

## Need for Up Gradation in HR Practices with a Special Reference to Biotech Industry

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### ABSTRACT

The 21st century belongs to biotechnology as it made profound impact in the field of health, food, agriculture and environmental protection. India's biotechnology industry is poised to record substantial growth, perhaps even overtake the robust IT industry. The objectives of the study are to determine the existing HR practices in Biotech Industry and to understand the need for the up gradation in existing HR Policies. Conclusive and descriptive research design is used in the paper. Data is collected from 122 employees in 23 companies of Biotech Industry. It was found that Biotechnology companies require managers with unique qualities. The lack of solid managerial training and the associated risk of failure often have long-term consequences for the careers of research professionals. The efforts to achieve excellence through a focus on learning, quality, teamwork, and reengineering are driven by the way organizations get things done and how they treat people.

**Keywords:** HR factor, training, excellence, quality, growth, development, teamwork, management, focus, learning.

### INTRODUCTION

#### HR issues in biotechnology

Whatever the changing fortunes of the biotechnology industry are, successful management of human resources is essential. Perhaps the most valuable, but often least recognized, source of a company's intellectual property is the staff. However, keeping those hearts and minds loyal to the cause is no easy feat.

Human resources constitute an increasingly critical function in any biotechnology company, particularly in an industry that's in an increasing state of flux. The efforts to achieve excellence through a focus on learning, quality, teamwork, and re-engineering are driven by the way organizations treat people. It is the job of HR to achieve organisational excellence.

The manager of a biotechnology start-up faces the challenge of fostering a transition within the founding team from science-oriented to commerce-oriented thinking and action. An academic scientist's focus is on scientific publications, intellectual brilliance, research involving tightly circumscribed projects, and science for science's sake. A biotechnology company, however, must translate research results into revenue.

Biotech managers should be strong and sensitive at the same time. Only managers with excellent interpersonal skills will be able to handle delicate tasks like helping the company founders think commercially, training them in what to say where and when. Yet, they should be strong enough in aiding decisions, like cancelling a pet project, bringing in and integrating new employees better paid than founding staff, and introducing formal management tools such as reporting and budgeting without damaging employee relations.

Managers should combine strategic thinking with a 'can-do' mentality. While a company is in its early stages with few employees, a manager must assume many roles. He must act as a visionary and developing innovative business plans and 'big-picture' strategies. Managers are still very operational and must have a hands-on attitude.

They must be highly motivated and aware of the challenges ahead. A successful biotechnology manager must know what to expect during the early stages of a start-up and must be eager to figurate to overcome obstacles.

### **Science and Managing**

In biotechnology companies around the world, scientists are often given the responsibility for people and projects without a second thought or additional training. Failures in the transition from scientists to management occur because scientists believe that adding supervision skills is simply a learn-as-you-go experience. Stan Sewitch, Founder of HRG Inc says, "Management is an entirely different career from that of the individual contributor in science."

It is very tempting to tell scientists that there will be a mix of both science and supervision in the job. Once a supervisor has four to six reporting employees, performing laboratory functions becomes very difficult. Many supervisors find serious career discontent when their workday fills exclusively with management issues. Jim Lewis, who teaches the course The Engineer as Manager at the Lewis Institute (Vinton, VA, USA), breaks down the required skills for technical manager into four categories: technical, organizational, conceptual and human relations. The supervisor needs to constantly stay updated, because technical obsolescence can set in quickly. After a year or two of management responsibility, a supervisor needs to spend some time getting recharged in the area of expertise.

Strong planning and organizational ability is a must for a manager. Analyzing this quality is one of the best ways to determine whether a person can move from science to management. A new supervisor must become an expert in the performance planning process that requires all reporting staff to have the tools they need to do the job. If an employee is given the role of a supervisor, formal training on project management must be provided.

Today's biopharmaceutical projects have a high degree of complexity. In order to properly utilize staff and other resources like suppliers and internal groups, a manager must be able to clearly visualize the desired goal. He or she then has to communicate this concept to others. 'People skills' are often communication related. The problem is that many managers think it is their employees' responsibility to be flexible in their communication style.

As psychiatrist Ross Ashby says, "In any system of men or machines, the element in the system with the greatest flexibility in its behavior will control the system." Biotechnology is a high-risk, fast-moving arena that requires quite a different breed of managers for success, opines Jianming

Li and William E Halal. Biotechnology industry needs a completely different organizational structure and management philosophy in biotechnology companies.

## LITERATURE REVIEW

**White (2002)** emphasizes the importance of understanding how management practices contribute to research and other technological capabilities, particularly in developing countries. Specifically, accumulated capacities can be lost because of inadequate or poor management of people.

**Hobday & et al (2004)**. Successful firms have evolved as learners by assimilating and tapping existing technologies, and eventually developing their capacity to generate their own technologies.

**Odagiri (1998)** did research on “Catching-up involves continuous efforts to mobilize and organize resources”. The study highlighted the importance of building the absorptive capabilities, making efforts in training and entrepreneurship and gaining a sound scientific and technological understanding, including mastering the production and management of skilled personnel.

**Hemmert (1998)** underscores factors in the analysis of how Japanese firms have dealt with changing, often adverse, macroeconomic environments, and the challenges associated with business strategies posed by continuous technological innovation.

**Legewie et al., (2000)**; Firms have had to constantly reorganize and restructure their R&D activities in general, and the management of R&D personnel in particular. Continuous improvement in personnel management has underpinned innovative organizational practices to promote incentives, motivation and productivity and attract R&D.

