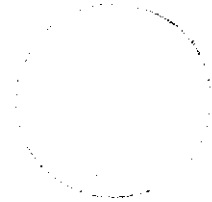


**A STUDY ON CAUSES OF EMPLOYEE ATTRITION WITH PARTICULAR
REFERENCE TO INFORMATION TECHNOLOGY ORGANIZATIONS IN
BANGALORE**

BY
A.GOWTHAMI
ROLL NO: 1008MBA1620
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A PROJECT REPORT
Submitted to the
FACULTY OF MANAGEMENT SCIENCES
In partial fulfillment for the award of the degree
Of
MASTER OF BUSINESS ADMINISTRATION

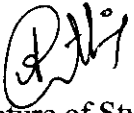


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August, 2012

BONAFIDE CERTIFICATE

Certified that the Project report titled A study on causes of attrition with reference to Information Technology organizations in Bangalore is the bonafide work of Ms . A.Gowthami who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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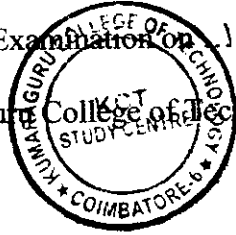
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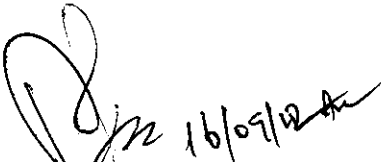
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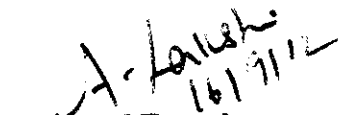

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ABSTRACT

The employee attrition of human resources has been shown to be momentous to the development and the accomplishment of the organization's goals and objectives. The primary aim of this study is to explore the main factors that cause attrition in Information technology organizations in Bangalore. Primary data were collected from 200 employees from software Industry using questionnaire methods. The results indicate that all factors (Individual and Propel) have contributed in the employee's attrition intentions. However, some facets of individual factor have significantly contributed in attrition intentions.

ACKNOWLEDGEMENT

I am grateful to my project guide **Mr. V.KAARTHEIKHEYAN**, Associate professor, KCT Study centre, for supporting me through proper direction and guidance with flexible manner to bring out this project as successful one.

I extend my sincere thanks to almighty God, my Parents and Friends for endowing me with their immense blessings and helping towards the successful completion of this project. Finally, I thank to all individuals who sacrificed their time to speak to me during the interviews.



Student's signature

A.GOWTHAMI

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CHAPTER I

INTRODUCTION

1.1 EMPLOYEE ATTRITION

Employee attrition is a voluntary reduction in an organization's manpower through resignations or retirements. A high attrition rate causes a high employee turnover in an organization, reducing quantity and quality of an organization's manpower. This in turn causes a huge expenditure on human resource, by contributing towards repeated acquisition, training and development, and performance management.

Attrition or voluntary turnover, although undesirable to any firm, is not completely avoidable. Yet, by improving employee morale and providing a satisfactory working environment, this problem can be nullified to a greater extent. A major cause for voluntary turnover is uninteresting and unchallenging job that offers boredom rather than enthusiasm for employees. Employees who experience boredom at work usually try exploring alternatives to make their work life happier. An easy track to retain these employees is by adopting some sort of job shift through job enrichment, empowerment, de-jobbing, or job rotation.

There is also a great impact from the working environment that an organization offers to its employees. An unhappy employee with organizational culture, superiors, subordinates, or even customers cause high attrition rate to that organization. These employees can also influence his peers and subordinates by sharing their feelings and opinion. There is also another group of employees who hunt for better alternatives and hop as they get one. These employees may rather spend their majority of working hours in searching new options than contributing to the present employer. This means, behavior and attitude of an employee also can cause attrition.

The main causes for attrition involves five major things:

1) COMPENSATION

2) ENVIRONMENT

3) GROWTH

4) RELATIONSHIP

5) SUPPORT

1.1.1 Reasons for an employee to leave:

Employees do not leave an organization without any significant reason. There are certain circumstances that lead to their leaving the organization. The most common reasons can be:

Job is not what the employee expected to be: Sometimes the job responsibilities don't come out to be same as expected by the candidates. Unexpected job responsibilities lead to job dissatisfaction.

1. **Job and person mismatch:** A candidate may be fit to do a certain type of job which matches his personality. If he is given a job which mismatches his personality, then he won't be able to perform it well and will try to find out reasons to leave the job.
2. **No growth opportunities:** No or less learning and growth opportunities in the current job will make candidate's job and career stagnant.
3. **Lack of appreciation:** If the work is not appreciated by the supervisor, the employee feels de-motivated and loses interest in job.
4. **Lack of trust and support in co-workers, seniors and management:** Trust is the most important factor that is required for an individual to stay in the job. Non-supportive co-workers, seniors and management can make office environment unfriendly and difficult to work in.
5. **Stress from overwork and work life imbalance:** Job stress can lead to work life imbalance which ultimately many times lead to employee leaving the organization.

6. **Compensation:** Better compensation packages being offered by other companies may attract employees towards themselves.
7. **New job offer:** An attractive job offer which an employee thinks is good for him with respect to job responsibility, compensation, growth and learning etc. can lead an employee to leave the organization.

1.1.2 Manager Role in reducing attrition:

When asked about why employees leave, low salary comes out to be a common excuse. However, research has shown that people join companies, but leave because of what their managers' do or don't do. It is seen that managers who respect and value employees' competency, pay attention to their aspirations, assure challenging work, value the quality of work life and provided chances for learning have loyal and engaged employees. Therefore, managers and team leaders play an active and vital role in employee retention by creating a motivating team culture and improving the relationships with team members. This can be done in a following way:

1. **Creating a Motivating Environment:** Team leaders who create motivating environments are likely to keep their team members together for a longer period of time. Motivation does not necessarily have to come through fun events such as parties, celebrations, team outings etc. They can also come through serious events e.g. arranging a talk by the VP of Quality on career opportunities in the field of quality. Employees who look forward to these events and are likely to remain more engaged.
2. **Standing up for the Team:** Team leaders are closest to their team members. While they need to ensure smooth functioning of their teams by implementing management decisions, they also need to educate their managers about the realities on the ground. When agents see the team leader standing up for them, they will have one more reason to stay in the team.
3. **Providing coaching:** Everyone wants to be successful in his or her current job. However, not everyone knows how. Therefore, one of the key responsibilities will be providing

coaching that is intended to improve the performance of employees. Managers often tend to escape this role by just coaching their employees. However, coaching is followed by monitoring performance and providing feedback on the same.

4. **Delegation:** Many team leaders and managers feel that they are the only people who can do a particular task or job. Therefore, they do not delegate their jobs as much as they should. Delegation is a great way to develop competencies.
5. **Extra Responsibility:** Giving extra responsibility to employees is another way to get them engaged with the company. However, just giving the extra responsibility does not help. The manager must spend good time teaching the employees of how to manage responsibilities given to them so that they don't feel overburdened.
6. **Focus on future career:** Employees are always concerned about their future career. A manager should focus on showing employees his career ladder. If an employee sees that his current job offers a path towards their future career aspirations, then they are likely to stay longer in the company. Therefore, managers should play the role of career counselors as well.

1.2 PROBLEM DEFINITION

The statement of problem is to identify the level of employee attrition and retention with particular reference to IT organizations in Bangalore. The study is made to find out whether there is any dissatisfaction for the employees along with the retention problem faced. This study is also made to find the interpersonal relationship with the employees and to explore the trends of attrition during the recent past among the IT organizations and identify the various reasons put forth by the employees towards attrition. This project also helps to study the various measures adopted by the organizations to retain employees with them and to suggest better practices for engaging the employees in the aforesaid sector. This project would be of much importance for the company in knowing its strengths, opportunities and other influencing factors of its precious employees thereby retaining them. The project follows a descriptive research, stratified sampling is used here where both the primary and secondary data is also been an information source. The tools used for the study is percentage analysis and the weighing average analysis.

