Attrition Analysis in Pharmaceutical Industry of Gujarat

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Abstract

The Indian Pharmaceutical Industry is under a transition phase since the opening up of the country's economy. After IT and BPO industry, the pharmaceutical industry is witnessing the highest level of attrition, as it is growing exponentially. Where skills are relatively scarce and where recruitment is costly or where it takes several weeks to fill a vacancy, attrition is likely to be problematic from a management point of view. This is especially true of situations in which you are losing staff to direct competitors or where customers have developed relationships with individual employees. Gujarat is one of the leading pharmaceutical manufacturing hubs of India and thus it was felt to have some sort of introspection of its manpower. Therefore this paper attempts to study the attrition scenario in the state and identify the variables that affect it. The literature shows that salary and compensation were found to be the most important organizational factors affecting attrition in both the size of companies, higher pay package and better job profile were the most important personal factors affecting attrition in both group companies.

Background of The Research

In recent times, attrition is one of the most serious issues witnessed by every organization struggling to retain its expertise and knowledge base. In a highly complex and competitive business environment, HR departments are being viewed as a strategic partner by every organization, and, employees are being treated as "internal customer." Therefore, it is assumed that manpower attrition is similar to customer switching problems faced by marketing

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departments of all organizations. In an ideal world, employees would love their jobs, work hard for their employers, get paid well for their work, have ample chances for advancement, and flexible schedules so they could attend to personal or family needs when necessary. And never leave their organization. But then there's the real world, where employees quit at the drop of a hat. In the real world, employees do leave, either because they want more money, hate the working conditions, hate their coworkers, want a change, or because their spouse gets a dream job in another state or for any other reason, which leads them to leave their job, resulting in attrition. Attrition is the actual number of employees leaving the organization by way of resignation (whether voluntary or forced), or some other reason (retirement/death/voluntary retirement schemes (VRS) etc.). In simple language, attrition is the gradual wearing down of any company's workforce by means of resignations, retirements or death.

The pharmaceutical industry is one of the most intense "knowledge driven" industries, which is continuously in a state of dynamic transition. The current revenues of the Indian pharmaceutical industry are estimated at $5.5 billion; and a growth rate of 9 per cent per annum. Geographically, there is a concentration of manufacturing operations in three states, mainly Maharashtra (more for pharmaceutical formulations than bulk drugs), Gujarat (more for bulk drugs) and Andhra Pradesh (also for bulk drugs). The industry is highly fragmented with over 20,000 players, of which only 250 are in the organized sector, and no single company has a market share of more than 8 %. The pharmaceutical industry in India meets around 70% of the country's demand for bulk drugs, drug intermediates, pharmaceutical formulations, chemicals, tablets, capsules, orals and injectibles. There are about 250 large units and about 8,000 small-scale units, which form the core of the pharmaceutical industry in India (including 5 central public sector units). These units produce the complete range of pharmaceutical formulations. Though it caters to about 16 % of the world's population, the Indian pharmaceutical industry remains small, accounting for only one percent of global industry turnover. The pharmaceutical industry exports drugs and pharmaceuticals worth $ 4.5 billion. It ranks 17th in terms of export value of bulk actives and dosage. Indian exports cover more than 200 countries including the highly regulated markets of USA, Europe, Japan and Australia.

In Gujarat, the pharmaceutical industry has experienced drastic changes in size, shape, operational pattern, organizational structures and competition. Today after IT and BPO industry, the pharmaceutical industry is grappling with the highest level of attrition. As the

Indian pharmaceutical industry grows exponentially, companies are taking the big leap from survival strategy to competitive strategy. Hence, there is a constant thirst for the best and the brightest of employees and as a result there is a high rate of employee attrition in the industry. The Indian pharmaceutical industry is facing serious employee attrition problem. The annual attrition rate is estimated to be around 30-35%.

The attrition rate of any organization reflects its image in the market, a high attrition reflects poorly on an organization's ability to hold on to its people. A high attrition rate not only has a direct impact on the business but also affects employee morale and productivity. Attrition leads to other problems such as the heavy cost associated with each employee leaving, leakage of important data, negative image of the organization, decrease in stock price, decrease in customer confidence and reduction employee morale. High attrition impacts the productivity of team work negatively, primarily as a result of uncompensated extra workloads, the stress and tension caused by the employee turnover. As a result, there is a decline in the morale of other employees as well. Therefore, it has really become important to study the current scenario of employee attrition and other aspects of attrition in pharmaceutical industry of Gujarat. This paper is an attempt to study the attrition analysis from various aspects. The main objective of the study is to find out the area where attrition is high and main reasons of attrition.

