfactory presence of a progressive practice, then results presented in Table 3 do not reveal a very encouraging picture of HR status in government healthcare sector. Some of the indicators of this picture are as follows:

- The involvement in human resource planning decisions is perceived to be low.
- Respondents felt that selection procedures are not transparent and are less-fair. They were neutral about the fairness and suitability of seniority based promotions in their jobs.
- Respondents are more positive towards a supportive training climate and their freedom in taking training related decisions. The positive response could be due to recent initiatives taken by these states in conducting training programmes for their doctors in the public health system.
- Respondents also agreed that in their departments people are provided many rank based privileges.
- Although they have high clarity about their performance objectives and role, even at the time of joining, they did not perceive their performance evaluation as fair or useful. They neither get detailed performance feedback nor do they see their rewards associated with their performance. Probably, recognition and rewards are based on other factors; one could be good relations with superiors as revealed by high score on this variable.
- The above observation is also reflected in respondents' low perceptions of job autonomy.

The study used step-wise regression to test various hypotheses presented in previous section. Regression has been estimated for each commitment component on HR and work environment variables. The results are summarised as follows:

### **Organisational affective commitment**

Table 5 shows the regression results with affective commitment regressed on HR and work environment variables. Three variables which emerged as significant predictors of affective commitment are appraisal utility, employee's relationship with their superiors, and supportive training climate. The relationship variable represents work environment.

**Organisational normative commitment**

Table 6 shows the regression results with normative commitment regressed on HR and work environment variables. The variables significantly influencing normative commitment are as follows: relationship with superiors, useful and open performance feedback, transparency in selection, and close reward performance relation. While the first three variables have a positive influence, the last variable affects commitment negatively. Relationship with superiors explained significant variance and had a large effect as well.

**Organisational continuance commitment**

Regression of continuance commitment on HR and work environment variables is not significant. Thus HR factors do not exhibit any significant effect on continuance commitment.

**Professional affective commitment**

Table 7 shows the regression results with professional affective commitment regressed on HR and work environment variables. The results suggest low level of variance explained by the model. The variables significantly influencing affective commitment are as follows: relationship with superiors, consultation in human resource planning, and close reward performance relation, the last one having negative effect.

**Professional normative commitment**

Table 8 shows the regression results with professional normative commitment regressed on HR and work environment variables. The variables significantly influencing normative commitment are as follows: clarity of job and performance objectives and requirements.

**Professional continuance commitment**

Like in case of OC, regression of professional continuance commitment on HR and work environment variables is not significant. Thus HR factors do not exhibit any significant effect on continuance commitment.

The list of factors affecting organisation and professional commitment are summarised in following table:

Summary of HR practices that relate significantly with Commitment		
Components	Organisation Commitment	Professional Commitment
<b>Affective</b>	<ul style="list-style-type: none"> <li>• appraisal utility</li> <li>• employee's relationship with their superiors (representing work environment)</li> <li>• supportive training climate</li> </ul>	<ul style="list-style-type: none"> <li>• employee's relationship with their superiors (representing work environment)</li> <li>• consultation in human resource planning</li> <li>• reward-performance relation</li> </ul>
<b>Normative</b>	<ul style="list-style-type: none"> <li>• employee's relationship with their superiors (representing work environment)</li> <li>• useful and open performance feedback</li> <li>• transparency in selection</li> <li>• reward-performance relation</li> </ul>	<ul style="list-style-type: none"> <li>• clarity of job</li> <li>• performance objectives and requirements</li> </ul>
<b>Continuance</b>	<ul style="list-style-type: none"> <li>• HR practices do not exhibit any significant effect on continuance commitment</li> </ul>	<ul style="list-style-type: none"> <li>• HR practices do not exhibit any significant effect on continuance commitment.</li> </ul>

## 6 Discussion of Results

Overall study provides some support for positive effects of progressive HR practices on OC, specifically on affective and normative OC. But the HR practices do not have similar effect on professional commitment.