1.3 NEED FOR THE STUDY

- The study helps us to identify the reasons for attrition and expectations of the employees from their organizations.
- The study also attempts to study the interpersonal relationship among the employees.
- Identifying the relevance of any such factor contributing to the above cause and offering suggestions for the same.

1.4 OBJECTIVE OF THE STUDY

1.4.1 Primary objective:

To study about the employee retention techniques and attrition with particular reference to IT organizations at Bangalore.

1.4.2 Secondary objective:

- To explore the trends of attrition during the recent past among the IT organizations.
- To identify the various reasons put forth by the employees towards attrition.
- To study the various measures adopted by the organizations to retain employees with them.
- To suggest better practices for engaging the employees in the aforesaid sector.

CHAPTER II

REVIEW OF LITERATURE

The previous studies for employee's retentions are presented to be the framework to understand and systematically analyze factors that affect employee's intentions. Retention defined as "an obligation to continue to do business or exchange with a particular company on an ongoing basis" (Zineldin, 2000, p. 28). A more detailed and recent definition for the concept of retention is "customer liking, identification, commitment, trust, readiness to recommend, and repurchase intentions, with the first four being emotional-cognitive retention constructs, and the last two being behavioral intentions" (Stauss et al., 2001). Studies have indicated that retention driven by several key factors, which ought to be managed congruently: organizational culture, strategy, pay and benefits philosophy, and career development systems (Fitzenz 1990).

The above mentioned definitions explain many situations in our contemporary life while many employees are no longer having the sense of organization loyalty once they leave. Increasing numbers of organization mergers and acquisitions have left employees feeling displeased from the companies that they work and haunted by concerns of overall job security. As a result, employees are now making strategic career moves to guarantee employment that satisfy their need for security. On the other hand, employers have a need to keep their staff from leaving or going to work for other companies. This is true because of the great expenses associated with hiring and retraining new employees. The adage, good help is hard to find, is even truer these days than ever before because the job market is becoming increasingly tight (Eskildesen 2000, Hammer 2000).

Literature of employees retaining again show that attracting existed employees costs less than acquiring new talents as organizations know their employees and what they want, and the initial cost of attracting the new employees has already been expended (Davidow and Uttal, 1989).

employees retention also attain benefits such as customers satisfaction, better service, lower costs (Reichheld, 1995), lower price sensitivity, positive word-of-mouth, higher market share, higher productivity and higher efficiency (Zineldin, 2000).

Abundant studies have hypothesized and empirically validated the link between satisfaction and behavioral intentions and behaviors such as employee's retention and word of mouth (e.g. Anderson and Sullivan, 1993; Rucci et al., 1998, Bansal and Taylor, 1999, Cronin et al., 2000). Indeed, this link is essential to the marketing concept, which holds that satisfying employee's needs and wants is the key to exist in the organization (Kotler et al., 2002). Further, the importance of satisfaction on retention is well recognized that some major economies now measure satisfaction at the industry level using large sample surveys to predict employee's retention and future financial performance (Fornell et al., 1995).

Kay (2000) describe costs as in "...advertising and recruiting expenses, orientation and training of the new employee, decreased productivity until the new employee is up to speed, and loss of customers who were loyal to the departing employee". The costs and expenses mentioned above open another area of concern which is productivity. When high level of employees turnover existed, most of the workforce is at an entry level stage of production. A very high cost is associated with large numbers of employees who have not accomplish full productivity. This cycle continues with very few employees performing at maximum productivity.

Numerous studies explain the importance of high employees involvement and how it could enhance their retention (Arthur 1994; Huselid 1995; Koch and McGrath 1996). Flexible work schedules and assistance programs need to be considered, however, only a small share of the workforce takes advantage of them (Perry Smith and Blum 2000). as earlier studies indicated that young employees are more interested in payment, advancement opportunities and time off. Such differences may reflect stages in the career plan or deeper generation differences. Additionally, there are often gender differences within demographic groups; e.g., young female may want different things from what young male want (Beck 2001). The lack of opportunities to learn and develop in the work can be the top reason for employee dissatisfaction and thus turnover.

CHAPTER III METHODOLOGY

3.1 METHODOLOGY

Research methodology is a design or plan as a guide for conducting research and to systematically solve the research problem. It includes research design, sampling procedures, data collection method and analysis procedure. Following research methodology was adopted for the present study.

3.2 RESEARCH DESIGN

Research design is a blue print or framework which specifies the details of the procedures necessary for obtaining the information needed to structure or solve research problems. Descriptive Research Design has been employed in the present study to define the answers to what, why and how of the different dimensions of the employee attrition among IT industries of Bangalore. Sampling method is Area Random sampling. Sampling size is 200. From a total of 225 questionnaires distributed, 210 were returned, out of which 200 were found valid and eligible for analysis

3.3 SOURCES OF DATA COLLECTION

Both primary and secondary data has been collected and analyzed to present a comprehensive analysis of the phenomenon of employee attrition. Primary data has been collected through standardized questionnaires for the purpose of the study. These questionnaires were administered to employees of the various IT organizations.

3.3.1 Primary sources: Employees of IT organizations in Bangalore were personally interviewed by administering the standard questionnaire as schedules, to collect data for the present study to have firsthand account of different dimensions of employee attrition in the IT industry.

3.3.2 Secondary sources: Comprehensive review of existing literature i.e., Journals, Books, Magazines, Internet and Newspapers was undertaken to know the contemporary employee retention scenario and the research undertaken in the field so far. It enabled identification of the prevalent gaps in the existing literature.

3.4 TOOLS FOR DATA ANALYSIS

To arrive at pertinent analysis, the collected data was put to planned and rigorous statistical analysis.

- Percentage analysis.
- Weighing average analysis.

CHAPTER IV DATA ANALYSIS

4.1 PERCENTAGE ANALYSIS

A. Profile of the respondents

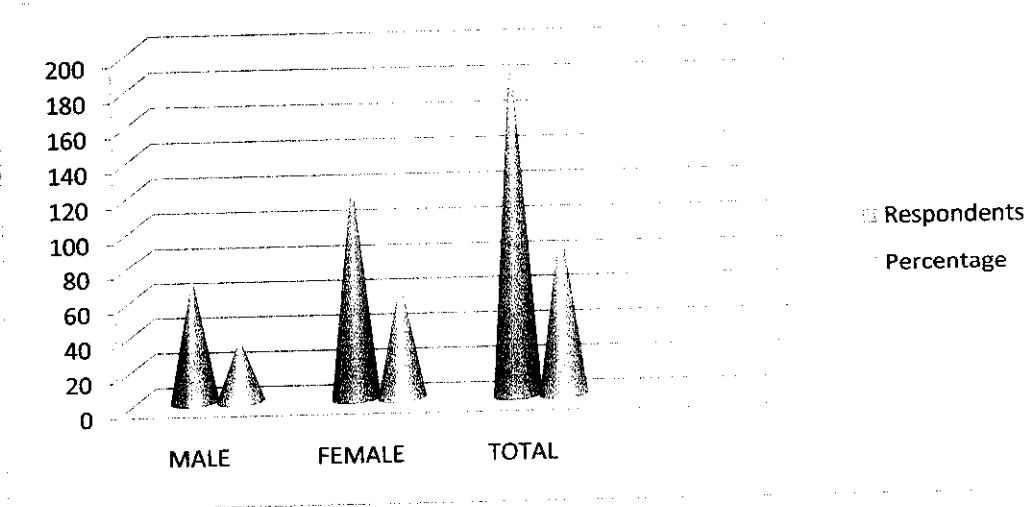
Initially the demographic factors of employees like gender, age, qualification, job level and experience were analysed.