**Lundvall et al. (2002)** argue that in addition to R&D efforts, analyses of firms’ innovation capabilities need to consider the influence emanating from the daily experiences of workers, engineers and salesmen, together with interactions among individuals within and outside the boundaries of a firm.

**Cohen and Levinthal’s (1989, 1990)** did research on “treatment of the dual role of R&D as a learning mechanism traces a link between management practices and R&D”. R&D generates new information and knowledge underpinning searches for new market and technological opportunities through innovation. R&D helps to build the absorptive capacity by tapping existing knowledge. The study stressed that the contribution of individuals’ cognitive processes to accumulate absorptive capacity is contingent on the nature of prior related knowledge and diversity of backgrounds.

**Greve (2007)**, The study concludes that firms engage in either knowledge exploitation or exploration activities, or both, illustrates the heterogeneity, complexity and distinct use of knowledge. Exploitation refers to the use and refinement of existing knowledge, technologies and products. It entails short-run perspectives, more certainty and proximity to potential benefits. Exploration, for its part, identifies searches for new knowledge, use of unfamiliar technologies, creation of products/services with unforeseen, or, at least, difficult to predict, demand.

**Greve ( 2007).** The study concludes that exploration underpins searches for unfamiliar, distant knowledge. This interpretation induces some flexibility to the analysis, while still capturing traditional views of innovation in terms of incremental and radical outcomes .Whereas local searches may lead to incremental innovations, distant searches could lead to radical ones. Nevertheless, there is no a priori reason for such a match to occur.

**Patel and Pavitt(1994).** The proposed interpretation is in line with empirical literature. Instead of focusing on innovation, attention is drawn to the learning process inside the firm. Successful catching-up experiences have coupled local searches, through internal learning efforts, with a few distant searches, and knowledge diffusion and assimilation through, for instance, reverse engineering activities. Firms combine stocks and flows of knowledge. Only when latecomer firms approach the technological frontier, does high quality basic research, more complex scientific and instrumentation progressively gain importance to sustain productivity and competitiveness.

## **RESEARCH METHODOLOGY**

### **Rationale of proposed investigation**

HR professionals are responsible for developing a scientific and behavioral culture that improves an organization's capability for growth and development. Managing HR in a knowledge-based industry like the life sciences is a significant challenge as it involves a multi task responsibility. Therefore to maintain the steady growth of the biotech industry, there is a need for a new kind of drive and excitement.

### **Objectives of research**

- To determine the existing HR practices in Biotech Industry.
- To understand the need for the upgradation in existing HR Policies.

### **Research Design**

Conclusive and Descriptive Research

### **Data Collection**

Primary Data:

Questionnaire: Structured and Close Ended

Type of Questions: Multiple Choice, Dichotomous and Scale

Secondary Data:

a) Published Material (Books, Journals)

b) Computerized Data Base (Websites)

Sample Size: 122 in 23 companies

## ANALYSIS AND INTREPRETATIONS

< Figure – 1>

As the graph is depicting maximum of 40.98% respondents are working in Newly Established biotech or Pharma firms in the total sample size of 120. 22% work in companies which are in early stage of development and 36.89% work in companies which are in later stage of development in the PLC.

<Figure – 2>

Results in this graph show that in 75.41% of the companies which come under the sample size has functional HR department and 24.59% do not have a HR department at all.

< Figure – 3>

Among the considered sample 44.26% companies have Hr professionals at higher management level and 55.74% do not have any HR professional above General Manager.

< Figure – 4>

47.54% people say that in their company HR is responsible for only Recruitment and selection, in only 27.05 % the Hr is functional fully and responsible for all the functions like T&D, compensation and appraisal etc.

<Figure -5>

64.75% respondents think that their company does proper Human resource planning before recruitment for any job, still 35.25% do not agree with it.

<Figure – 6>

Among the 23 companies under consideration almost 75% give more emphasis on skill sets while recruiting new candidate and in only 25 % they give more stress on cultural fit of course along with the required skill sets.

< Figure – 7>

For the fact that their extensive information is collected for Job Analysis for every job 34 % respondents strongly agree and 41% agree with this, 25% do not know about it probably and therefore are neutral towards it.

<Figure – 8>

Among the sample of 23 companies 52% have written and defined roles for every position and almost half that is 48% of the companies do not have the defined job descriptions for their employees.

<Figure – 9>

Almost half of the number of companies recruit by visiting campuses which makes it 51% among whole of the sample, 17% recruit through employee reference, 21% advertise about the position and only 11% take the help of consultancies.

< Figure – 10>

More than 75% companies believe in recruiting through internet and 23% still work only through conventional tools of recruitment and selection.

< Figure – 11>

As the graph is showing in 67% companies among the sample size new employees do not get a mentor cum friend, this is practiced in only 33% of the lot

<Figure – 12>

According to the graph almost 70 % companies do not have any separate T&D department, almost 30% of them do have separate T&D department along with HR department.

<Figure – 13>

Behavioral training is provided in only 30% of the companies which is very less than the number of those companies who do not care much to develop behavioral skills of their employees that is almost 70% among the whole count of taken sample size.

< Figure – 14>

The results of the graph shows that more of the number of companies where the training if provided is not aligned with the job responsibilities of the employees as 43% respondents disagree with the statement and 23% are silent by not taking any stand. Only 34% respondents feel that their company gives good training.

<Figure – 15>

Performance appraisal is done annually at majority times than half yearly.

<Figure – 16>

Performance appraisal in 63% companies is only done by immediate seniors of employee; in 31% HR also play a role for appraising in only 6% companies take feedback from peers also for appraising people.

