

**CHAPTER 1**

**INTRODUCTION**

# CHAPTER 1: INTRODUCTION

## 1.1 General introduction

Emotions play a very critical role in our life. The construct of Emotional Intelligence today is one of the most frequently researched topics in organizational study especially in context of human behavior. Emotional intelligence (E.I.) refers to the ability to recognize and regulate emotions in ourselves and others (Goleman, 2001).

Emotional intelligence has been found to be associated with leadership. Leaders high in emotional intelligence are key to organizational success. Leaders must have the capacity to sense employees' feelings about their work environments, to intervene when problems arise, to manage their own emotions in order to gain the trust of the employees, and to understand the political and social conventions within an organization. In addition, a leader has the capacity to impact organizational performance by setting a particular work climate. (Goleman 2001)

Organizational climate is perhaps one of the most important and significant characteristics of a great workplace. In most general way it can be defined as members' collective perception about their organization with respect to such dimensions as autonomy, trust, cohesiveness, support, innovation, recognition and fairness. (Moran and Volkwein 1992, Koys and Decotilis 1991, Dewitte and De cock 1986, James and Jones 1974) Researchers and investigators in organizational climate literature have reached consensus that it is a psychological multidimensional complex phenomenon that has an effect on learning, performance, organizational commitment, turnover and tenure. (Likert 1967)

Employee engagement is one of the most important variables which is affected directly by organizational climate (Schneider and Reichers 1983 ,Rhyde 2010) .Employee Engagement is a measurable degree of an employee's positive or negative emotional attachment to their job, colleagues and organization which profoundly influences their willingness to learn and perform at work (Scarlett 2001). By definition, employees feel engaged when they find personal meaning and motivation in their work, receive positive interpersonal support and operate in an efficient work environment or organizational climate. Research work done so far shows that employee engagement is positively associated with organizational commitment and negatively with employee turnover. (J.K.Harter,F.L.Schmidt,T.L.Hayes 2002)

Concept of organizational commitment has attracted considerable attention over recent years and has become a central objective of research in human resource management. Organizational commitment, as an attitude, has been defined as the relative strength of an individual's identification with, and involvement in, a particular organization (Mowday et al., 1979; Allan and Meyer, 1990).Employee commitment is important because high levels of commitment lead to several favorable organizational outcomes. Meta analyses indicate that commitment is negatively related to turnover (Cooper - Hakim & Viswesvaran, 2005), absenteeism (Farrell & Stamm, 1988), and counterproductive behavior (Dalal, 2005) and positively related to job satisfaction (Cooper-Hakim & Viswesvaran, 2005), motivation (Mathieu & Zajac, 1990), and organizational citizenship behaviors.

High rates of employee turnover result in greater inefficiencies in organizations as they must bear the costs associated with hiring and training new employees ,as well as cost of lost productivity when experienced workers leave .This is especially true in

organizations where the organizational capital is primarily intellectual that is where employee knowledge skills and abilities form the basis for services and deliverables of the organizations .High rates of turnover may lead to reduced productivity and reduced competitiveness .(Balfour and Neff 1992 ) Talented employees often comprise the organization's core human capital, making it significant to highlight their turnover behavior influence on an organization's competitive advantage (Lee and Steven, 1997; Shaw, 1999; HoukesInge, 2001). The obvious loss of an organization's talent has inspired researchers and practitioners alike to identify the factors that enable organizations to promote effective talent retention and organization performance (Dalton et al., 1982; Allen and Rodger, 1999; Lee et al.,2004). The present research is aimed at finding relationship amongst above mentioned constructs.

## **1.2 Background**

The present research study was focused on Organizational Commitment of sales personnel in Pharmaceutical Industry in India. The main purpose of the study was identifying relationship between Emotional Intelligence of leaders and Organizational commitment of subordinates so as to minimize intention to quit of subordinates.

The Pharmaceutical Industry is the third largest Industry in India by volume and it is growing at a rate of more than 10% per annum. It is already a very important industry for the economy of the country. Recently the employee turnover rate of the industry for sales personnel has raised to an alarming high of 30-35% from as low as 8-10% in the past (Dhar 2010). Moreover, it was found that very few research studies are available with a focus on Organizational commitment of sales personnel in the Pharmaceutical Industry in India. This is the main reason why the researcher was inspired to take up the present study.

Emotional Intelligence has been researched in great detail in predicting Managerial effectiveness and Leadership characteristics. (Goleman 2001). Emotional Intelligence of Leaders has emerged as a new area of interest recently. Emotional Intelligence of leaders has shown to have considerable impact on Employee Engagement and Organizational climate which in turn have an impact on employee's intention to quit (Corporate Leadership Council 2004).

Concept of Organizational Commitment has remained the topic of interest ever since it was introduced in the early 1950s to the field of Organizational Behavior (Aryee and Heng 1990, Meyer and Allen 1997, Baruch 1998, Mowday 1998). This is in part due to the vast number of works that have found relationships between organizational commitment and attitudes and behaviors in the workplace such as improved performance, reduced absenteeism & reduced turnover (Porter et al., 1974, 1976; Koch and Steers, 1978; Angle and Perry, 1981, Meyer and Allen 1997, Mowday 1998).

Employee engagement is another organizational factor that is found to be associated with organizational commitment and has been researched extensively (J.K. Harter, F.L. Schmidt, T.L. Hayes 2002).