4.1 Table showing the gender of the employees

Gender	No. of Respondents	Percentage
Male	72	36
Female	128	64
Total	200	100

Interpretation: From the total sample of 200 analyzing reasons for attrition , 36% of the respondents are male and 64% of respondents are female.

4.1 Chart showing the gender of the respondents



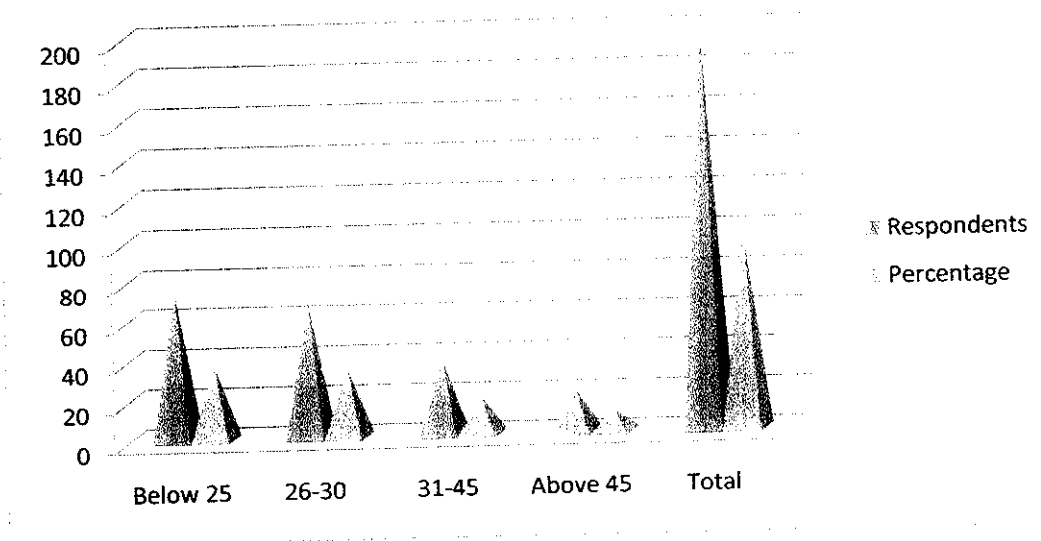
4.2 Table showing the age of the employees

Age	No of Respondents	Percentage
Below 25	73	36.5
26-30	68	34
31-45	38	19
45 and above	21	10.5
Total	200	100

Interpretation:

The maximum cadre of employees providing various reasons for attrition belong to the age group below 25 (36.5%), about 34% belong to the age group between 26-30, 19% belong to the age group between 31-45 and about 10.5% belong to the age group of 45 and above.

4.2 Chart showing the age group of the respondents



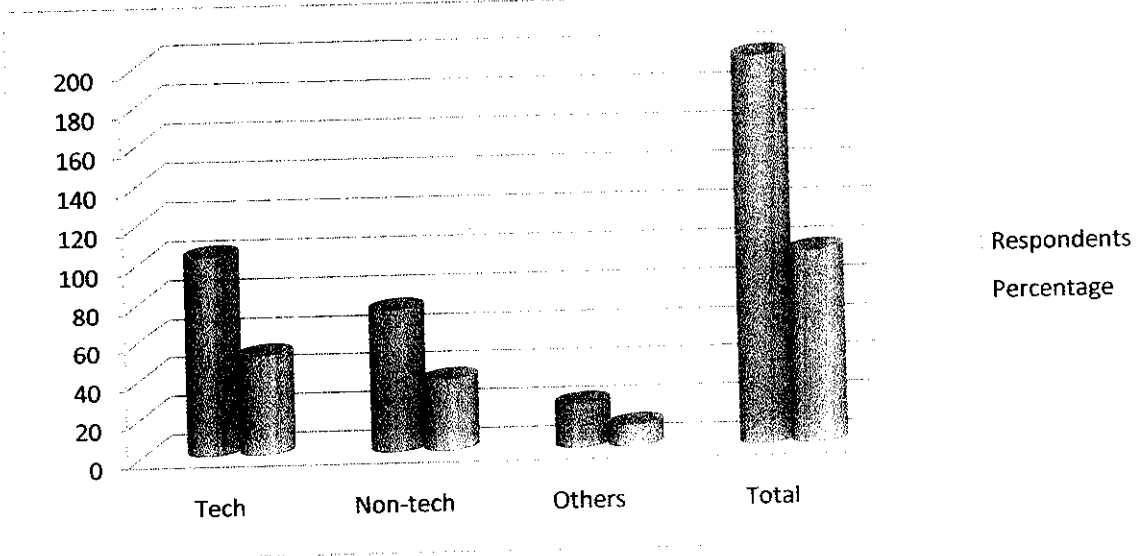
4.3 Table showing the qualification of the employees

Qualification	No. of Respondents	Percentage
Graduate(Tech)	103	51.5
Graduate(Non-Tech)	74	37
Others	23	11.5
Total	200	100

Interpretation :

More number of IT employees are tech graduates and also here in this survey of attrition many respondents(51.5 %) are Tech graduates, about 37% are non-tech graduates, and about 11.5% belong to other group.

4.3 Chart showing the qualification of the employees



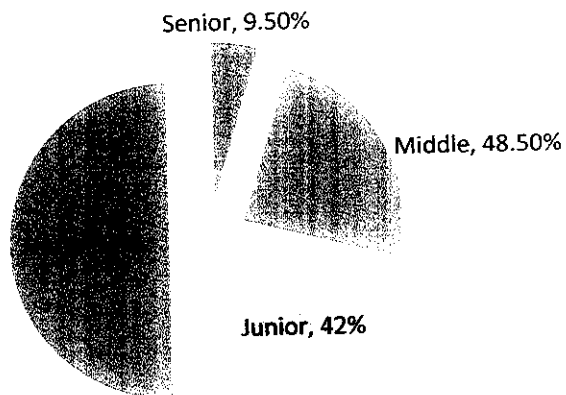
4.4 Table showing the Job level of Respondents

Job level	No of Respondents	Percentage
Senior level	19	9.5
Middle level	97	48.5
Junior level	84	42
Total	200	100

Interpretation:-

There were more number of middle level respondents (48.5%) responding to the questionnaire.

4.4 Chart showing the job level of respondents



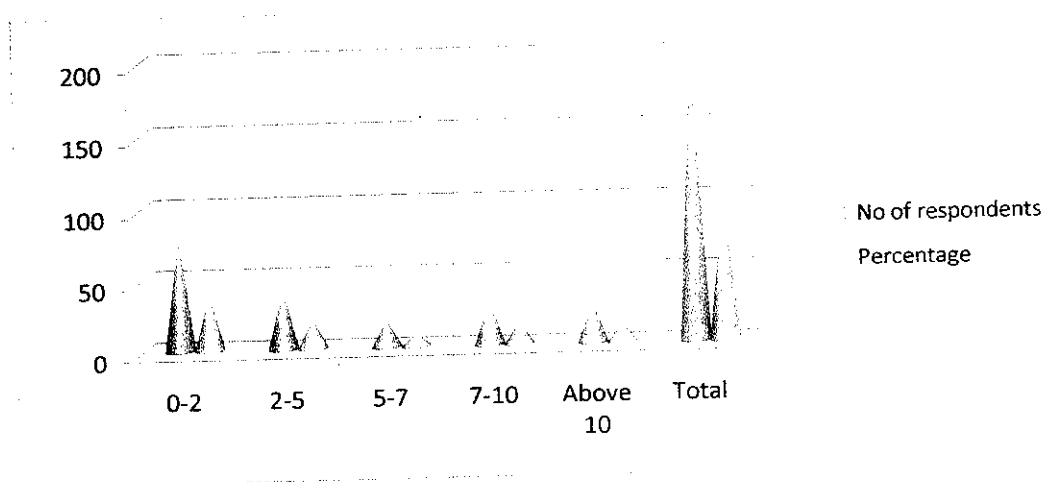
4.5 Table showing total experience

Experience (in years)	No of Respondents	Percentage
0-2	80	40
2-5	42	21
5-7	19	9.5
7-10	31	15.5
Above 10	28	14
Total	200	100

Interpretation:-

About 40 % of the respondents have experience of 0-2 years, 21% have experience of about 2-5 years, 9.5% have experience between 5-7 years, 15.5% have experience of about 7-10 years and 14% have experience more than 10 years.