<Figure – 17>

According to the results shown in the graph 27% companies believe to give new challenges to those employees whose careers has reached the plateau stage but a bigger number of 73% does not believe in this type of policy.

< Figure – 18>

Employees of about 80% of the companies are not satisfied with the pay plans of their respective company.

<Figure – 19>

According to the results depicted in graph 75% companies give an annual increment in basic salary to their employees.

< Figure – 20>

Around half of the companies that is around 51% have kept their benefit plans flexible for the convenience of their employee, 48% do not give any flexibility to their employees in their benefit plans.

< Figure – 21>

Employees are given attractive incentives by maximum number of companies for their outstanding performance. Almost 60% agree to it in all.

<Figure – 22>

According to data collected almost 67% companies have performance based reward system and only 33% give rewards according to the competency of the person.

<Figure – 23>

Almost half 49% of the companies give promotion to the employees senior in position and about 51% companies give performance based promotion

< Figure – 24>

Employees from almost 42% companies agree to the fact that their HR departments handle IR issues or disputes well, 16% people do not agree and 40% people do not have any view point.

<Figure – 25>

If by chance there happens an accident in company premises then around 65% companies have provision for their employees, around 35% companies do not have such type of provision.

<Figure – 26>

Around 75% companies provide training to employees so that they can avoid accidents.

< Figure – 27>

According to the study around 56% employees say that their HR department is not being improved by time, Almost 30% have no idea about it and only 14% companies are taking initiatives to develop their HR practices

## **FINDINGS AND DISCUSSION**

According to the results the main problem lies where many startup companies do not have any



HR department at all, these two factors are found to be correlated at .01 significance level. The value of 'r' is coming to be .370. This means that this practice of not having HR department is prevailing in newly established biotech or biopharma firms. Companies which are at early stage of development have partially functional HR department which normally takes care of pay rolls of the employees and their recruitment and selection. Few companies do have fully functional department which almost take care of each and every HR function.

Next two factors are HR at higher management level and establishment of the company, these factors are correlated at .05 significance level. The value of 'r' that is Pearson's Correlation is .427. This tells us that the degree of correlation is a bit less because no doubt new firms do not have an HR at higher level of hierarchy as many of them do not have any such department or a single person working for it, but many organizations which are at early developmental stage of product life cycle have an HR personnel only till Senior HR Manager level. There is no HR authority after General Manager Level. This shows that these companies have not still realized the need to make HR as their strategic partner.

Now the next factors are functions of HR and establishment of firm. These factors are found to be correlated at 0.05 significance level. The value of Pearson's Correlation 'r' is .524. These are also correlated but to a lesser extent, as if the newly established companies have HR as a separate department then it takes care of almost all the functions like appraisals, compensation, training and development along with recruitment and selection of employees. Many firms in early stage or later stages of development have HR which is least involved in appraisals as it is normally done by the immediate senior and his boss for any employee. HR just function as a record keeper of all the events and therefore is not valued much as it is considered as just as an admin department who keeps a record of their pay rolls and leaves.

A very surprising finding is that a more than half of the companies do not have any type of written or defined roles that is job descriptions for any type of job. This practice is mainly prevailing in new or start up firms and these are found to be correlated at .01 significance level. Value of Pearson's Correlation 'r' is .414. If the employees will not know exactly what they are supposed to do, what exactly are their duties and responsibilities then how can they perform at their best. No job description means any clarity of roles which leads to inefficiency and less effectiveness in the performance of the employee and in all productivity of the company.

When a new employee is hired then many companies provide a mentor cum friend to him or her so that they can feel comfortable at work and if have any type of problem can talk to their mentors. This practice is normally used in service and IT industry as we know these two industries are booming maximum. In case of biotech industry it is not practicing this. Many companies do not have any separate training and development department and normally companies do not believe in giving any behavioral training to production or R&D people. No doubt training is given to them but only technical one. Still in many companies marketing people are provided with behavioral training to so that they can do the sales talks better. Less emphasis is given to personal growth of the employees and therefore they fail to make them loyal and committed towards the organization.

Maximum companies give annual increment in the basic salary and necessary benefits also, but main problem here is that the benefit plans are not made flexible enough so that employees can take their full advantage.



Pay plans of the company and satisfaction level of the employees are two other factors which play an important role in improvement of enhancing efficiency and effectiveness of employees. These factors are again found to be correlated at .01 significance level. The value of 'r' between the data collected for these two variables comes to be .375. This shows that these are highly correlated and satisfactory pay plans drive the employee to do better at work place. This is also related to the rewarding the employee for his or her outstanding performance.

Lastly maximum of the studied companies are not thinking of using new and developed HR tools such as 360 degree performance appraisal, Performance based pay, balanced scorecard (HR scorecard) etc. These practices are adopted by few companies which are in later stage of development.

## RECOMMENDATIONS

Biotechnology companies require managers with unique qualities. The lack of solid managerial training and the associated risk of failure often have long-term consequences for the careers of research professionals. Few recommendations are as follows:

The efforts to achieve excellence through a focus on learning, quality, teamwork, and reengineering are driven by the way organizations get things done and how they treat people. These are fundamental HR issues. Therefore, achieving organizational excellence must be the work of HR. HR must partner with senior executives and managers, helping to move planning from the boardroom to the organization. It must guide serious discussion of how the company should be organized to carry out its strategy.

HR must be an employee champion, ensuring that employees feel committed to the company and are able to fully contribute, and take responsibility for training line management about the importance of high employee morale and how to achieve it.