### 6.1 Organisational Commitment

The results suggest that HR initiatives and reforms which enhance department's developmental climate and procedural fairness are more likely to succeed. Consolidating the regression results for OC, it is clear that following initiatives foster a developmental climate which helps doctors/officers in developing and growing professionally:

- providing opportunities for training, and professional competency development
- developing healthy relationship between superiors and subordinates
- providing useful performance feedback which helps them to develop
- recognising and rewarding performance

These can be strengthened by doing the following:

- following fair HR practices which among other things should emphasise on providing regular performance feedback
- developing appropriate and meaningful appraisal systems which help them in improving their job performance

- developing and instituting appropriate rewards which commensurate with performance
- ensuring transparency in selection process and fair recruitment and transfer practices

An affective organisational commitment score of 3.65 clearly suggest that the departments of health in these states must make effort on improving these dimensions. The improvement in these is likely to improve the commitment score and therefore contribute to the success of reform process. In other words, the reform processes which focus on these and enhance these factors are more likely to be accepted by the doctors, and thus are likely to succeed better. Further, affective organisational commitment is also an important antecedent of pro-social organisational behaviour (O'Reilly and Chatman, 1986). People with high affective organisational commitment are likely to increase their efforts on the job.

## **6.2 Professional Commitment**

The comparison of results on professional and organisation commitment indicate that doctors in government service are having higher professional commitment than their organisational commitment. This indicates their higher identification with the profession than organization. The study has found that HR practices have significant influence on organisation commitment, but not same dimensions are significant in case of professional commitment. The following variables have some influence:

- clarity on job and performance objectives
- relationship with superiors
- consultation in human resource planning

However, the influence of these variables is not as strong as it was observed in case of organisation commitment. The small influence is expected as it was argued earlier that HR practices influence professional commitment only indirectly. These practices mainly pertain to aspects which facilitate doctors' work, and help them grow professionally. Thus good relations with superiors, clarity on job objectives, autonomy on work etc help in delivering responsibilities professionally.

The health administrators need to take cognizance of these factors and create a healthy environment so that high professional commitment can be effectively leveraged to undertake reform processes. They need to take following actions:

- Providing higher responsibilities to doctors. One way to strengthen this is to involve the doctors participating in the development plans and staffing decisions for their workplaces. This involves providing autonomy on two key dimensions: one staffing decisions and second on finance delegation.

- Affective professional commitment also demands transparency in job and performance evaluation. Hence, the departments of health need to work towards designing better and transparent administrative practices.
- Administrators should also focus on improving interpersonal relations within departments across hierarchy. This can be facilitated by frequent socialisation practices, open and transparent communication on critical decisions related to the individuals.

An aberration in the above results for both forms of commitment is the consistent negative effect of close reward – performance relation on commitment. This could be just a measurement artefact because all the items measuring this variable were reverse coded and past research in Indian context shows that respondents' sometimes misunderstand these items. Thus not much is read in the aberration.

Since HR practices do not exert large influence on professional commitment, higher professional commitment could be the result of good professional skills of the majority of respondents. Most of the senior doctors have postgraduates with specialisations in different fields. This is reflected by high value of self-efficacy (the score is 4.18, see Table 4) in the sample. But on the other hand, organisational commitment is lower, which evidently is the result of inadequate developmental opportunities, and lower score on fairness perception of HR practices (see Table 3). Policy makers should, therefore, provide growth and development opportunities for employees and implement fair and transparent HR practices to effectively implement reforms. Since the results suggest that current status of fair and developmental HR practices is poor, an improvement and reform in this area will not only enhance organisational commitment but will also influence professional commitment.

Another factor which emerges critical is the inter-relationship among fellow doctors. The cooperation of colleagues and superiors enhances both organisational and professional commitment of doctors. The current sample shows that the relations are reasonably good (mean score is 3.92). Good relations facilitate sharing of health care related issues openly and supporting each other. But since this factor has emerged so critical in the study, it is desirable that constant efforts be made in imbibing cooperative culture among doctors. Though this relationship score looks acceptable, authors found that in some states it was on lower side. One reason was that these states allowed doctors in government health service to do private practice as well. This practice instigates a sense of competition among doctors to enhance their professional interests. Thus, it is suggested that extensive socialisation to indoctrinate professional values and intended departmental culture should be taken up by the department to help doctors cooperate with each other, especially in these states. Such value based socialisation mechanisms have proved to be strengthening strong coordination and control mechanisms in many large organisations (Maheshwari,

1997). These socialisation mechanisms also significantly enhance the commitment of people. It is suggested that district level forums could be created where all service providers interact at least once in a month to facilitate the effective implementation of reforms.