Organizational Climate has also been found to influence employees' work behaviors and perceptions towards organization thereby linking their work performance and job related attitudes such as organizational commitment (Pritchard and Karasick, 1973; Litwin and Stringer, 1968; Taguiri and Litwin, 1968).

Although a great deal has been researched about emotional intelligence of leader, organizational climate, and employee engagement the exact manner in which these factors influence each other and in turn the development of organizational commitment and intention to quit is still not well understood. Empirical evidence is still needed to unravel the development of organizational commitment in order to reduce employee turnover. Moreover there is hardly any research work done to study relationship in above mentioned constructs in Pharmaceutical Industry with focus on sales personnel in India. The present thesis will therefore add significant value in research literature in this context.

### **1.3 Justification for research**

The Indian Pharmaceutical Industry is 3<sup>rd</sup> in terms volume and 14<sup>th</sup> in value in the world.(IBS report 2010). According to Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, the total turnover of India's pharmaceuticals industry is expected to reach around US\$19.22 billion by end of year 2012.(KPMG report 2011) India will join among the league of top 10 global pharmaceuticals markets in terms of sales by 2020 with value reaching US\$50 billion.(Price water house coopers 2010)

Thus Pharmaceutical Industry is going to be an extremely important industry in India in immediate future .

The pharmaceutical industry is growing exponentially. There is a constant thirst for the best and the brightest employees. After information technology, pharmaceutical industry is grappling with the highest level of attrition of 30-35%. Globally the rate of attrition in pharmaceutical industry is 10-12 % ( IBS report 2010 ).It was really surprising to see that hardly any research studies are available in India with focus on Pharmaceutical Industry and its problem of high employee turnover .It was felt that Industry of such high importance should be researched much more .

Pharmaceutical salespersons are an important source of information that doctors use in deciding which drugs to prescribe to their patients (Andaleeb and Tallman, 1995).

Pharmaceutical salespersons have to call on doctors and detail existing and new products. While this seems straightforward, it is not easy. Doctors are very busy and usually provide sales persons with a very limited amount of face to face time per call. Salespersons often have to endure long waiting times before they can see doctors and hence need a good deal of patience. They are required to build relationships with doctors and ensure that the doctors prescribe their products. However, previous research (Andaleeb and Tallman, 1995) has found that doctors often do not value the salespersons highly and believe that they can get information on drugs from other sources. Such beliefs may present challenges for salespersons in building relationships with doctors. Pharmaceutical salespersons need to believe that their work is important even if doctors do not readily acknowledge this. They need to have emotional intelligence to get along with doctors who may have a much higher level of status in emerging market contexts compared to the salespersons. In addition, salespersons have

to absorb a vast amount of technical information and convey it in a succinct way. They need to be interested in the material they have to memorize, and should be able to understand the information and answer the queries that doctors may pose. Hence they need a considerable amount of technical knowledge to function effectively.

The sales people spend most of their work time outside the office in the field ,some of them in fact operate in remote locations which are far away from the corporate office .Therefore it is not surprising that the organizational climate and culture in corporate office have very little impact on them. For them it is the immediate supervisor who makes the whole difference .The immediate supervisor represents the organization to the salesperson. The communication , the values, motivation and in general the leadership style of the supervisor (leader) added together is perceived as Organizational climate by the sales people .It is this Organizational Climate that has maximum impact on the sales personnel in general .

Emotional Intelligence (EI) refers to the capacity for recognizing our own feelings and those of others for motivating ourselves and for managing emotions in ourselves and our relationships (Goleman 1998) .Research shows that leaders high in emotional intelligence are key to organizational success; leaders must have the capacity to sense employees' feelings about their work environments, to intervene when problems arise, to manage their own emotions in order to gain the trust of the employees, and to understand the political and social conventions within an organization (Goleman, 2001). Thus, a leader has the capacity to impact organizational performance by setting a particular work climate or Organizational climate .

When the organizational climate is right the people in organization believe that their organization is a great place to be in. They also believe that the goals of the organization

are worth striving for and the values of the organization are worth upholding (Mowday et al., 1979).

Thus in case of pharmaceutical sales personnel it was felt that organizational climate set by the emotional intelligence of the leaders is a critical factor in deciding the level of employee engagement which in turn would affect the organizational commitment. The people who have high levels of organization commitment tend to remain with the organization and are willing to put in considerable efforts on behalf of the organization. Previous research has indicated that higher levels of organization commitment are associated with lower turnover intentions (Mathieu and Zajac 1990) .Thus it was felt that if the leaders in pharmaceutical industry were emotionally intelligent it would have a high influence on reducing employee turnover.

#### **1.4 Purpose of the study**

The purpose of the study was to determine the relationship between emotional intelligence of leaders, organizational climate ,employee engagement ,and organizational commitment of sales personnel of pharmaceutical industry in India. The proposed relationship between variables of interest is presented in figure 1.1

The Pharmaceutical Industry in India is facing a challenge of very high attrition rates of 30-35% at present .This is a clear indication of low Organizational Commitment .Based on various research studies conducted in past, the researcher proposed that the Emotional Intelligence of Leaders could play a major role in improving Organizational