Within the HR function there are dozens of processes that can be done better, faster and cheaper.

Finding and fixing those processes is part of the work, and measuring the impact of HR programs and initiatives to the bottom line is crucial. The roles of the Chief Executive Officer and top management team are particularly crucial for any biotechnology company.

## CONCLUSIONS

Every organization, and in all every industry needs a motivated and committed workforce. But due to many options and competition these days it is the responsibility of companies to take care of the employees also, care of their needs and development. Many companies which are considered as the Best Employers are those who treat their human resource as an indispensable asset and not like any other machine. It is very important that the companies should have properly functioning HR department and not only at the lower level but higher level also.

Many biotechnology companies fail not because of bad science, but because their management personnel did not have the knowledge or skill to design and guide a complex research organization effectively.

The companies of biotech industry start-up face the challenge of fostering a transition within the founding team from science-oriented to commerce-oriented thinking and action. An academic scientist's focus is on scientific publications, intellectual brilliance, research involving tightly circumscribed projects, and science for science's sake. A biotechnology company, however, must translate research results into revenue.

Industries like IT and Service industry are on the maximum boom for last decade or few years and interestingly these are the two industries which are practicing maximum tools of HR whether conventional or developed ones. They have HR as their strategic partner along with other departments also. Biotech industry is trying to establish itself in India for last one decade but is not showing any phenomenal growth because they still do not valuing their human resource as much they should be.

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## FIGURES

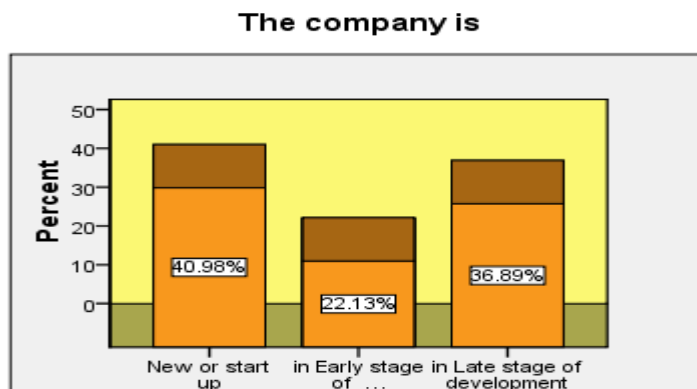


Figure- 1

## A fully functional HR department in company

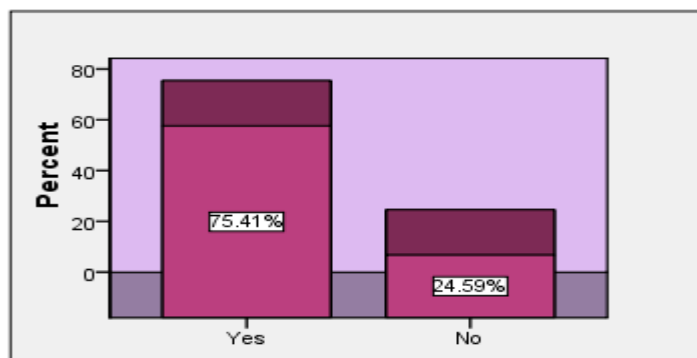


Figure – 2

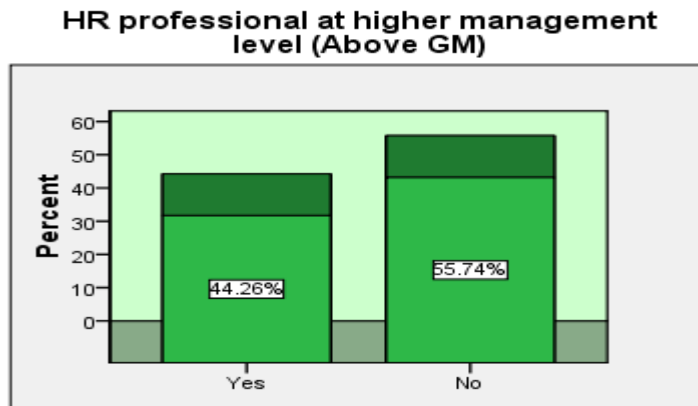


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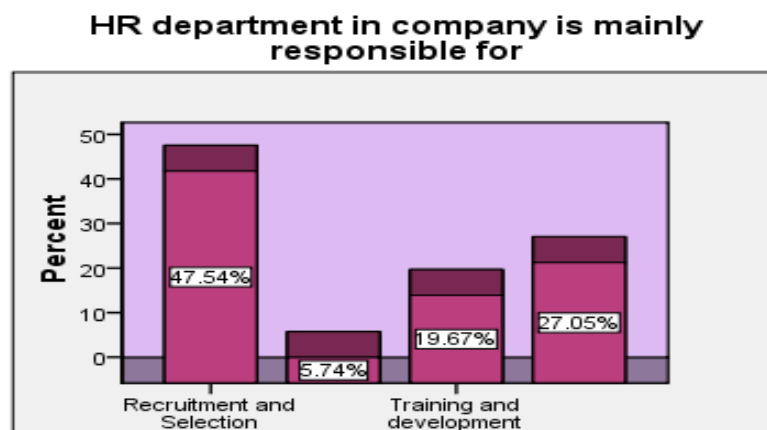