## **7 Significance of HR interventions**

This study emphasises the importance of implementing progressive HR practices and improving the work environment of healthcare employees/doctors in government sector. This section discusses in detail the status of various HR practices and its implication for doctors in healthcare services. Since regression was conducted only on few factors which emerged as a result of exploratory factor analysis, and some redundant factors were dropped (due to high correlations and partly due to sample size limitations), the following section considers mean values of these factors as well to make discussion inclusive. The discussion also draws from the focussed group discussions which were held with health officials. It is divided in four sections: staffing, professional growth and career development, reward policies, and structure issues. These encompass all HR practices considered in the study.

### **7.1 Staffing in Health Sector**

The most striking feature of staffing is the high desire (score 4.19) among the doctors for consultation in staffing decisions (Table 9). They want to be consulted whenever an employee is posted in their department. However, the intensity of consultation in human resource planning is substantially low (score 2.77). Similarly health officials view selection process and staffing decisions unfair and perceive lack in transparency (score 2.9). As the decision-making in the sector is highly centralised, staffing decisions are influenced more by political and administrative concerns than by the field requirements. The denial of this consultation is found to affect adversely the morale of doctors. Doctors also perceive that most of the selection processes are inadequate to test peoples' skill. Consequently employees with inappropriate skills enter the health sector. Moderate job clarity primarily emanates from the primary focus on implementation of national health programmes (e.g., vaccinations) which are well spelt out in the documents. But on regular health services front, there needs to be more clarity on scope of doctor's responsibility.

### **7.2 Professional Growth and Career Development**

Professional growth and career development opportunities are important issues affecting doctors' commitment. However, the status of most of the career and professional growth related practices is poor (see Table 10). Opportunities for continued education are low (score 3.11). Since doctor's profession requires constant upgrading of ones knowledge and skill, this factor is very critical. Doctors believe that there is low concern for people development (score 3.24) and poor training climate (score 3.2). This results in lower commitment, and frustration among the doctors. Thus there is a need for putting in place

an effective developmental programme which upgrades doctors' skills and competencies on job.

The promotions are seniority based but are not perceived fair (score 2.96). Many doctors are made to officiate at higher district levels without having been promoted and provided corresponding benefits. In deciding these arrangements seniority of doctors is often ignored.

### **7.3 Reward Policies**

Doctors perceive that there is no relation between performance and rewards or recognition (see Table 11). Hence, they have very low motivation to perform in the organisation. This is a critical variable to enhance the doctors' commitment. Rewards in the department do not motivate doctors owing to low perception of fairness and equity. In any case the compensation and privileges are seniority/tenure based, and thus performance is neglected. Policy makers need to take note of this factor if they want to inculcate a performance culture in health sector. Otherwise not only they will attract poor human resources, but also they will lose out good performers if their contributions are not recognised.

### **7.4 Structural Design Changes**

The progressive administrative and HR policy and practices will be successfully implemented only when proper enabling structural arrangements are put in place. The focussed group discussions reveal that the current structural rigidities in healthcare sector are an impediment to implement the reform process. This emerged from qualitative study and discussions authors had with officials at various levels.

Based on the study's findings, following structural design elements need immediate attention of policy makers.

### **Roles and Responsibilities**

Health professionals at the district level perform three distinct activities. These are regulating and monitoring, provision of health care services and facilitating and coordinating the provision of services. These three roles require different behavioural pattern. These are summarised in Table 12. In instigate appropriate behaviour, the health systems lack enabling structures and communication process.

The present structure is characterised by rigidities leading to very little coordination and communication between centre, state, district, sub-division, blocks, sectors and villages with highly unpredictable resource flows, high variability in performance and inconsistent practices (Bhat and Maheshwari, 2005). Further, the health infrastructure is fragmented and there is very little coordination across Health, Family Welfare and Indian System of Medicine (ISM). Further roles in the present structure are characterised by little influence

to steer the programme and lack of clarity on linkages and resource flows, inadequate role in strategic planning and policy and considerable gaps in capacities.