4.5 Chart showing total experience of the respondents



(A) Respondents opinion to the current job profile

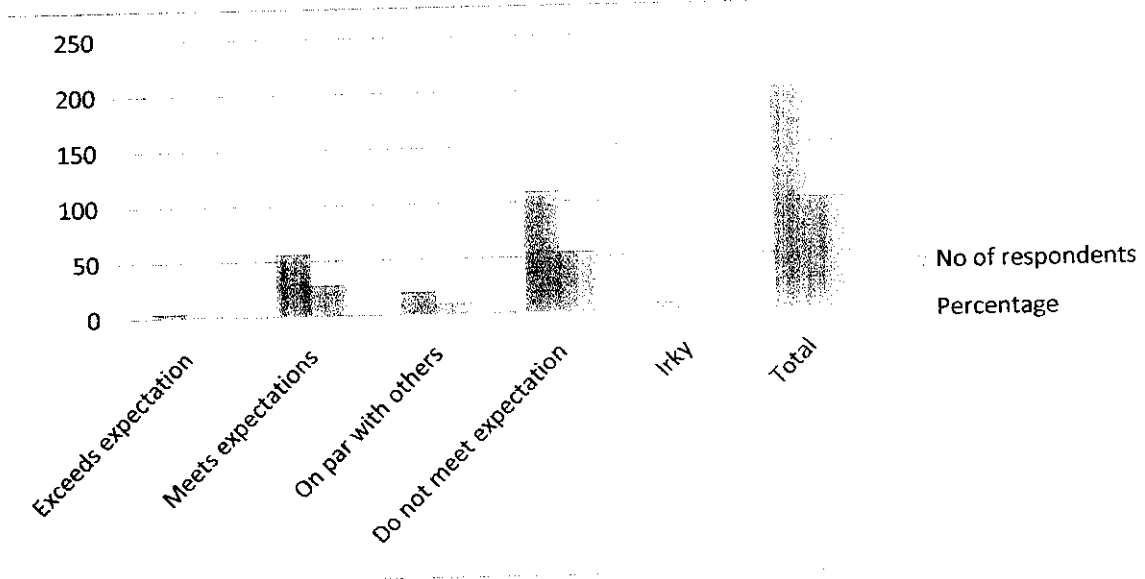
4.6 Table showing Pay structure

Pay Structure	No of Respondents	Percentage
Exceeds expectation	5	2.5
Meets expectations	57	28.5
On par with others	21	10.5
Do not meet expectation	110	55
Irky	7	3.5
Total	200	100

Interpretation :

Pay structure was considered as a major factor of attrition by the maximum number of respondents(55 %).

4.6 Chart showing Pay structure



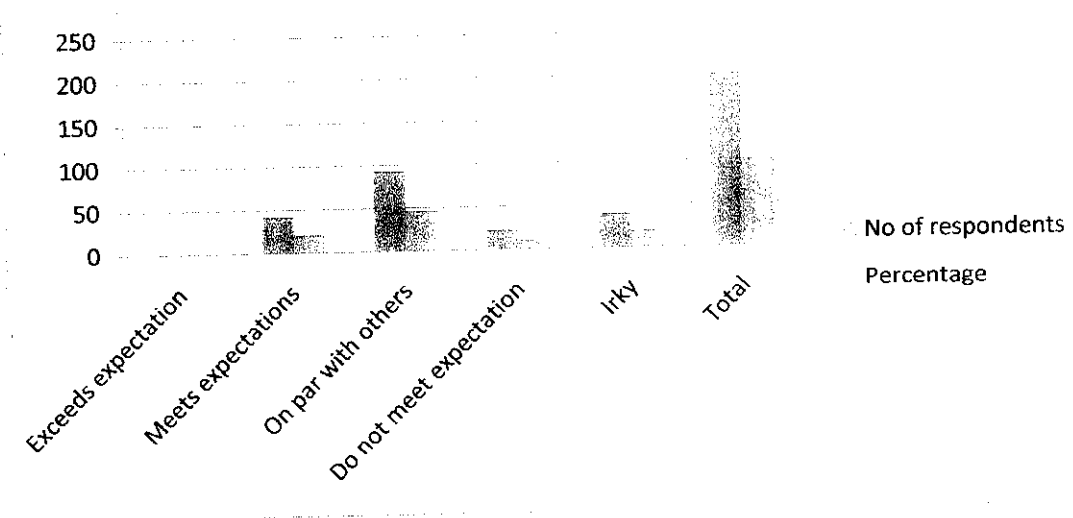
4.7 Table showing Statutory Benefits

Statutory Benefits	No of Respondents	Percentage
Exceeds expectation	0	0
Meets expectations	43	21.5
On par with others	94	47
Do not meet expectation	23	11.5
Irky	40	20
Total	200	100

Interpretation :

Statutory benefits was not ranked as a major factor by the employees. Majority of respondents(47%) feel that the statutory benefits are on par with others.

4.7 Chart showing Statutory Benefits



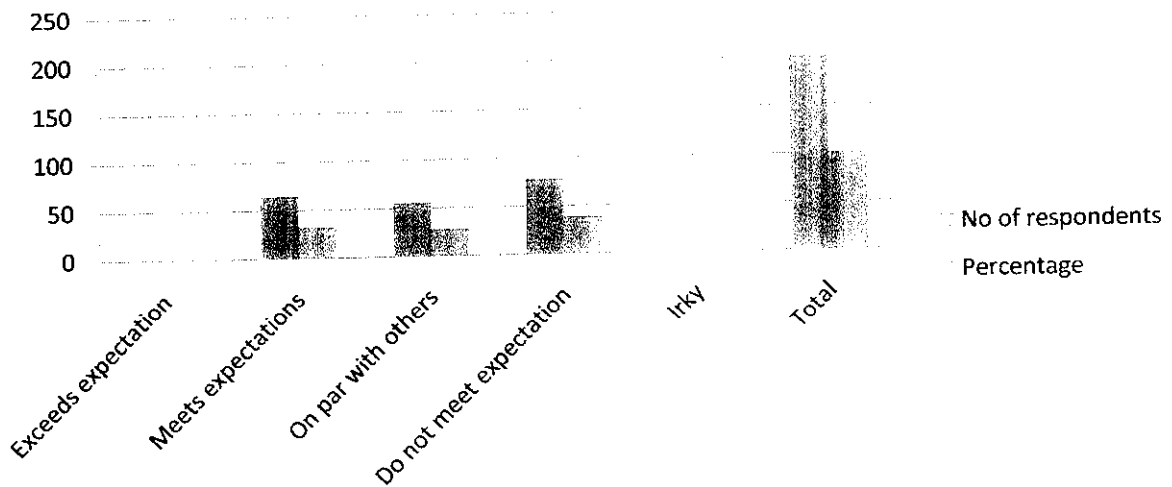
4.8 Table showing Allowances and Compensatory packs

Allowances and Compensatory packs	No of Respondents	Percentage
Exceeds expectation	0	0
Meets expectations	65	32.5
On par with others	56	28
Do not meet expectation	78	39
Irky	1	0.5
Total	200	100

Interpretation :

Allowances and compensatory packs was also considered by most of the respondents (39%) as not meeting their expectations and hence causing attrition.