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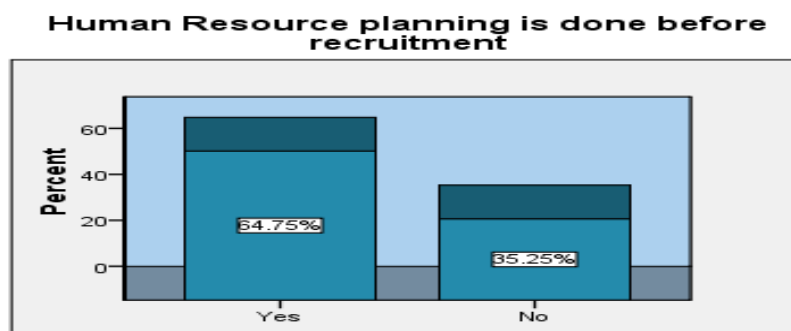


Figure- 5

**For recruitment main emphasis is given to**

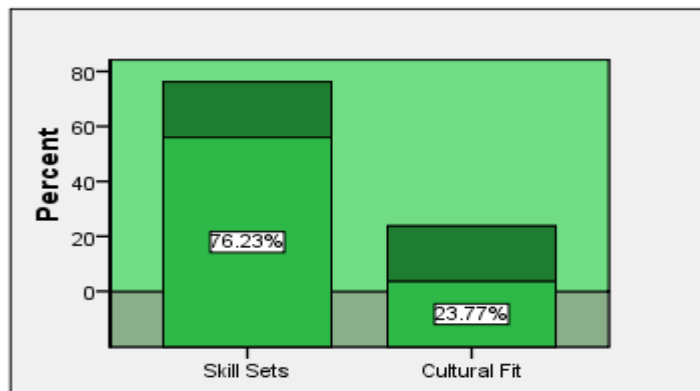


Figure – 6

**Extensive information is collected for Job Analysis**

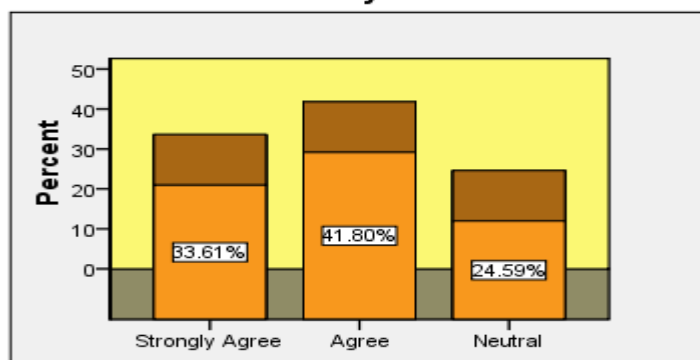


Figure – 7

**There are defined and written roles for each position**

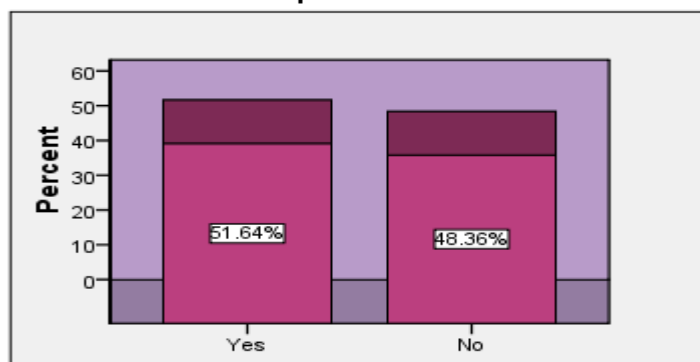


Figure – 8

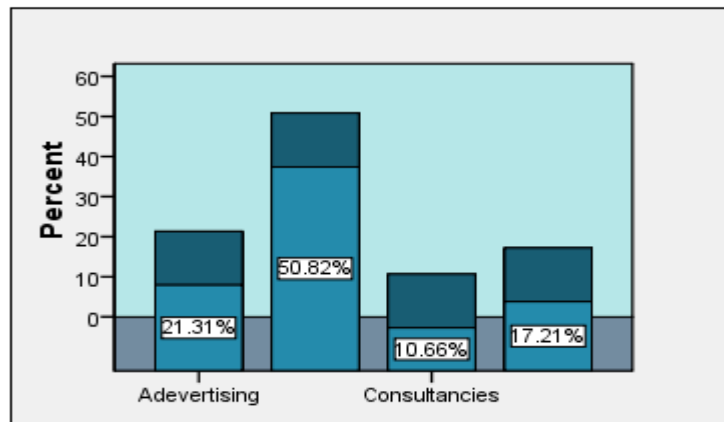
**Main mode of recruitment**

Figure – 9

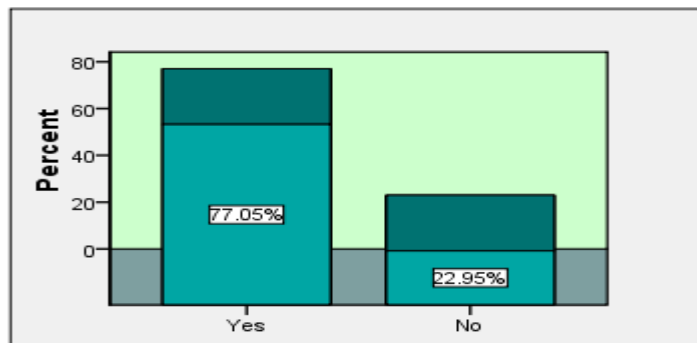
**There is a concept of E – Recruiting**