Survey of Existing Literature

Once highly prized by job seekers, the pharmaceutical industry is grappling with hard times as its staff turnover rate hovers among the highest levels for industries in India, a trend that is not sparing even heavyweight multinational companies such as Pfizer Inc. and Merck KgaA. "Though consolidated figures are not available, we understand that the attrition rate in the industry is around 25-30%," says Uday Mohan, Director of Human Resources at Pfizer Ltd (Livemint, 2009).

Raychaudhuri (2003) concluded in his white paper that the main approach to preventing attrition should be grooming leaders, rather than just treating employees the way it is normally done. In fact, the companies with leading-edge retention programs should address all the areas like ongoing education and training, a mix of job assignments, the organization of small groups and teams, peer group and mentoring programs, organized career counseling, flextime and other lifestyle benefits, including on-site day care, fitness clubs and sponsored charity work and internal marketing and communication with employees. But in the case none of the above

work, the best way is to predict it and act accordingly. Thus prediction of attrition rates becomes vital for any organisation.

A recent survey by Associated Chambers of Commerce and Industry of India (ASSOCHAM, 2003) highlighted some interesting figures regarding the attrition rates in India Inc. The survey focused on the attrition problem in growing economy and said that the maximum attrition is taking place in the age group of 26 to 30 years as they find themselves to be unsettled in their jobs and companies that they have been associated. The study also revealed that most stable segment of employees is found to be in age 39 to 45 years. Attrition trends also reveal that women employees are less prone to frequent job changing than their male counterparts. For every 10 males changing their jobs, there were only 2 females doing the same.

Increased attrition is a multi-faceted problem in the sense that not only does it contribute to the brain drain from a company, but it also results in increased costs for administration, recruitment and selection procedure, induction of new employees and costs incurred during the vacancy period for a position. Research shows that the cost to replace a frontline employee is 40% of the salary and that for a top management employee is 150 to 200%. Apart from this, delays creep into project timelines, client relationships may be adversely affected, and searching for the best skills for the job again may demand lots of time and effort (IIM-Calcutta, 2007).

Dr. Paul Carr and Dr. Michael Hartsfield, both associate professors at Regent University, USA, in their article titled "Attrition as an HR Challenge" concluded that organizations planning for the future should be given close attention to why attrition is occurring in the present. To ignore why people are leaving the organization is to ignore the organization's greatest asset, namely, its people (Carr and Hartsfield, 2008).

Significance of the Study

This study has been conducted to gauge the current trend of attrition in pharmaceutical industry of Gujarat. The study includes an attrition survey carried out among major pharmaceutical companies located in Gujarat as well as the major functional departments of the sample pharmaceutical companies that are greatly affected by high rate of attrition.

Research Objectives

1. To assess the level of attrition in different functional areas of pharmaceutical industry of Gujarat.

2. To identify and study the organizational and personal factors affecting attrition in pharmaceutical industry of Gujarat.

3. Analyze the attrition prevailing across different employee levels and age groups in pharmaceutical industry of Gujarat.

Broad Hypothesis of the Study:

1. There is no significant difference between the attrition rate of large-scale and small-scale pharmaceutical companies in Gujarat, i.e. $\mu_1 = \mu_2$ and H_1: $\mu_1 > \mu_2$

2. There is no significant association between size of the company and rate of attrition across different position of the employees in the pharmaceutical companies.

3. There is a significant association between size of the company and attrition rate across different age groups of the employees in pharmaceutical industry of Gujarat.

Research Design

A cross-sectional descriptive research design has been used for this study. This design will facilitate the study at a given point of time and consists of a sample of the pharmaceutical units located in the state of Gujarat.

Research Methodology

The detailed research methodology is narrated in the following paragraphs:

Sampling Element

Individual respondents of different age groups, working in different departments and positions of pharmaceutical companies of Gujarat consists of sample element.

Population for Study

All the pharmaceutical companies located in Gujarat.

Sampling Frame

The pharmaceutical industry directory has been considered as sampling frame to identify target population.

Sampling Unit

The Human Resources Manager of respective pharmaceutical units formed the sampling unit for the study as these managers had all the information related to attrition scenario of their company.