4.8 Chart showing Allowances and Compensatory packs



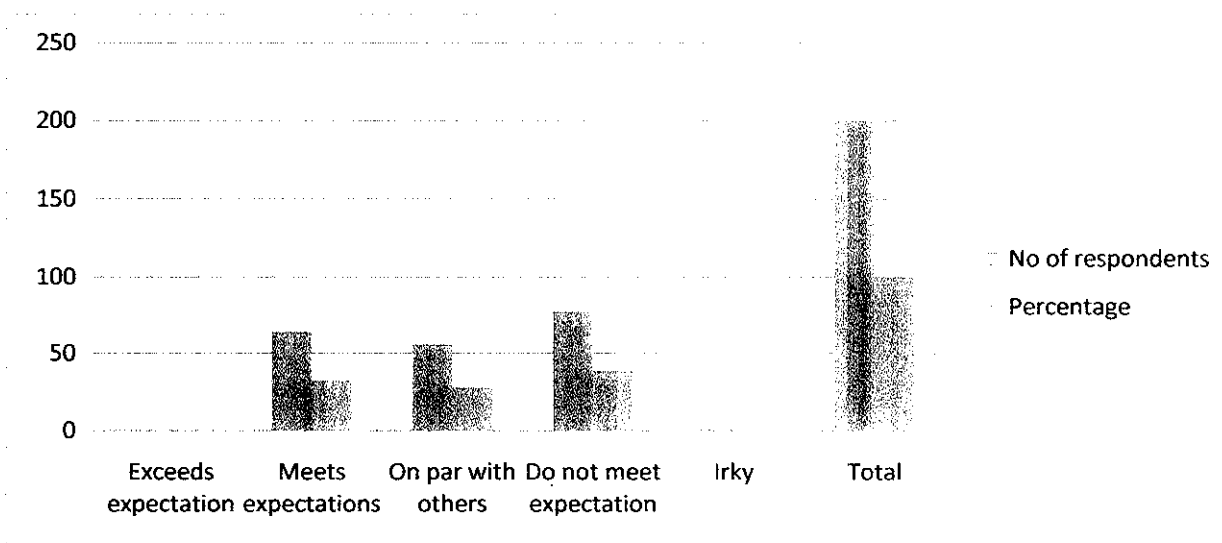
4.9 Table showing Incentives and bonus provided

Incentives and bonus provided	No of Respondents	Percentage
Exceeds expectation	0	0
Meets expectations	35	17.5
On par with others	51	25.5
Do not meet expectation	97	48.5
Irky	17	8.5
Total	200	100

Interpretation :

We can interpret from the above data that Incentives and bonus provided is also a factor for attrition responded by 48.5% of employees that they don't meet their expectations.

4.9 Chart showing Incentives and bonus provided



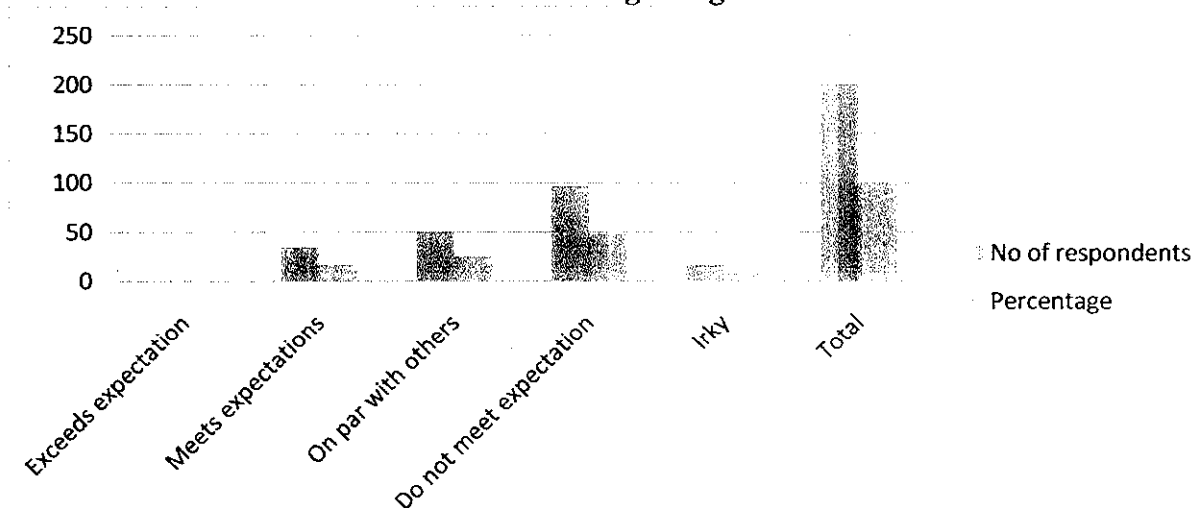
4.10 Table showing Fringe benefits

Fringe benefits	No of Respondents	Percentage
Exceeds expectation	2	0
Meets expectations	43	21.5
On par with others	59	29.5
Do not meet expectation	85	42.5
Irky	11	5.5
Total	200	100

Interpretation :

In most of the IT organizations in Bangalore, most of the fringe benefits provided is not meeting the employee's expectations and hence 42.5% feel that this may be a cause of attrition.

4.10 Chart showing Fringe benefits



(B) Job Environment

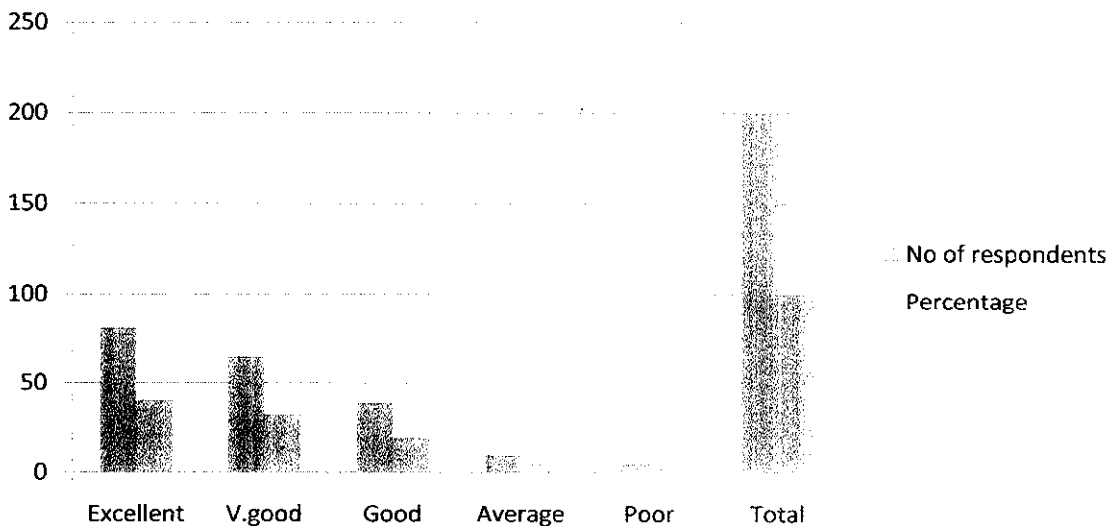
4.11 Table showing Work environment

Work environment	No of Respondents	Percentage
Excellent	81	40.5
V.good	65	32.5
Good	39	19.5
Average	10	5
Poor	5	2.5
Total	200	100

Interpretation :

In IT organizations in Bangalore most of the employees (40.5%) feel that the environment in which they are working is excellent and this would not be a major factor for attrition.