Figure – 10

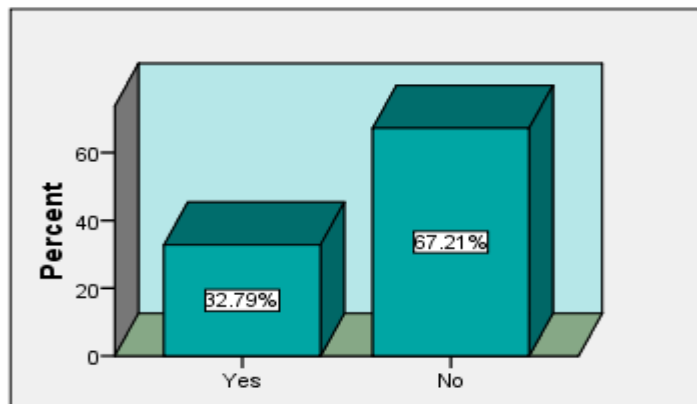
**New employees get a mentor cum Friend at work**

Figure – 11

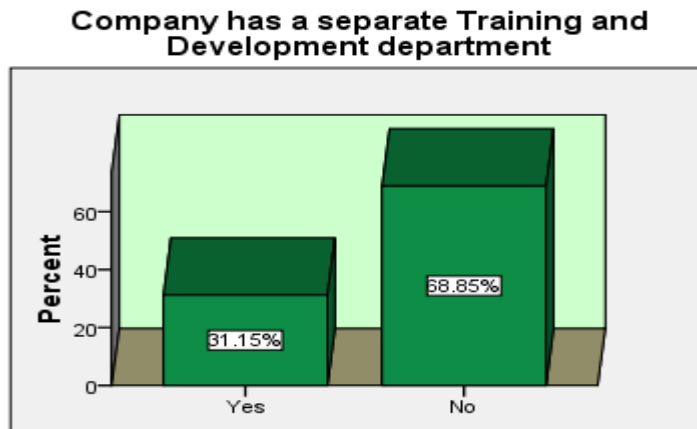


Figure – 12

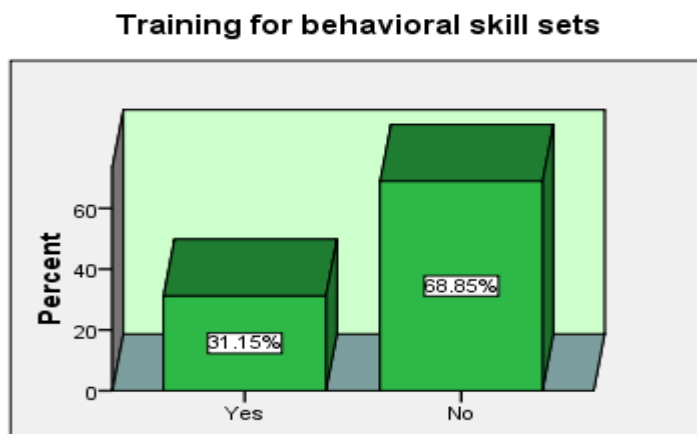


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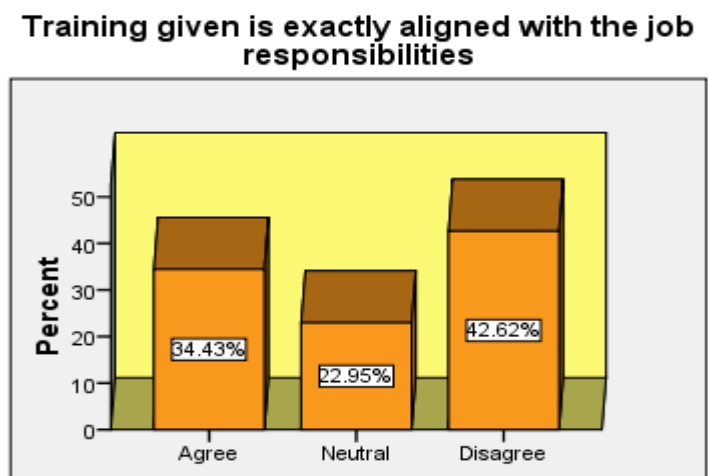