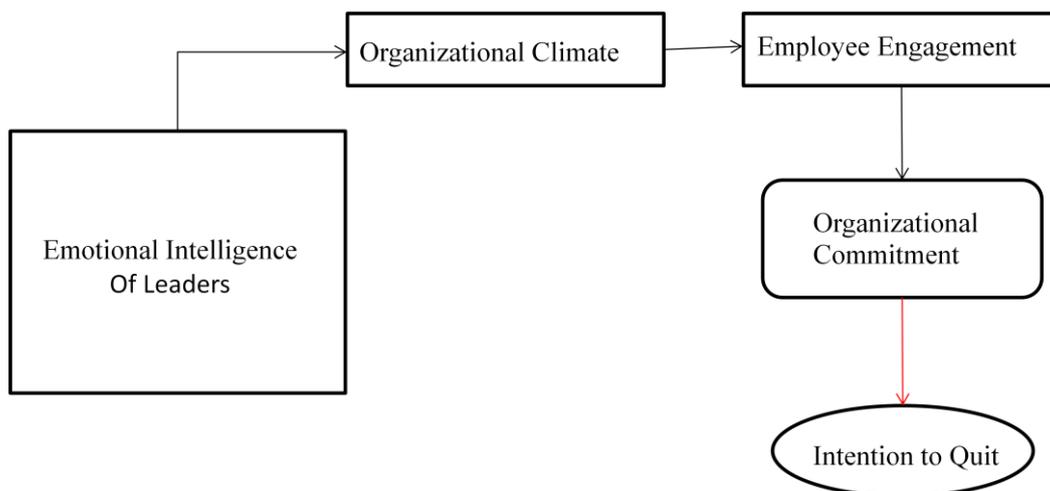
commitment of subordinates by creating a conducive organizational climate and thus improving employee engagement .

It is felt that results of the study would help the Human resource managers and line Managers in Pharmaceutical Industry in understanding the key organizational factors influencing the Organizational Commitment of sales personnel which in turn would help them in reducing employee turnover .

The relationship of Emotional Intelligence of leaders with these factors along with Organizational commitment would also help in deciding training needs and recruitment criteria for the managers .

The present study would give a different perspective to tackling the issue of high employee turnover in Pharmaceutical Industry .

**Fig 1.1 Proposed relationship between emotional intelligence of leaders, employee engagement ,organizational climate, organizational commitment and intention to quit**



Note Red line indicates negative relationship



## **1.5 Significance of the study**

The pharmaceutical industry is growing exponentially but at the same time it is grappling with the highest level of attrition of 30-35 %. Globally the rate of attrition in Pharmaceutical industry is 10-12 % per annum .The attrition in Indian pharmaceutical industry is alarmingly high .This is a clear indication of lack of Organizational Commitment (Dhar 2010).

There are various research studies available in literature which find antecedents and consequences of organizational commitment and in general causes of attrition in India

It was surprising to find that there is hardly any research about the organizational commitment and turnover intentions of salespersons in pharmaceutical industry working in emerging markets like India . This is surprising because of two reasons. First, the enormous business potential in emerging markets is being recognized and addressed by both global and local firms (Gadiesh, Leong and Vestring, 2007). Second, firms from emerging markets are making their presence felt in countries outside their home markets (Khanna and Palepu, 2006). Both developments require the dedicated efforts of salespersons in securing marketplace success for their firms. Salespersons are important resources for organizations and the overall investment in the sales force for large firms can be of the order of billions of dollars (Zoltners et al, 2001). Salespersons work at the boundary between the firm and its environment and are subjected to uncertainty and incompatible expectations from different groups outside and within the firm. The salesperson's role is critically important in the revenue generation activities

of firms and the salesperson performance has a major impact on many positions within the firm (Churchill, Ford and Walker,1974).

It was felt that the present research would be useful in bridging gap in literature on organizational commitment of sales person in pharmaceutical industry .It was also felt that this study would give a specific direction or solution for solving the problem of high turnover in pharmaceutical industry.

## **1.6 Description of concepts used in the study**

### **1.6.1 Emotional Intelligence**

The topic of emotional intelligence has witnessed unparalleled interest for last two decades .At the most general level emotional intelligence (EI ) refers to the ability to recognize and regulate emotions in ourselves and in others (Goleman 1998)

Peter Salovey and John Mayor who originally used the term ‘Emotional intelligence ‘ in published writing defined it as The ability to monitor one’s own and other’s feelings and emotions ,to discriminate amongst them and to use this information to guide one’s thinking and actions (Mayor and Salovey 1997)

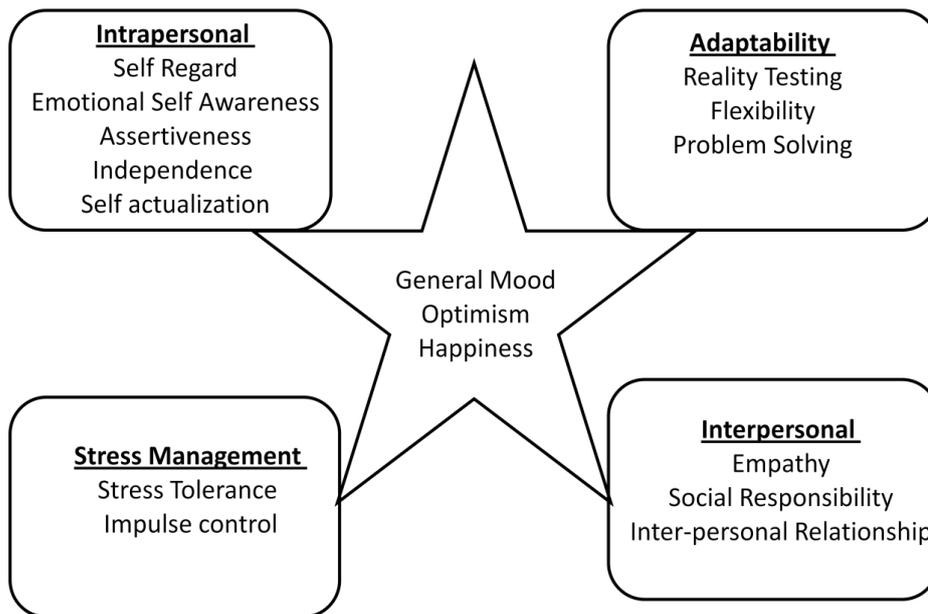
Emotional Intelligence develops over time and that it can be improved through training, programming, and therapy. Those individuals with higher than average EQs are in general are more successful in meeting environmental demands and pressures. (Bar-On 1997)