Sampling Technique

Judgemental sampling method has been used for the purpose of data collection. The population elements have been selected on the basis of researchers own judgement. The samples have been selected taking into consideration the following factor. In order to get a proper unbiased analysis, companies were divided into two groups, Group A Companies and Group B Companies based on their annual turnover. Thus, A group has been defined as those companies whose sales turnover was more than Rs. 400 crore annually, and that of B group companies' sales turnover should be less than Rs. 400 crore annually.

Sample Size

The total sample size consisted of 11 HR managers of pharmaceutical companies of Gujarat. The data was collected from 6 respondents of Group A companies and 5 of Group B companies respectively. The names of all the 11 companies have been kept confidential.

Sources of Data

1. **Primary Data** has been collected through structured questionnaire. Looking to the nature of study, the questionnaire mainly contained questions that are closed ended. The responses were recorded and measured by using nominal and likert scale.

2. **Secondary data** has been collected from the printed material of respective units, pharmaceutical industry reports, journals, magazines, business dailies and websites of respective companies.

Data Collection Method

The survey method was used to collect the primary data. A detailed structured questionnaire was provided to HR managers of sample units and their responses were recorded on it. HR managers were also personally interviewed to get further insights about prevailing attrition scenario in their company.

Tools of Analysis

Researchers started data preparation with preliminary check of all the questionnaires for its completeness. The collected data was than edited, coded, tabulated, grouped and organized according to the requirement of the study and than it was analyzed by using SPSS. As the sample size is small, two-sample t- test is used to tests for differences between means. Chi-square test is used to test the statistical significance of observed association in a cross-

tabulation. Further relevant charts and diagrams are also used to analyze the attrition scenario in pharmaceutical units of Gujarat.

Analysis & Interpretations

1) **Ho**: There is no significant difference between the attrition rate of large-scale and small-scale pharmaceutical companies in Gujarat, i.e. $\mu_1 = \mu_2$ and H $_1$: $\mu_1 > \mu_2$

Table 1: Two Sample t-test output

Group	N	Mean	Variance (S)	df	Tabulated t value	Calculated t value
A Large Scale	6	X=25.33	33.86	9	1.80	1.93
B Small Scale	5	Y =20.6	79.65			

The above table presents the output of two-sample t-test performed at 95% confidence level. The calculated t value is found to be 1.93, which is greater than tabulated t value of 1.80. This means the t-test does not show a significant difference between the attrition rate of large scale and small-scale pharmaceutical units of Gujarat. Hence the null hypothesis is accepted and we conclude that at 95% confidence level, attrition rate and size of the pharmaceutical company are not significantly related.

2) **Ho:** There is no significant association between size of the company and rate of attrition across different position of the employees in the pharmaceutical companies.

Table 2: Size of Company * Attrition Rate Across Employees Position Cross tab

Company's Group		ATTRITION RATE AMONGST EMPLOYEES POSITION			Total
		Middle Level	Lower Level	Worker/Office Staff	
Group A		3	3	0	6
Large Scale		50.0%	50.0%	.0%	100.0%
Group B		1	3	1	5
Small Scale		20.0%	60.0%	20.0%	100.0%
Total		4	6	1	11
		36.4%	54.5%	9.1%	100.0%

Table 3: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.925(a)	2	0.382
Likelihood Ratio	2.342	2	0.310
N of Valid Cases	11		

a 6 cells (100.0%) have expected count less than 5. The minimum expected count is .45.

From the chi-square test output table we see that a significance level of 0.382 has been achieved. This means the chi-square test is not showing a systematic association between the above two variables even at 60% confidence level. Hence the null hypothesis is accepted and we conclude that at 95% confidence level, there is no systematic association between the size of the pharmaceutical company and attrition rate across different employees position/cadres.

Table 4: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.418	0.382
	Cramer's V	0.418	0.382
	Contingency Coefficient	0.386	0.382
N of Valid Cases		11	

a Not assuming the null hypothesis. b Using the asymptotic standard error assuming the null hypothesis.

The value of phi statistics is 0.418, which indicates a weak association between two variables, size of pharmaceutical company and rate of attrition at different positions. The value of Contingency Coefficient is 0.386, which also shows a weak association between the above two variables. The value of Cramer's V is 0.418, which also shows a weak association between size of the pharmaceutical company and attrition rate across various employee's position.

3) **Ho:** There is no significant association between size of the company and attrition rate across different age groups of the employees in pharmaceutical industry of Gujarat.