These structural rigidities and discontinuities have led to mechanistic system of decision-making in the health sector. Over the years many of these rigidities have been reinforced and have to a large extent been institutionalised by centralising decision-making powers at the state and central level. Centralised decision-making over a period of time has seriously affected the creativity and commitment among healthcare providers in the system.

Consistent with the mechanistic decision-making, system tries to overcome some of the concerns relating to hierarchy, justice (both procedural and substantive), and HR issues by moving away from performance based system and linking to seniority based HR systems. Consequently the performance focus in the state was found to be meeting the documented targets relating to different national programmes (like immunisation, malaria eradication, family planning etc.) than to quality of care to patients visiting the health facilities. Any reform process need to address these issues. For example, strengthening of referral system requires a network of sustained relationships focused on to work out problems as they arise and linked by informal channels of communication and networking. At the micro level, health care providers need to connect, communicate, and collaborate through a web of interrelated informal networks. Tight structural arrangements and various rigidities described above fail to facilitate such communication, required to provide adequate care.

The other central issue of structure relates to control and quality of supervision. Officials at different levels collect information to achieve desired control and influence below them. Collecting relevant information for this purpose is vital. However, officials collect the important information through informal networks, not through formal hierarchy. Hence, effective provision of care would require investment in the socialisation of officials and facilitating the development of their mutual informal relationships.

### **Networking, Collaboration and Referral Linkages**

The networking, collaborations and referral linkages are critical for effective healthcare system. The key to this lies in two factors: one, the policy and physical infrastructure (physical capacity) and second, the management capacity to develop collaborations, and implement the referrals. The later will also include referring to the ability of personnel to diagnose a need for referral; their willingness to refer the patient to specialised services; and their pro-social behaviour. There is significant tendency to spend significant efforts in information seeking, information screening and its careful dissemination. Hence, the willingness to implement these depends on the confidence and trust in the relationship between service providers in the network than on formal linkages. Most of the public health facilities do not qualify on this condition primarily owing to prevailing roles and responsibilities and management structure of the health system.

## 8 Conclusion

Given the growing complexities and challenges the health sector faces, reforms in this sector are inevitable. Reforms in the health sector generally focus on making the health systems responsive through higher allocations and strengthening financial systems, ensuring local participation and public-private partnerships, and autonomy of health facilities. Inter alia, it is through these reforms that deficiencies in the health sector can be addressed. The reform process is also likely to help in developing strategies that ensure effectiveness and efficiency of resource use.

However, the reform process makes some fundamental assumptions about the intrinsic organisational and professional commitment and availability of skilled and competent health care professional. We argue that the commitment of people working in the health sector would have significant implications for any sector reform process to succeed. The study of health officials at the district and state level suggests that the sector faces number of human resource challenges to ensure the professional and organisational commitment of officials. Effective management of issues raised in this paper would lead to better implementation of reform processes.

The findings of this study suggest a critical linkage between human resource (HR) practices/policies and commitment of doctors working in the government at district and state level handling administrative positions. Specifically, following HR practices were found critical in influencing organisational commitment: transparency in selection/postings, supportive training and capacity strengthening climate, recognition of performance and regular performance feedback. Further, results suggest that certain work environment and structural factors facilitate these practices. Health officials' roles need to be redefined and given complexity of coordination at various levels, officials need to be allocated higher responsibilities. There is also a need to improve interpersonal relations within departments and coordination among agencies and officials at various levels. It is also observed that the structural rigidities in the system leading to obstruction in information sharing across various levels needs to be addressed to ensure effective healthcare delivery. This study highlights the criticality of administrative and structural issues for reforms of healthcare sector in India.