Bar-On (1997) defines emotional intelligence as being concerned with effectively understanding oneself and others, relating well to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands.

Academic researchers of EI (Salovey&Mayor 1990, Armstrong 1993,Chemiss&Alder 2000,Lynn 2002 ) have identified specific measurable dimensions of emotional intelligence .For the purpose of this study ,the five dimensions of emotional intelligence

identified by Bar-On (1997) were used to operationalize the concept of emotional intelligence .

Figure 1.2 Emotional intelligence model (Bar-On 1997)



Emotional Intelligence Model by Bar-On

A literature review to date pertaining to emotional intelligence has identified a diverse number of studies attributing emotional intelligence to increase performance outcome in workplace .Such outcomes include employee effectiveness ratings ,sales quota indices, leadership capacity ,career commitment and managerial advancement .(Pesuric and Byham 1996 ; Spencer,McClelland &Kelner 1997; Goleman 1998 ;Carson &Carson 1998 ;,Dulewigz&Higgs 1999; Palmer &Stough2001 ;Freshman &Rubino 2002 )

A gap in literature has been identified pertaining to research conducted on the evaluation of the emotional intelligence of leaders and any possible associated impact on the employee engagement in turn affecting organization commitment .

### **1.6.2 Employee engagement**

Engagement at work was conceptualized by Kahn, (1990) as the ‘harnessing of organizational members’ selves to their work roles. In engagement, people employ and express themselves physically, cognitively, and emotionally during role performances. Thus, according to Kahn (1990), engagement means to be psychologically as well as physically present when occupying and performing an organizational role.

Most often employee engagement has been defined as emotional and intellectual commitment to the organization (Baumruk 2004, Richman 2006 and Shaw 2005) or the amount of discretionary effort exhibited by employees in their job (Frank et al 2004). Truss et al (2006) define employee engagement simply as ‘passion for work’, a psychological state which is seen to encompass the three dimensions of engagement discussed by Kahn (1990), and captures the common theme running through all these definitions.

The researchers generally do agree that employee engagement involves the interplay of three factors - cognitive commitment, emotional attachment, and the behavioral outcomes that result from an employee’s connection with their company.

It is important to know, however, that the researchers tend to emphasize one (and sometimes two) of the three factors over the others in creating their particular definition for employee engagement.

Some definitions emphasize employees' cognitive connection to the work or organization and the subsequent behaviors that they demonstrate on the job. The Corporate Leadership Council (2004), Blessing White (2005), and Smythe (2005) emphasize satisfaction and commitment (both cognitive concepts) and their impact on how hard an employee is willing to work. Blessing White (2005) also identifies retention as one of these behavioral outcomes.

A second group focuses on the emotional attachments. Bates (2004) and Gubman (2004) both generally refer to engagement as a heightened emotional attachment to one's work, organization, manager or co-workers. Baumruk (2004) straddles the cognitive and emotional approaches by defining engagement as "the state in which individuals are emotionally and intellectually committed."

Finally, a third group focuses primarily on the behavioral outcomes, regardless of the causes. Towers Perrin (2003) (2005), Shaffer (2004), refer to engagement as the employee's willingness to expend discretionary effort on the job. Walker Information (2005) places the emphasis on an employee's commitment to staying with his/her company.

### **1.6.3 Organizational commitment**

Organizational commitment, as an attitude, has been defined as the relative strength of an individual's identification with, and involvement in, a particular organization (Mowday et al., 1979; Allan and Meyer, 1990). This definition, reflecting an

individual's affective commitment, represents a major approach to the study of organizational commitment (Meyer et al., 2002), and appears to be the most desired form of commitment. Employees with strong organizational commitment continue employment with the organization because they want to do so (Ghani et al., 2004). In order to achieve organizational commitment, employers need to help their employee's value involvement in the organization. The more the employee's value being part of the organization, the more likely they are to stay with the organization.

### **Definition of Commitment**

Multiple definitions of organizational commitment are found in the literature. Bateman and Strasser (1984) state that organizational commitment has been operationally defined as "multidimensional in nature, involving an employee's loyalty to the organization, willingness to exert effort on behalf of the organization, degree of goal and value congruency with the organization, and desire to maintain membership". Mowday, Steers, and Porter (1979) identified commitment-related attitudes and commitment-related behaviors.

Meyer and Allen (1991) and Dunham et al (1994) identified three types of commitment; affective commitment, continuance commitment, and normative commitment.