4.11 Chart showing Work environment



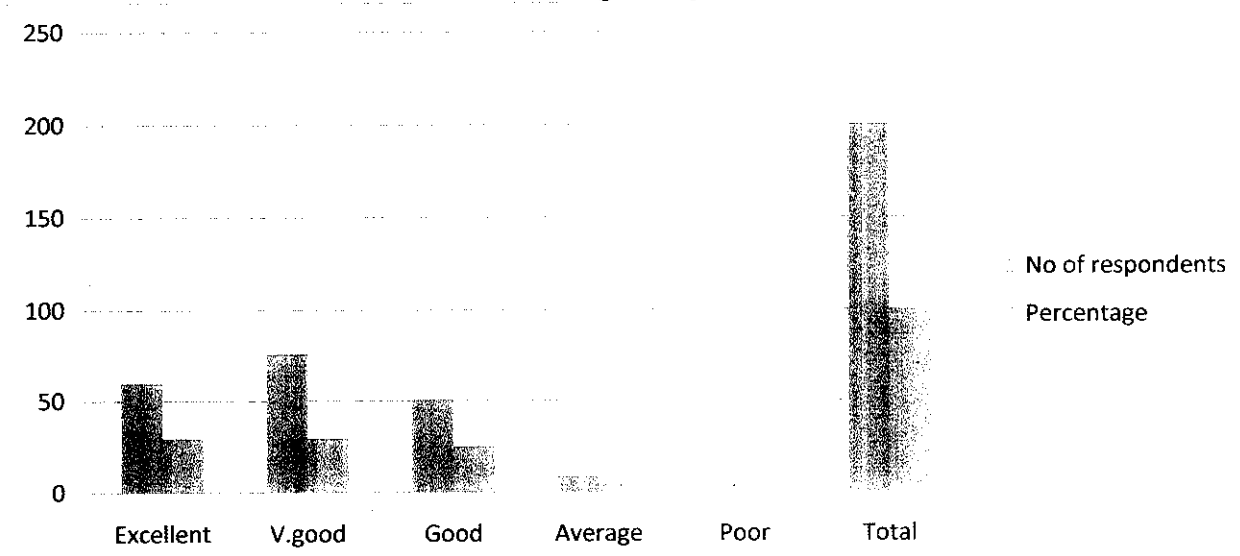
4.12 Table showing Safety and Welfare

Safety and Welfare	No of Respondents	Percentage
Excellent	60	30
V. Good	76	38
Good	51	25.5
Average	9	4.5
Poor	4	2
Total	200	100

Interpretation :

Most of the respondents feel that the safety and welfare in their organizations are better (v.good 38%) and this would not be a factor for attrition.

4.12 Chart showing Safety and Welfare



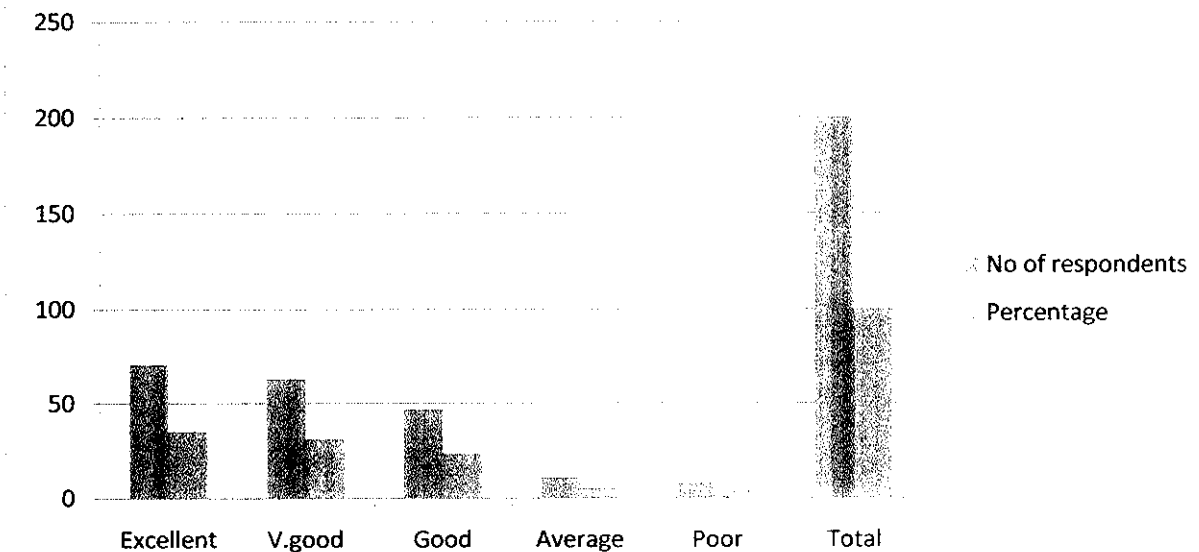
4.13 Table showing Amenities

Amenities	No of Respondents	Percentage
Excellent	71	35.5
V.good	63	31.5
Good	47	23.5
Average	11	5.5
Poor	8	4
Total	200	100

Interpretation :

From the above response it is clear that the amenities in IT organizations in Bangalore is excellent (35.5%) and hence this would not cause attrition.

4.13 Chart showing Amenities



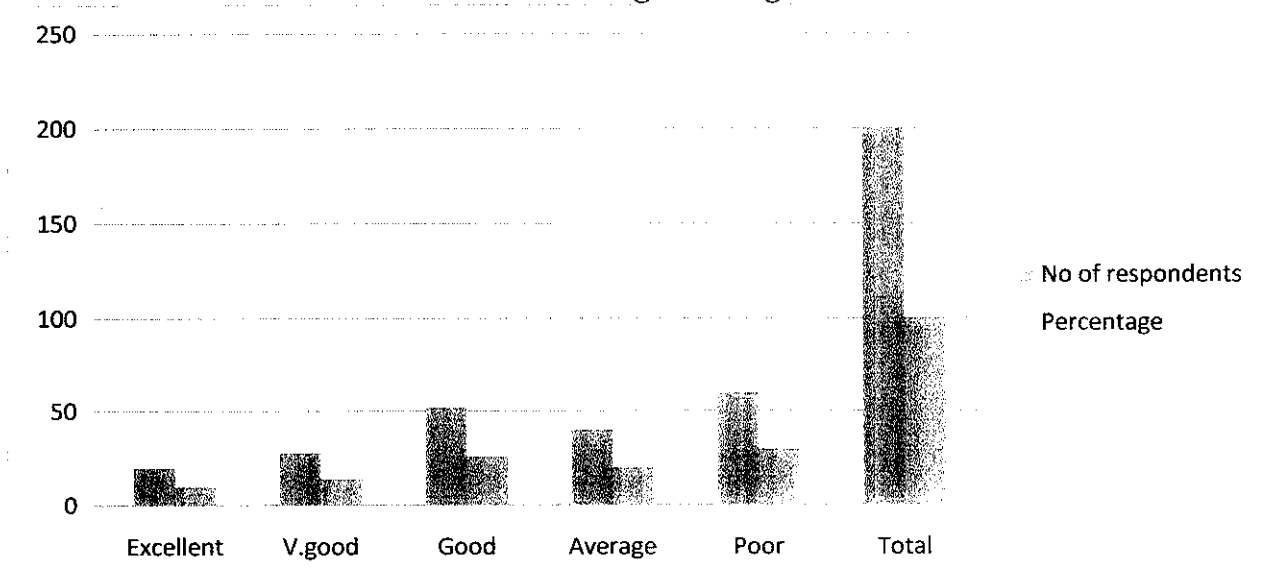
4.14 Table showing Working Hours

Working Hours	No of Respondents	Percentage
Excellent	20	10
V.good	28	14
Good	52	26
Average	40	20
Poor	60	30
Total	200	100

Interpretation :

More respondents (about 30%) feel that working hours is not proper in their organization and this would be a factor of attrition.