Table 5: Size of Company * Attrition Across Different Age Groups Cross tabulation

Size of Company	Attrition Across Age Groups			Total
	20-25	26-30	31-40	

Group A Large-Scale	3	2	1	6
	50.0%	33.3%	16.7%	100.0%
Group B Small-Scale	0	3	2	5
	.0%	60.0%	40.0%	100.0%
Total	3	5	3	11
	27.3%	45.5%	27.3%	100.0%

Table 6: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.471(a)	2	0.176
Likelihood Ratio	4.609	2	.100
N of Valid Cases	11		

a 6 cells (100.0%) have expected count less than 5. The minimum expected count is 1.36.

From the chi-square test output table we observe that a significance level of 0.176 has been achieved. This means the chi-square test is not showing a systematic association between the above two variables even at 80% confidence level. Hence the null hypothesis is accepted and we conclude that at 95% confidence level, there is no systematic association between the size of the pharmaceutical company and attrition across different age groups. In other words we conclude that attrition is found across all the age groups in pharmaceutical companies of Gujarat because of many job opportunities available in Gujarat, as several large and small pharmaceutical companies are located in the state.

**Analysis of Attrition Through Charts and Graphs:**

Figure 1: Tenure Wise Attrition Analysis

AVERAGE TENURE WISE ATTRITIION

- 0 to 6 months
- 6 months -1 year
- 1-2 years
- Above 2 years

12%
23%
28%
37%
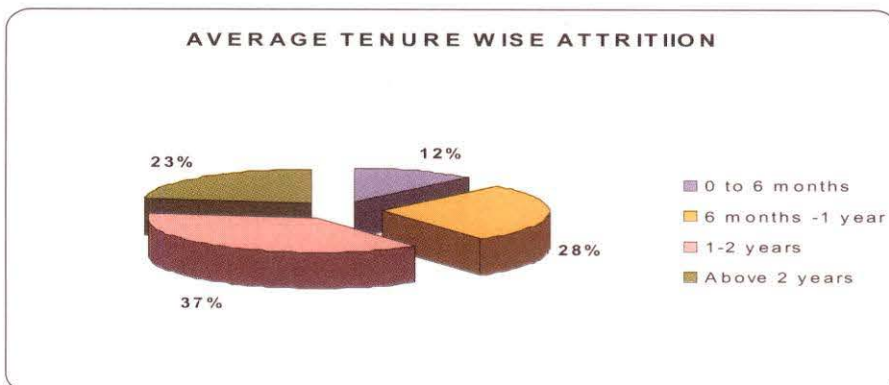
The above chart depicts that employees mainly leave the company after having an experience of 1-2 year. Reasoning being that the employees acquire the required learning, exposure and the requisite training during this period and thus makes them fit to be employed elsewhere. They can easily switch to other companies with salary hike and better job profile. Thereafter, higher rate of attrition is observed in tenure group between 6 months to 1 year and finally high rate of attrition is observed in tenure group of 2 years and above, where employees leave for better job profile and pay package.

Analysis Based on Company Group and Age of Employees:

Figure 2: Attrition and Age Group
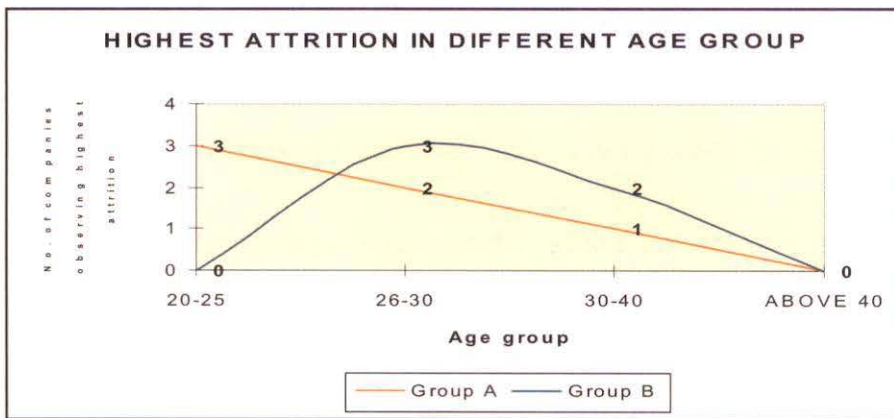
The above graph depicts attrition rate amongst Group A and Group B companies across different age groups. In A group of companies, highest attrition is observed in age group of 20-25 years of employees whereas, in B group, highest attrition is observed in age group of 25-30 years of employees.