Normative commitment is a relatively new aspect of organizational commitment having been defined by Bolon in 1993. Affective commitment is defined as the emotional attachment, identification, and involvement that an employee has with its organization and goals (Mowday et al, 1997, Meyer & Allen, 1993; O'Reily & Chatman). Porter et al (1974) further characterize affective commitment by three factors (1) belief in and acceptance of the organization's goals and values, (2) a willingness to focus effort on helping the organization achieve its goals, and (3) a desire to maintain organizational

membership. Mowday et al (1979) further state that affective communication is when the employee identifies with a particular organization and its goals in order to maintain membership to facilitate the goal. Meyer and Allen (1997) continue to say that employees retain membership out of choice and this is their commitment to the organization.

Continuance commitment is the willingness to remain in an organization because of the investment that the employee has with nontransferable investments. Nontransferable investments include things such as retirement, relationships with other employees, or things that are special to the organization (Reichers, 1985). Continuance commitment also includes factors such as years of employment or benefits that the employee may receive that are unique to the organization (Reichers, 1985). Meyer and Allen (1997) further explain that employees who share continuance commitment with their employer often make it very difficult for an employee to leave the organization.

Normative commitment (Bolon, 1993) is the commitment that a person believes that they have to the organization or their feeling of obligation to their workplace. In 1982, Weiner discusses normative commitment as being a “generalized value of loyalty and duty”. Meyer and Allen (1991) supported this type of commitment prior to Bolon’s definition, with their definition of normative commitment being “a feeling of obligation”. It is argued that normative commitment is only natural due to the way we are raised in society. Normative commitment can be explained by other commitments such as marriage, family, religion, etc. therefore when it comes to one’s commitment to their place of employment they often feel like they have a moral obligation to the organization (Wiener, 1982).

Meyer, Allen, & Smith (1993) say that the three types of commitment are a psychological state “that either characterizes the employee’s relationship with the organization or has the implications to affect whether the employee will continue with the organization”. Meyer et al (1993) continue to say that generally the research shows that those employee’s with a strong affective commitment will remain with an organization because they want to, those with a strong continuance commitment remain because they have to, and those with a normative commitment remain because they fell that they have to. Meyer & Allen (1997) define a committed employee as being one “stays with an organization, attends work regularly, puts in a full day and more, protects corporate assets, and believes in the organizational goals”. This employee positively contributes to the organization because of its commitment to the organization.

#### **1.6.4 Organization Climate**

Organizational climate is a construct that leverages internal processes. It is defined as a global impression of one’s organization and seething personal impact of the work environment by most authors . The concept of organizational climate has been assessed by various authors, of which many of them published their own definition of organizational climate

Organizational climate is a set of properties of the work environment, perceived directly or indirectly by employees, that is assumed to be a major force in influencing employee behavior.( Ivancevich, Konopaske, and Matteson 2011)

Organizational climate, however, proves to be hard to define. Furthermore there are several approaches to the concept of climate, of which two in particular have received substantial patronage: the cognitive schema approach and the shared perception approach.

The first approach regards the concept of climate as an individual perception and cognitive representation of the work environment. From this perspective climate assessments should be conducted at an individual level.

The second approach emphasizes the importance of shared perceptions as underpinning the notion of climate (Anderson & West, 1998; Mathisen & Einarsen 2004). Reichers and Schneider (1990) define organizational climate as the shared perception of the way things are around here . It is important to realize that from these two approaches, there is no “best” approach and they actually have a great deal of overlap. Organizational Climate (sometimes known as Corporate Climate) is the process of quantifying the “culture” of an organization.

Researchers Hart, Griffin, Wearing & Cooper (1996) have pursued the shared perception model of Organizational Climate. Their model identifies the variables which moderate an organization’s ability to mobilize its workforce in order to achieve business goals and maximize performance.

Litwin and Stinger (1968) have given a macro perspective of analyzing the organization. According to them, “Climate can be defined as the perceived attributes of an organization and its sub-systems as reflected in the way an organization deals with

its members, groups and issues". The emphasis is on perceived attributes and the working of sub-systems. This frame work emphasizes on motivational linkages and seems to be quite relevant for studying organizational climate.

It tends to influence employees' work behaviors and perceptions towards organization thereby linking their work performance and job related attitudes (Pritchard and Karasick, 1973; Litwin and Stringer, 1968; Taguiri and Litwin, 1968). It also reflects workers' emotional responses to the characteristics of the work environment (Glisson and James, 2002; James, Hater, Gent, and Bruni, 1978; James and Sells, 1981). Since the very inception of the concept (Lewin, Lippitt and White, 1939) organizational climate had gone through many changes in its conceptualization, construct definition and development. Sometime the construct of organizational climate is mixed with organizational culture, yet it is noticeable that organizational climate continued to manifest its identity and different meanings by way of representing the inner core of organizational culture to which it makes a reference. The organizational climate describes needs and presses of people in a context (Stern, 1990) that are perceived by other organizational members unlike organizational culture that serves like a bed for germinating and sustaining organizational climate. Culture represents actual situation; climate is the outward perception and manifest expression of it. Organizational culture and climate in a sense are two core dimensions of organizational characteristics that influence employees' attitudes either directly or through some medium of organizational processes (Aarons and Sawitzky, 2006; Carmazzi and Aarons, 2003; Glisson and Hemmelgarn, 1998). More positively patterned organizational climate predicts more positive work attitudes (Glisson and James, 2002; Morris and Bloom, 2002) whereas less positive or negative organizational climate gives way to heart