4.14 Chart showing Working Hours



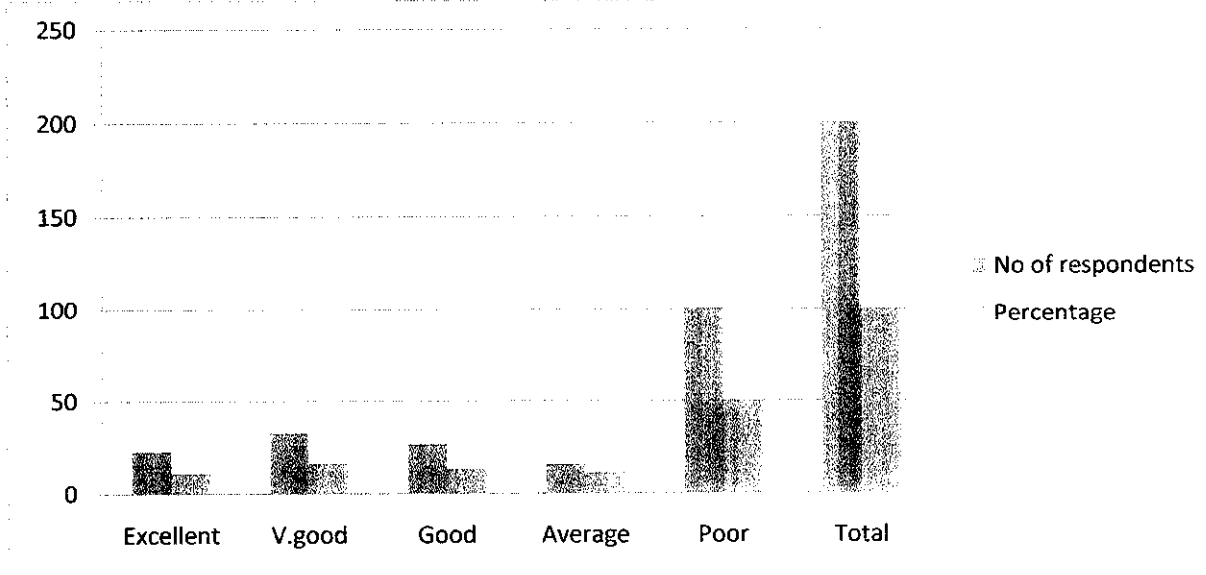
4.15 Table showing Distribution of workload

Distribution of workload	No of Respondents	Percentage
Excellent	23	11.5
V.good	33	16.5
Good	27	13.5
Average	16	8
Poor	101	50.5
Total	200	100

Interpretation :

Workload is considered as a major factor by most of the employees to leave the organization . About 50.5% of the repondents feel that workload is not proper in their organization and hence causing attrition.

4.15 Chart showing Distribution of workload



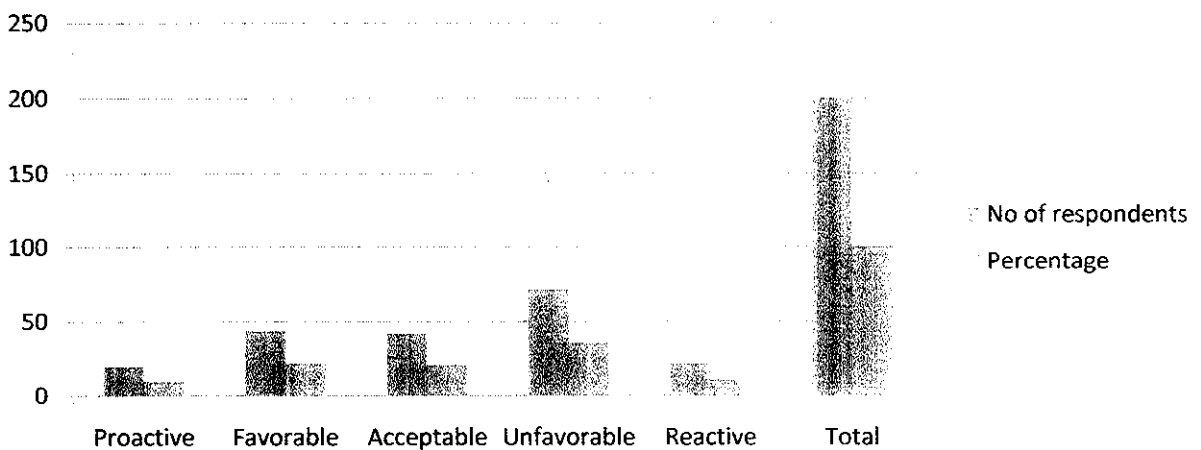
(C) Career Development
4.16 Table showing Support for higher education

Support for higher education	No of Respondents	Percentage
Proactive	20	10
Favorable	44	22
Acceptable	42	21
Unfavorable	72	36
Reactive	22	11
Total	200	100

Interpretation :

The respondents feel (36%) support for higher education is not provided by most of the IT organizations in Bangalore and this is a cause for attrition where employees leave the organization for pursuing higher education.

4.16 Chart showing Support for higher education



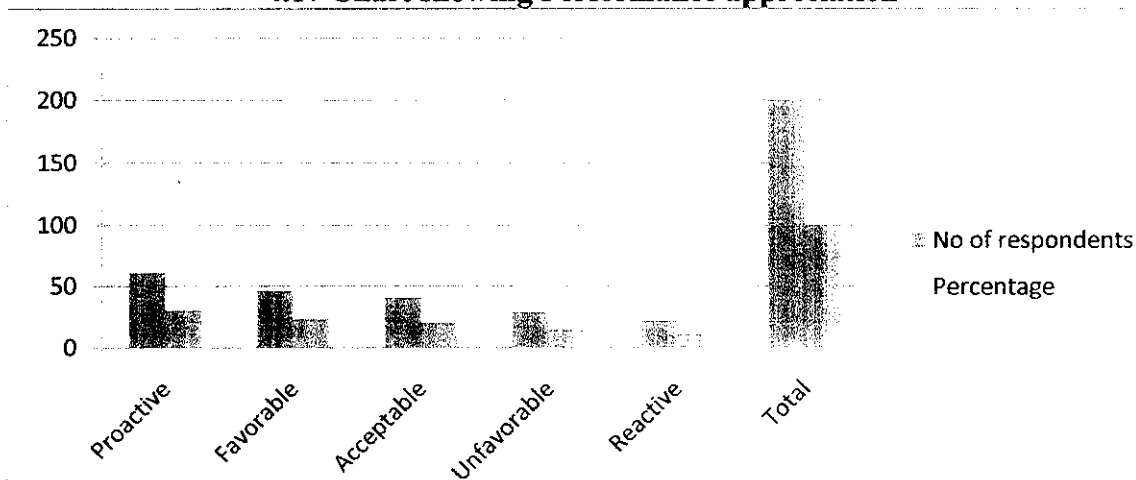
4.17 Table showing Performance appreciation

Performance appreciation	No of Respondents	Percentage
Proactive	61	30.5
Favorable	47	23.5
Acceptable	41	20.5
Unfavorable	29	14.5
Reactive	22	11
Total	200	100

Interpretation :

In IT organizations in Bangalore performance appraisal is provided upto the expectations to most of the employees and hence 30.5% feel that it is not a major cause for attrition.