Table 7: Function Wise Attrition Rate

Functions	Industry Average Attrition Rate (%)
HR/Administration	5
Finance & Accounts	12.30
Sales & Marketing	21.60
Procurement	8.86
Supply Chain Management	10.45
Production	21.81
IT	8.86
Other Functions	6.81

From the above table, it can observed that percentage of attrition is highest in production and marketing department and least in HR department.

Figure 3: Organizational Factors Affecting Attrition


Group wise comparison
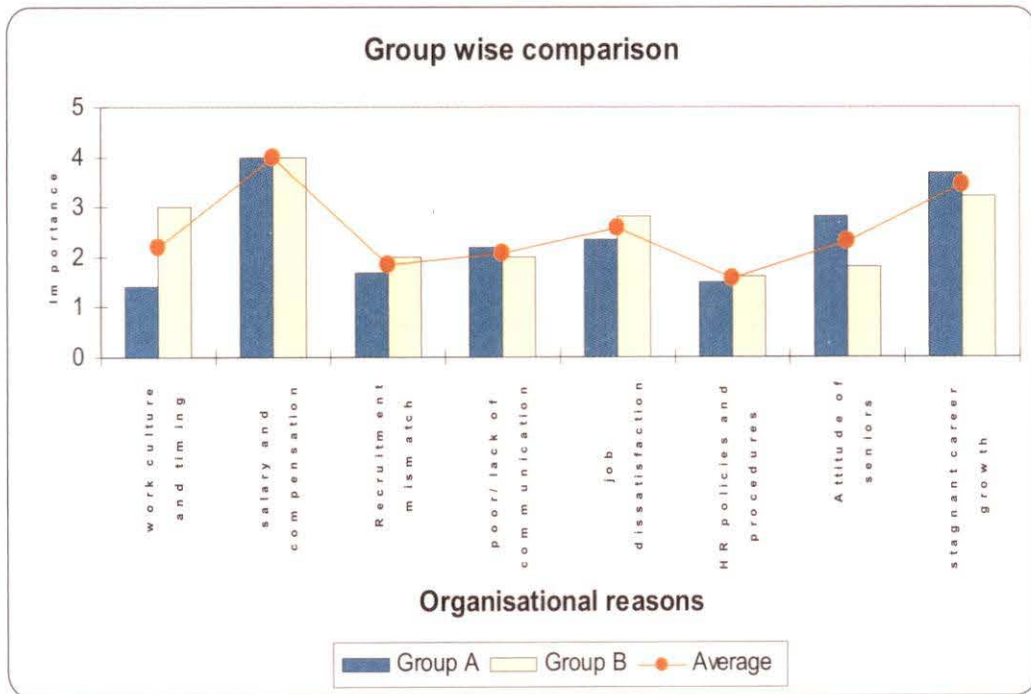
There are several organizational as well as personal factors that cause attrition. From the chart it can be observed that employees leave the organization mainly due to monetary reason and stagnant career growth. Then job dissatisfaction is also important factor for attrition. HR policies and procedure is least responsible for attrition in the sampled pharmaceutical industry companies located in Gujarat. In companies in both Group A and Group B monetary reason is equally cited as being responsible for attrition. The next main reason observed in both the group companies is stagnant career growth. Job dissatisfaction is also a major factor responsible for attrition. In companies of the B group, work culture and timing is found to be more important than in companies in the A group. Whereas in B group companies the least important factor for attrition is HR policies and procedures, in A group companies the least important factor was found to be work culture and timings.

Personal Factor Factors Affecting Attrition

The HR managers were of the view that personal factors like better job profile, better pay package, home relocation issues, family issues, health concerns, employee's marriage, maternity reasons, higher studies and opportunities abroad were some of the major reasons that caused attrition in pharmaceutical industry of Gujarat.