burning, seething grievances and by and large negative reactions from one and all. The various approaches that have defined organizational climate comprises several schools of thoughts such as structuralist, objectivist, subjectivist, interactive etc. (Moran and Volkwein, 1992; Ashforth, 1985, Forehand and Gilmer, 1964; Powell and Butterfield, 1978; Moran and Volkwein, 1992; Furnham and Gunter, 1993; Schneider and Hall, 1972; Johnston, 1976; James, Joyce and Slocum, 1988, Ashforth, 1985, Joyce and Slocum, 1984; Keys and DeCottis, 1991), but irrespective of a given framework organizations can easily be perceived for their created impact on organizational members as implied above. In line with some of the schools of thoughts organizational climate has been measured through certain defined dimensions, such as Structure, Responsibility, Risk, Reward, Warmth and Support, (Litwin and Stringer 1968), Conflict and approval rating for actions, (Furnham & Gunter, 1993; DeCottis and Summers 1987). Apart from formal organizational work environment, organizational climate is very much influenced by the in-role and extra-role social interactions that takes place in consequence of individuals' interactions within organizational boundaries (Organ, 1988) and also increased commitment seemingly caused by an urge to interact (Rousseau, 1988).

### **1.6.5 Intention to Quit**

Employee turnover is proven to have a general negative impact on organizational effectiveness (Price & Mueller, 1986) and reduces profitability (Johnson, 1981). These negative impacts include extensive financial costs, disruption of coworkers, additional work-unit stress, reduce in quality of work-unit and diminish of ability to adapt to uncertain environments.

Mellor, Moore and Loquet (2004) define employee turnover as the individual who may be thinking about quitting a job. The theory of reasoned action suggested that intention was a psychological precursor to the actual behavior act (Ajzen & Fishbein, 1980). This means that an individual's intention to perform or not to perform a behavioral act is the immediate determinant of action.

Based on this notion an individual who nurtures the thought of quitting his present profession is more likely to do so if the right condition exists, or if the adverse condition that warranted the thought of intent persists (Ajzen & Fishbein, 1980).

## **1.7 The Indian pharmaceutical industry**

### **1.7.1. Introduction**

The Indian pharmaceutical Industry currently tops the chart amongst India's science based Industries with wide ranging capabilities in the complex field of drug manufacture and technology. A highly organized sector ,the Indian Pharmaceutical Industry is estimated to be worth \$4.5 billion ,growing at about 8 to 9 %annually. It ranks very high amongst the third world countries in terms of technology ,quality and wide range of medicines manufactured .It ranges from simple headache pills to sophisticated antibiotics and complex cardiac compounds ,almost every type of medicine is now made in Indian pharmaceutical Industry .

The Indian Pharmaceutical sector is highly fragmented with more than 20000 registered units .It has expanded drastically in last two decades .The pharmaceutical industry in India is an extremely fragmented market with severe price competition and government price control.( DPCO) The industry meets around 70% of the country's demand for bulk drugs ,formulations chemicals tablets, capsules etc.There are approximately 250 large units and 8000 small scale units which form the core pharmaceutical industry in India (IBS report on Indian pharmaceutical industry, 2011)

### **1.7.2 Current scenario**

Indian Pharmaceutical market grew at rate of 15.7% up to December 2011 .Globally India ranks third in terms of manufacturing pharmaceutical products by volume .The Indian pharmaceutical Industry is expected to grow at rate of 9.5% till end of year 2015 The pharmaceutical sale volume is at present US \$11 billion it is expected to jump to US\$74 billion by year 2020.This is a huge growth potential indicating high employment opportunities especially in sales and research.

Moreover the increasing population of higher income group in the country will open a potential US\$8 million market for multinational companies selling costly drugs by 2015..Besides the domestic pharmaceutical market is estimated to touch US\$20 billion by 2015,king India lucrative destination for clinical trials for global scenario.

Further estimates of the healthcare market in India to reach US\$50 billion by 2020. (IBS report on Indian pharmaceutical industry, 2011)

### **1.7. 3 The Historical situation**

The pharmaceutical industry in India is going through a major shift in its business model in the last few years in order to get ready for a product patent regime from 2005 onwards .This shift in the model has become necessary due to the earlier process patent regime put in place since 1972 by the Government of India. This was done deliberately to promote and encourage the domestic health care industry in producing cheap and affordable drugs. As prior to this the Indian pharmaceutical sector was completely dominated by multinational companies (MNCs). These firms imported most of the bulk drugs (the active pharmaceutical ingredients) from their parent companies abroad and sold the formulations (the end products in the form of tablets and capsules, syrups etc.) at prices unaffordable for a majority of the Indian population. This led to a revision of

Government of India's (GOI) policy towards this industry in 1972 allowing Indian firms to reverse engineer the patented drugs and produce them using a different process that was not under patent. The entry of MNC's was also discouraged by restricting foreign equity to 40%. The licensing policy was also biased towards indigenous firms and firms with lesser foreign equity. All these measures by GOI laid foundations to a strong manufacturing base for bulk drugs and formulations and accelerated the growth in the Indian Pharmaceutical Industry (IPI), which today consists of more than 20,000 players. As a result the Indian pharmaceutical industry today not only meets the domestic requirement but has started exporting bulk drugs as well as formulations to the international market. Currently the main activities of Indian pharmaceutical industry are broadly restricted to producing (i) bulk drugs and (ii) formulations with very few companies risking investing in primary research aimed at developing and patenting new drugs. The bulk drug business is essentially a commodity business, whereas the formulation business is primarily a market driven and brand oriented business. Multinational companies which have entered the Indian market have mostly restricted themselves to formulation segment till date. The domestic pharmaceutical industry (MNC's and Domestic) meets about 90% of the country's bulk drug requirement and almost the entire demand for formulations. The economics of bulk drug business and that of formulation business are quite different. (IBS report on Indian pharmaceutical industry, 2011)