Figure – 14



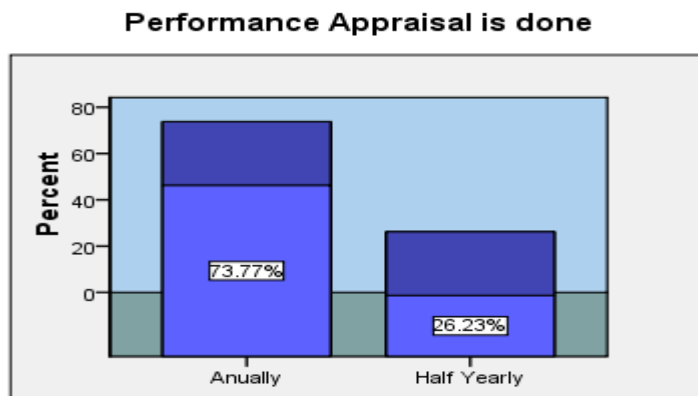


Figure – 15

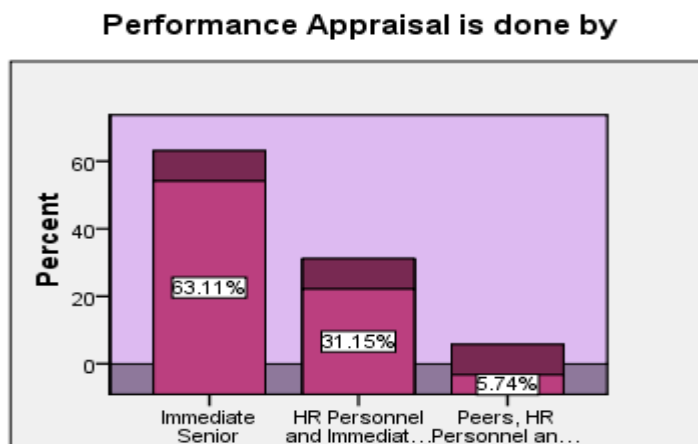


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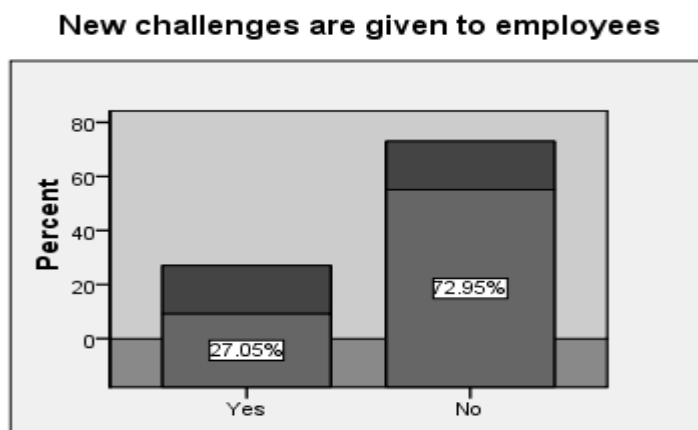


Figure – 17

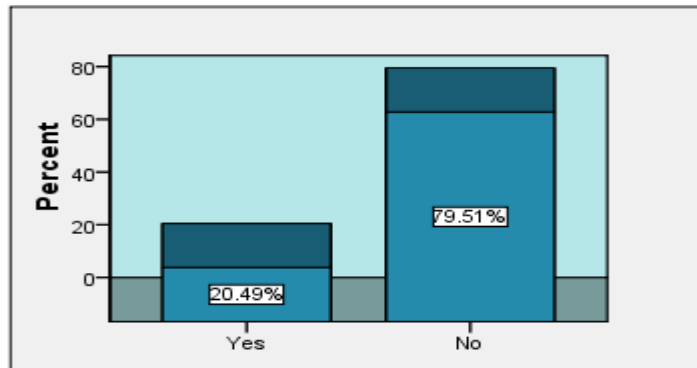
**Pay plans of the company are totally satisfactory**

Figure – 18

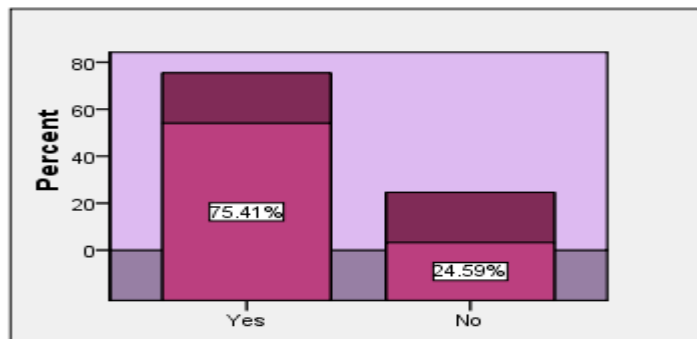
**Annual increment in basic salary**

Figure – 19

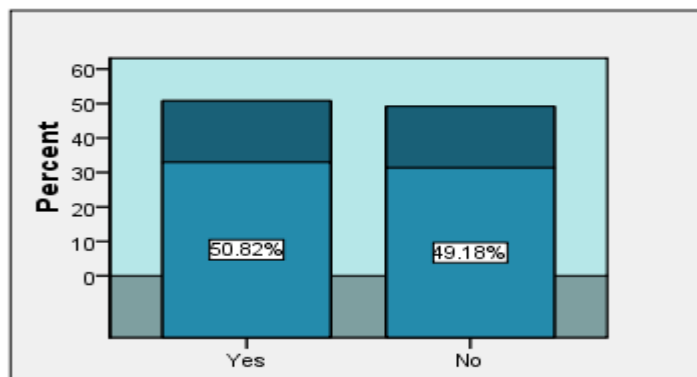
**Benefit plans of company are flexible**