Figure 4: Personal Factors affecting Attrition
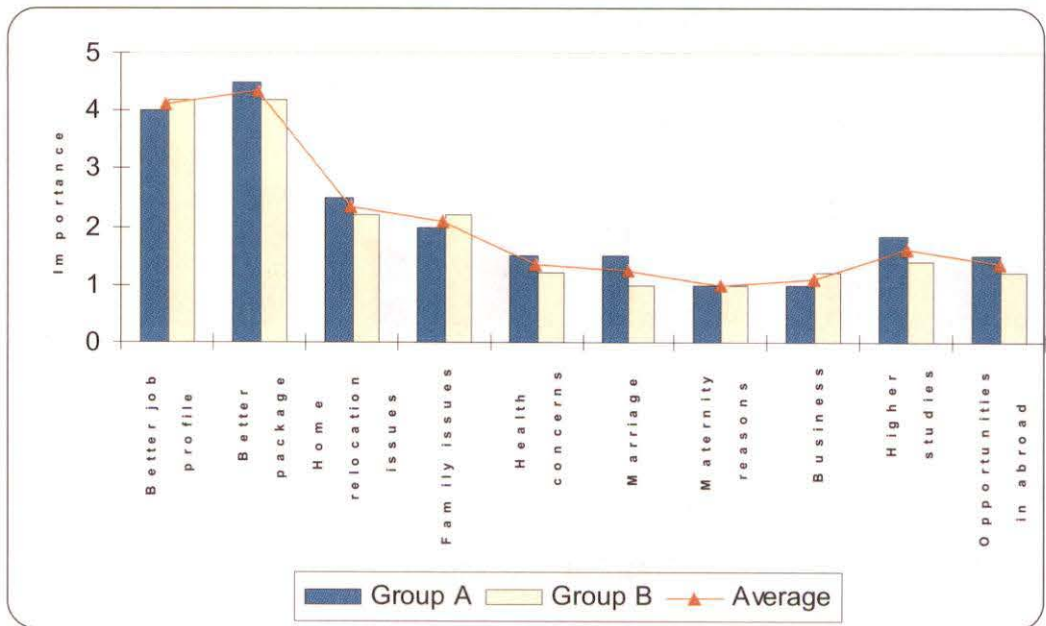
From the above graph it can be observed that generally employees leave the organization mainly due to better pay package and better job profile in other organization. Home relocation is also another important factor for attrition. Maternity reason and starting own business are the least responsible factors for attrition in pharmaceutical industry of Gujarat. In both group companies, employees mainly leave for monetary reasons and next for better profile available in other companies.

Major Findings

1. Attrition prevails across the pharmaceutical industry of the state and is independent of the size of the companies. Average attrition rate in the state pharmaceutical industry is found to be 23%.

2. 54.4% attrition is found at lower level employees, 34.4% at middle level and 9.1% at worker/office level staff.

3. 45.5% rate of attrition is found in the age group of 26-30 years and equal rate of 27.3% is found in other two age groups i.e.20-25 years and 31-40 years.

4. 37% attrition was found to be the highest amongst employees having experience of 1-2 years, 28% attrition prevailed amongst employees having experience of 6 months to 1 year, 23% and 12% attrition prevailed amongst employees having experience of above 2 years and up to 6 months respectively.

5. In the A group of companies, the highest attrition of employees is observed in the age group of 20-25 years and in B group, highest attrition is observed in age group of 25-30 years.

6. Salary and compensation was found to be the most important organizational factor affecting attrition in both groups of companies.

7. Factors like higher pay package and better job profile were the most important personal factors affecting attrition in both group companies.

8. Attrition rate of 21.81% is found to be the highest in production followed by marketing/sales job with attrition rate of 21.60%.

Suggestions

On the basis of the analysis and key findings from this research on "attrition analysis" as well as from the responses of the HR managers of major pharmaceutical companies of Gujarat, the companies can control the rate of attrition of their valuable employees at lower level in the organization by adopting appropriate HR strategies like focusing on welfare measures, employee engagement, providing employees with performance based incentives, bonus, friendly work culture, job rotation etc. Retention strategies for middle and top-level employees could be counseling and facilitating them to make effective carrier planning. More over providing retention bonus, starting loyalty programmes with cash incentives, enriching their jobs could also be some practical ways to retain the above cadre of employees of the pharmaceutical companies.

Conclusion

Companies can reduce attrition rate of their workforces to certain extent but cannot stop it completely because of the individual needs of employees. We suggest that it is appropriate to deal with employees' issues at a niche or micro level rather than generalizing them if the

companies would like to retain their knowledge base. More over retaining the best performing employees is one of the major tasks of human resource managers. The companies and their management will have to realize the fact that talented employees will be the people who will lead the organization to future success and thus the organization can't afford to loose them. Hence, the pharmaceutical companies of Gujarat need to promote the diversity and design strategies to retain their employees across different positions, age groups and functional areas by providing them opportunities for their development and make them realize that they are the most valuable and precious jewels of the company because 90% of the employees complain not because the company is bad, it is because they feel they were not treated with dignity.

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