During the early 1990s, markets were opened by removing restrictions on imports and in 1994 licensing was abolished for producing bulk drugs and formulations. Other than this FDI restrictions into this sector have been modified to allow 74% foreign equity

through the automatic route. More favorable conditions are to follow in future particularly for MNCs as soon as 'Product Patents' and 'Exclusive Marketing Rights' (EMRs) are permitted. In a situation like this, there is a lot of speculation that the indigenous companies that have been the mainstay of the Indian pharmaceutical industry over the past couple of decades finally becoming a formidable part of Indian economy and a major source of foreign income might be facing uncertain market conditions in the future. It may also come down to a state where most of the small scale companies have to close down, with the multinational companies dominating and monopolizing the industry once again. There is a justified reason for this, and that is, so far Indian companies have made use of the cheap labor and the reverse engineering skills under the favorable conditions of process patent regime

#### **1.7..4 Advantage India**

The Indian Pharmaceutical Industry ,particularly has been front runner in a wide range of specialties involving complex drug manufacture ,development and technology .With advantage of being highly organized sector ,pharmaceutical companies are growing at rate of 9-10% per annum. (IBS report on Indian pharmaceutical industry, 2011)

There are some distinct advantages that India has to offer for Global players

*Competent workforce* India has a pool of personnel with high managerial and technical competence and also skilled workforce .It has an educated workforce and English is commonly used .Professional services are easily available.

*Cost effective chemical synthesis* its track record of development, particularly in area of improved cost beneficial chemical synthesis for various drug molecules is excellent .It provides a wide variety of bulk drugs and exports sophisticated bulk drugs.

*Legal and Financial Framework* India has a 53 year old democracy and has a solid legal framework and strong financial markets. There is already and established international industry and business community.

*Information technology* It has world class educational institutes and hence excellent support in IT .Trained manpower in IT is a major strength.

*Globalization* The country is committed to a free market economy and globalization .Above all it has a 70 million middle class market , which is continuously growing.

*Consolidation* For the first time in many years ,the International Pharmaceutical Industry is finding great opportunities in India .Process of consolidation which has become generalized phenomenon in the world pharmaceutical Industry has started taking place in India.

### **1.7.5 Major Pharmaceutical companies in India**

India based pharmaceutical companies are not only catering to the domestic market and fulfilling the country's demands, they are also exporting to around 220 countries. They are exporting high quality, low cost drugs to countries such as the US, Kenya, Malaysia, Nigeria, Russia, Singapore, South Africa, Ukraine, Vietnam, and more. Currently, the US is the biggest customer and accounts for 22 percent of the sector's exports, while Africa accounts for 16 percent and the Commonwealth of Independent States (CIS) places around eight percent of orders, as per Research and Market report.

For most of the pharmaceutical companies, domestic business contributes in the range of 20-50% of the overall revenue. US business contribution stands at 20-30% and remaining comes from the raw markets. (IBS report on Indian pharmaceutical industry, 2011)

**Table 1.1 Leading Indian Pharmaceutical Players by Sales**

company name	sales in US\$ million	year end
Cipla	6368.06	March 2011
Ranbaxy Labs	5687.33	March 2011
Dr.Reddy's Labs	5285.8	December 2010
Sun Pharma	1986.78	March 2011
Lupin LTd.	4527.12	March 2011
Aurobindo Pharma	4229.99	March 2011
Piramal Health	1619.74	March 2011
Cadila Health	2213.7	March 2011
Matrix Labs	1894.3	March 2011
Wockhardt	651.72	December 2011

### **1.7.6 Trends in the Industry**

- All companies, including MNCs, have increased their field force in the last one year.
- Indian companies are entering into strategic tie-ups with MNCs to strengthen their product portfolio.

- Companies are expanding their presence in rural markets.
- Acquisitions by MNCs to gain quick foothold in the fastest growing Indian pharmaceutical market.

Most of the Pharmaceutical companies have shown considerable decline in growth in the first half of 2011. The slowdown is widely visible in the Chronic and Acute categories. Anti-infective, pain and gastro together contribute 1/3rd of the total pharmaceutical market. The pharmaceutical companies have started facing challenges in domestic market due to increase in competition from unlisted MNCs in this segment.

They are rapidly expanding their field force to extend their geographical reach.

Companies like Cipla, Torrent and IPCA which are mainly focused on Indian market are already feeling the heat. Growth rates of companies such as Cadila, Dr. Reddy and Ranbaxy have already come down. On the other hand Lupin and Sun are showing growth due to the shift of focus towards specialty therapies, where competition is relatively low.