Addressing human resources issues is critical for ensuring commitment from staff in implementing new initiatives. National Rural Health Mission (NRHM) also identifies the human resources and capacities as an important challenge. Institutions that are critical vehicles to implement the NHRM would remain weak owing to low commitment of people. It would be important to focus on HR issues before any new initiative is proposed and implemented. The departments of health across states need to broaden and deepen the understanding of HR management and planning issues. For this purpose they may need to set-up HR division having appropriate competency and skill-mix to address the issues and work towards making the right changes. The papers discusses that these changes will

be required at both strategic and operational levels. For example, the existing institutional structure of the healthcare delivery system needs thorough review. The present structure has grown in size without giving due consideration to developing appropriate management structures to handle a large number of employees; has fragmented the healthcare delivery system by creating operating islands without any mechanism of coordination and information sharing across departments and offices involved in implementing the programmes; is without any one assuming responsibility of performance or management of key resources and has remained poorly developed in terms of management systems (financial, personnel, logistics, etc) to implement programmes effectively and with greater degree of transparency. Without addressing some of these key institutional aspects in the health sector, effective delivery remains dream. Since development oriented human resource practices are powerful tools that commit health professionals to enhance the quality of care, we believe that health sector reforms should concentrate on human resource issues and practices more than ever before in the future.

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**Table 1: Key Indicators of the States under Study**

<b>Key indicators</b>	<b>Maharashtra</b>	<b>MP</b>	<b>Chattisgarh</b>	<b>Gujarat</b>
Population (in million) 2001 census	97	60	21	51
Males (in thousands)	50	31	11	27
Females (in thousands)	47	29	10	24
Area (in thousand sq. Km.) 2003-04	308	308	135	196
Districts	35	45	16	25
Literacy rate (Percentage)	77	64	65	69
Sex Ratio (Females per thousand males)	922	933	990	920
<b>Vital Health Indicators</b>				
Birth Rate	20.3	30.3	26.9	24.6
Death Rate	7.3	9.7	9.6	7.6
Infant Mortality Rate (IMR)	45	85	78	57.0
Total Fertility Rate (TFR)	2.52	3.9		2.8
Mother Mortality Rate (MMR)	310	498		540
<b>Health Infrastructure</b>				
Hospitals	945			59
Dispensaries	2,019			41
Primary Health Centres (PHC)	1,807	1194	512	1027
Beds in Institutions	92,472		6822	6648
Population (in thousands)/PHC	53.54	50.57	40.62	49.27
Comparison of combined basic indicators of the four states with India total: Population 22 per cent, Geographic area 29 percent.				

**Table2: Constructs and reliability estimates**

<b>Human resource functions</b>	<b>Construct/Factor label</b>	<b>Number of items</b>	<b>Cronbach alpha</b>
Human resource planning	Consultation in human resource planning	6	.85
	Fairness in transfer	2	.83
Career Growth	Fairness of seniority based promotion	4	.69
	Job clarity before joining	2	.70
	Transparency in selection	3	.69
Training policy	Role in training of subordinates	2	.70
	Supportive training climate	3	.72
Performance appraisal policy	Clarity of performance objectives	3	.58
	Performance feedback	3	.75
	Appraisal utility	6	.70
Compensation policy	Seniority based compensation	3	.51
	Reward performance relationship	3	.70
Work environment	Job autonomy	7	.83
	Relationship with superiors	2	.59

**Table 3. Commitment of Doctors at District and State Level to the department and the profession and the differences between them (Scale: 5.00)**

Commitment	Level	Mean	Std. Deviation
Affective	Organisation	3.65	0.55
Commitment	Profession	3.88	0.51
Normative	Organisation	3.59	0.54
Commitment	Profession	3.89	0.58
Continuance	Organisation	3.05	0.58
Commitment	Profession	3.41	0.54

**Table 4. Descriptive Statistics of HR Practices, Work Environment, and Self Efficacy variables**

HR Practice Variables	Mean	Std. Deviation
Consultation in Human Resource Planning	2.77	0.98
Fairness in Transfer	2.86	1.10
Fairness of seniority based promotion	2.96	0.77
Job clarity before joining	3.31	0.92
Transparency in selection	2.86	0.79
Supportive training climate	3.20	0.73
Role in training of subordinates	3.01	0.96
Clarity of performance objectives	3.70	0.56
Performance feedback	2.60	0.78
Appraisal utility	2.87	0.62
Seniority based privileges	3.34	0.62
Reward performance relation	2.47	0.80
Job autonomy	2.92	0.71
Self efficacy	4.18	0.56
Relationship with superiors	3.92	0.63