Figure – 20

### Attractive Incentives for Outstanding Performance

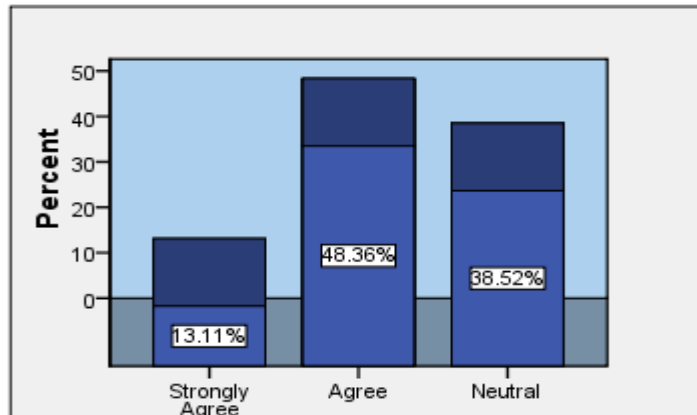


Figure – 21

### Reward System is

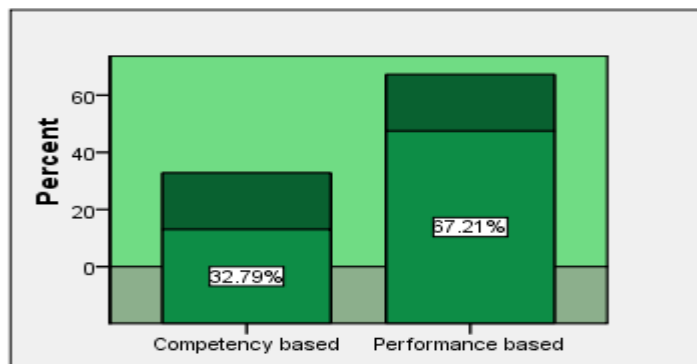


Figure – 22

### Promotions are given on

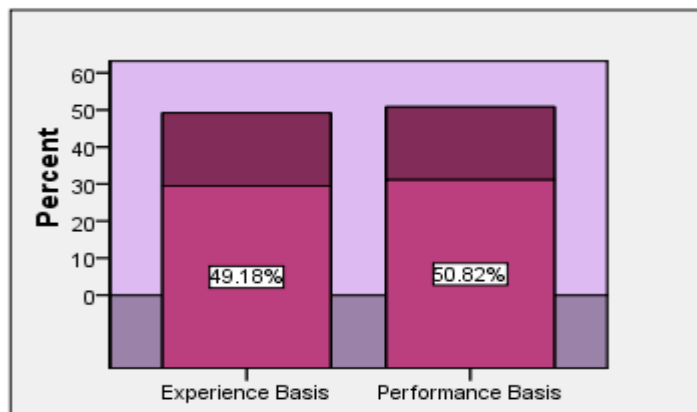


Figure – 23

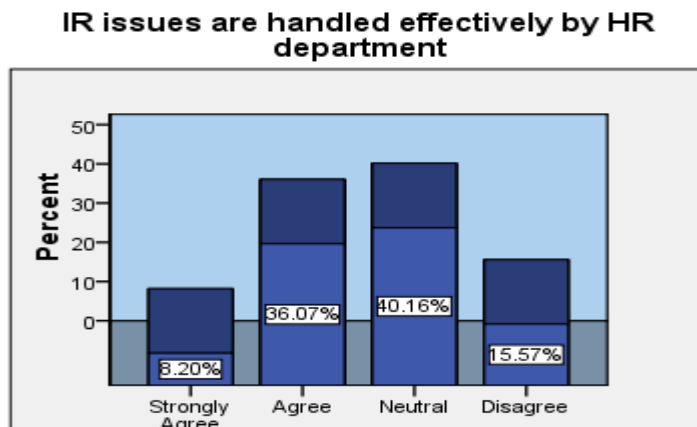


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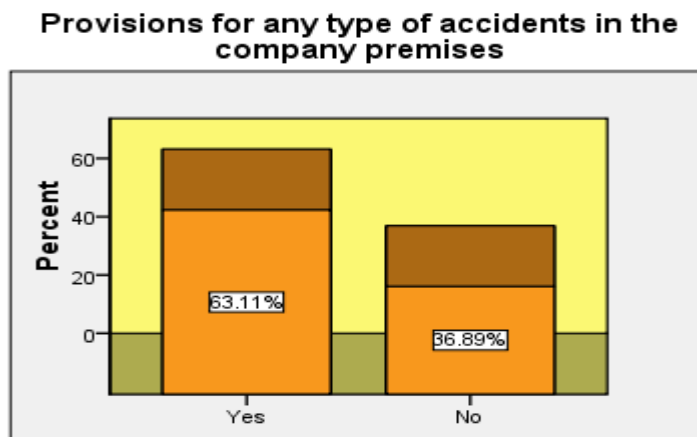


Figure - 25

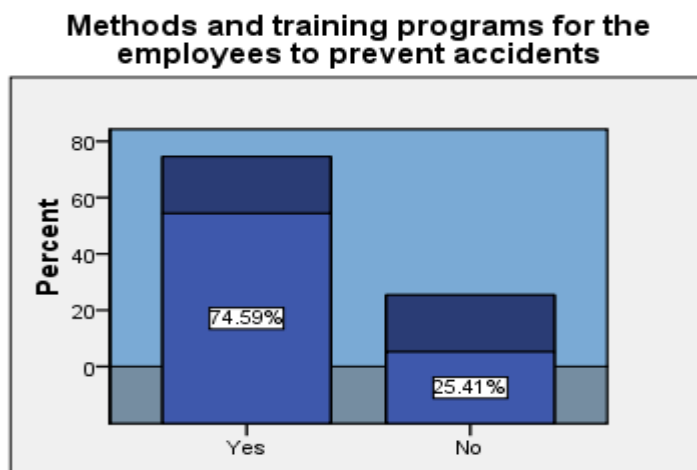


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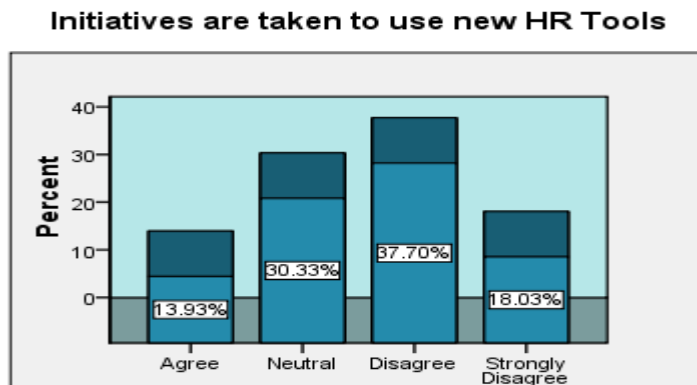


Figure – 27