Basing on the changing macro factors and economic growth Emkay Research has expected the growth estimates of the pharmaceutical companies to decrease. It cut down the domestic growth estimates for Cadila, Cipla, Dr. Reddy, IPCA, Torrent and Unichem for Financial year 2010-11 and Financial year 2011-12 by 2% to 5% and retained the growth estimates for Lupin, Ranbaxy, Sun, Glaxo Smithkline and Pfitzer pharmaceutical.(EMKAY research 2011)

**Table 1.2 Indian Pharmaceutical Industry Domestic Growth Expectations**

<b>Company</b>	<b>Growth During Financial Year 2011-12</b>	<b>Earlier growth Estimates</b>
Cadila	12%	15%
Cipla	10%	15%
Dr. Reddy's	10%	15%
Glenmark	16%	16%
IPCA	10%	17%
Lupin	19%	19%
Ranbaxy	12%	12%
Sun Pharma	15%	18%
Torrent	12%	12%
Unichem	5%	9%
GSK	13%	13%
Pfizer	14%	14%

Source: Emkay Research 2011

### **1.7.7 Government Initiative and Investment**

Government initiatives in the public health sector have recorded some noteworthy successes over time with focus on investments related to better medical infrastructure, rural health facilities etc. The National Rural Health Mission (NHRM) had allocated US\$ 10.15 billion for the up gradation and capacity enhancement of healthcare facilities.

Moreover, in order to meet revised cost of construction, in March 2010 the Government allocated an additional US\$ 1.23 billion for six upcoming AIIMS (All India institute of medical sciences) like institutes and up gradation of 13 existing Government Medical Colleges. As a result, FDI inflow in hospital and diagnostic centres was US\$ 1.1 billion during April 2000 and November 2011, according to Department of Industrial Policy & Promotion (DIPP) data. FDI inflow in medical and surgical appliances stood at US\$ 472.6 million during the same period. And the drugs and pharmaceuticals sector has attracted FDI worth US\$ 5.0 billion between April 2000 and November 2011 (KPMG report 2011)

### **1.7.8 Future Growth of Indian Pharmaceutical Industry**

The Indian pharmaceutical industry's emergence on the global landscape as a strong generics player was due, in no small measure, to the Indian Patents Act, 1970, which allowed only process patents in pharmaceutical products. This was aimed at keeping the cost of medicines at affordable levels by enabling domestic pharmaceutical players to build technical expertise in reverse engineering of existing medicines by modifying the manufacturing process and, thus, become efficient producers of generic drugs.

Although India shifted to the product patent regime in 2005, the capabilities developed during the past two decades became a competitive advantage for the Indian pharmaceutical industry in the 1990s, when the rising healthcare costs in many developed countries forced them to seek the cheaper generic drug option. Thus, the Indian pharmaceutical industry was able to exploit the enormous generic opportunity that was spawned.

The share of Indian pharmaceutical companies in the total pie of approvals for generic drugs (called abbreviated new drug applications (ANDA) approvals in the U.S.) has risen steadily. In 2011 itself, more than a third of the ANDA approvals were by Indian firms. As a consequence, formulation exports from India, essentially generic drugs, have grown at 21 per cent compounded annual growth rate (CAGR) between 2005-06 and 2010-11. With about \$150 billion worth of drugs set to lose patent exclusivity between 2010 and 2015, Crisil Research expects the growth momentum in exports to continue over the next five years, with exports growing at 14-16 per cent CAGR.

In the near-term, the generic opportunity will continue to lure more companies. And, with competition intensifying, generic drugs will see greater price erosion. (KPMG report 2011)

### **1.7.9 Challenges and Limitations**

Along with higher competition, the global generic market is set to face another hurdle in the longer term. Already, R&D productivity of large global pharmaceutical players (innovators) has slowed considerably over the past few years. R&D productivity, a function of cost of new drug development and returns from those new drugs, is of critical importance as global players invest heavily in R&D (about 20 per cent of revenues). First, the average cost of developing a new drug has more than doubled in the past five years to \$1.5 billion. Second, R&D activities by global players have resulted in only a handful of new molecules.

Further, returns from these few novel drugs have not reached the scale seen in the previous decade. Unlike highly successful launches in the past, such as Lipitor, most patented drugs launched over the five years have not been able to garner sales in excess of \$1 billion. The slowing down of new drug launches will mean that the generic opportunity set to open up in the next decade (post 2020) is likely to be significantly lower. For sustaining growth, Indian drug-makers will, therefore, be forced to look at newer avenues such as entering niche segments, building relationships with global pharmaceutical for joint research and development and widening distribution networks through marketing alliances. Other potential thrust areas include bio-pharmaceuticals, contract research and manufacturing, and new drug research.

The Indian bio-pharmaceutical industry is in its emerging stage and is sized at about \$1.4 billion as of 2010-11. However, Indian bio-pharmaceutical players largely market vaccines and are yet to make inroads into U.S. and Europe. With the looming patent expiry of many bio-pharmaceutical products globally, Indian firms will look to build capabilities to capitalise on the opportunity that will arise.

The low cost of manufacturing renders India as an attractive destination for contract research, and the availability of a large patient pool makes it appealing for clinical trials, which contributes the most, in terms of revenue, to the contract research segment. An increased presence in contract research will also help them build expertise to move up the value chain and engage in new drug development.

Indian industry's R&D capabilities currently lie in reverse engineering drugs and in process chemistry. With limited experience and high costs associated with bringing a drug to the market, Indian players have traditionally shied away from drug discovery, or

in a few cases, out-licensed molecules to multinational companies at early stage of development.

At present, only a handful of Indian companies (leading the pack are: Primal Life Sciences, Glen mark and Sun Pharmaceuticals ) are engaged in new drug research; consequently, there are only 70-80 molecules in the pipeline from Indian players, of which more than two-thirds are still in early clinical phases. Amid slower growth in the generics space, large Indian players will look to enhance their focus in this area. The high-risk high-return field of new drug research holds tremendous potential for Indian players. (KPMG report 2011)