**Table 5: Stepwise regression for affective organisational commitment and human resource practices**

Variables	Model 1	Model 2	Model 3
Appraisal Utility	.354***	.294***	.193**
Relationship with Superiors		.256***	.240***
Supportive Training Climate			.190**
$\Delta R^2$	.120	.057	.021
**P<0.05 ***P<0.1			

**Table 6: Stepwise regression for normative organisational commitment and human resource practices**

Variables	Model 1	Model 2	Model 3	Model 4
Relationship with Superiors	.351***	.346***	.391***	.362***
Performance Feedback		.297***	.340***	.302***
Reward Performance Relationship			-.162**	-.198***
Transparency in Selection				.169**
$\Delta R^2$	.118	.084	.018	.002
*P<0.01 **P<0.05 ***P<0.1				

**Table 7: Stepwise regressions for affective professional commitment and human resource practices**

Variables	Model 1	Model 2	Model 3
Relationship with Superiors	.191**	.248***	.226***
Reward Performance Relationship		-.204***	-.256***
Consultation in Human Resource Planning			.196**
$\Delta R^2$	.031	.033	.030
*P<0.01 **P<0.05 ***P<0.1			

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>
Clarity of Performance Objectives	.205***	.194***
Job Clarity before Joining		.166**
$\Delta R^2$	.037	.022
*P<0.01 **P<0.05 ***P<0.1		

<b>Staffing Practices</b>	<b>Mean (Scale: 5.00)</b>	<b>Std. Deviation</b>
Consultation in Planning	2.77	0.98
Importance of consultation in planning	4.19	0.72
Fairness in transfer	2.86	1.10
Job Clarity before joining	3.31	0.92
Transparency in selection	2.86	0.79

<b>Staffing Practices</b>	<b>Mean (Scale: 5.00)</b>	<b>Std. Deviation</b>
Opportunities for CME	3.11	0.89
Supportive training climate	3.20	0.73
Concern for People Development	3.24	0.84
Fairness in seniority based promotion	2.96	0.77

<b>Staffing Practices</b>	<b>Mean (Scale: 5.00)</b>	<b>Std. Deviation</b>
Motivation to perform	3.07	0.82
Seniority based privileges	3.34	0.62
Reward performance relationship	2.47	0.80

**Table 12. Roles and responsibilities in health sector**

<b>Activities</b>	<b>Regulation</b>	<b>Service delivery</b>	<b>Facilitating the services</b>
Goals and Objectives	Implementing the laws and standards to protect the health of people like laws related to adulteration of food articles.	Caring the patient	Coordinating between Personnel responsible for Different health schemes
Expected Behaviour	<ul style="list-style-type: none"> <li>· Authority driven</li> <li>· Top-down communication</li> <li>· Paternalistic</li> <li>· Bureaucratic behaviour</li> </ul>	<ul style="list-style-type: none"> <li>· Influence driven</li> <li>· Bottom-up communication</li> <li>· Benevolent leadership</li> <li>· Pro-social behaviour</li> </ul>	<ul style="list-style-type: none"> <li>· Coordinating abilities</li> <li>· Both-way communication</li> <li>· Customer sensitive</li> </ul>
Supportive Structure	<ul style="list-style-type: none"> <li>· Centralised decision-making</li> <li>· High power distance between different levels</li> <li>· Long hierarchy</li> </ul>	<ul style="list-style-type: none"> <li>· Empowerment at lower levels</li> <li>· Low power distance between different levels</li> <li>· Short hierarchy</li> </ul>	<ul style="list-style-type: none"> <li>· Democratic decision-making</li> <li>· Equitable power distribution</li> <li>· Medium hierarchy</li> </ul>
Assumptions Behind the Structural design	<ul style="list-style-type: none"> <li>· Do not trust people unless proved worthy of that</li> <li>· Do not leave things to chance</li> </ul>	<ul style="list-style-type: none"> <li>· Trust people unless proved unworthy of that</li> </ul>	<ul style="list-style-type: none"> <li>· Neither trust them not mistrust them, be open to examination every time.</li> </ul>