4.17 Chart showing Performance appreciation



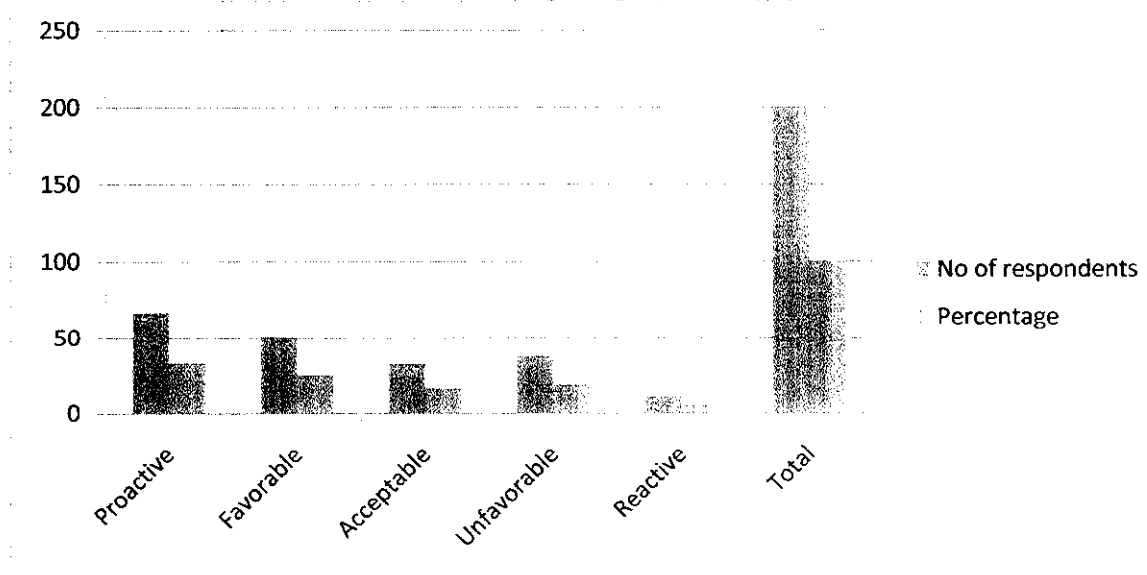
4.18 Table showing Employee Engagement

Employee Engagement	No of Respondents	Percentage
Proactive	67	33.5
Favorable	51	25.5
Acceptable	33	16.5
Unfavorable	38	19
Reactive	11	5.5
Total	200	100

Interpretation :

Most of the employees feel (33.5%) that the IT organizations in Bangalore engage their employees in most of the actions and hence this would not be a reason for attrition.

4.18 Chart showing Employee Engagement



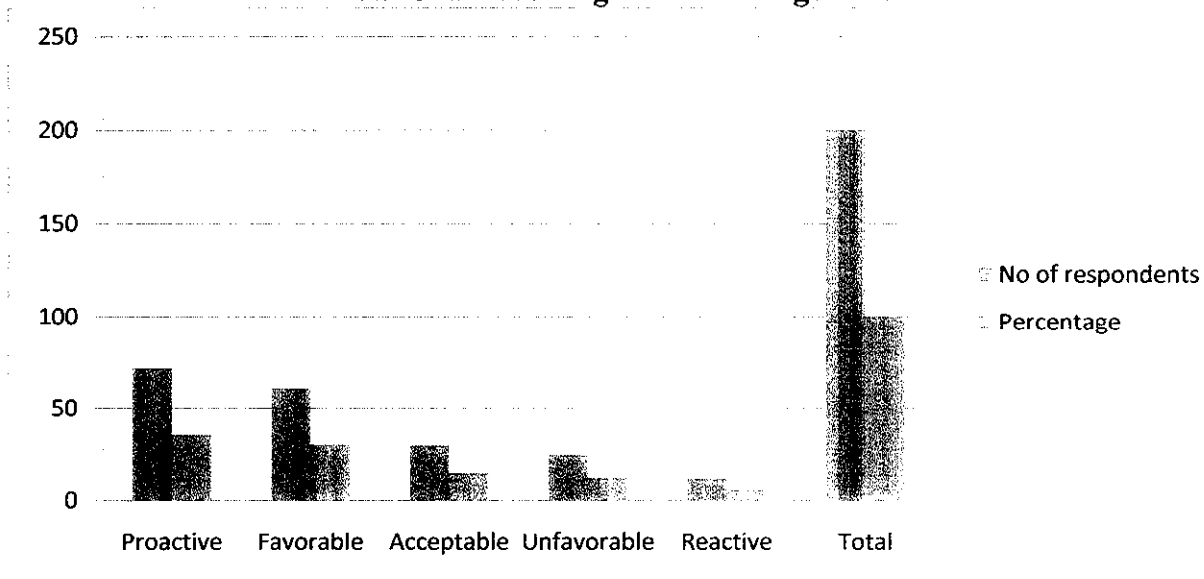
4.19 Table showing Talent Management

Talent Management	No of Respondents	Percentage
Proactive	72	36
Favorable	61	30.5
Acceptable	30	15
Unfavorable	25	12.5
Reactive	12	6
Total	200	100

Interpretation :

Many employees response (36%) indicate that IT organizations manage the employees talent proactively and hence it will not be a major factor for attrition.

4.19 Chart showing Talent Management



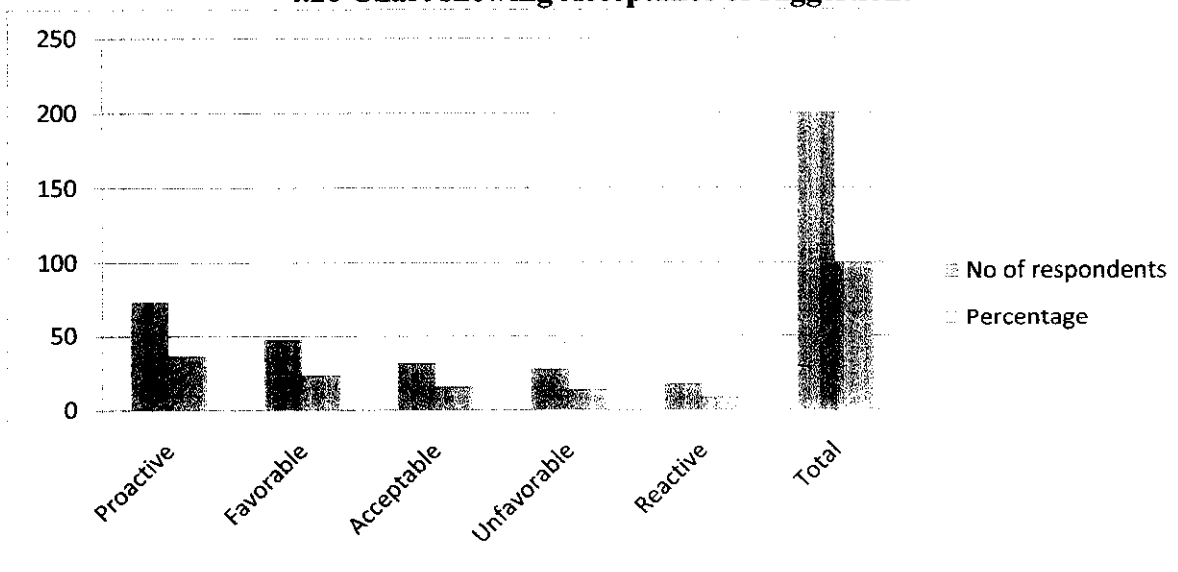
4.20 Table showing Acceptance of suggestions

Acceptance of suggestions	No of Respondents	Percentage
Proactive	48	24
Favorable	32	16
Acceptable	74	37
Unfavorable	28	14
Reactive	18	9
Total	200	100

Interpretation :

The acceptance of suggestions in IT organizations are indicated as acceptable by the employees and hence it is not said to be major factor causing attrition.

4.20 Chart showing Acceptance of suggestions

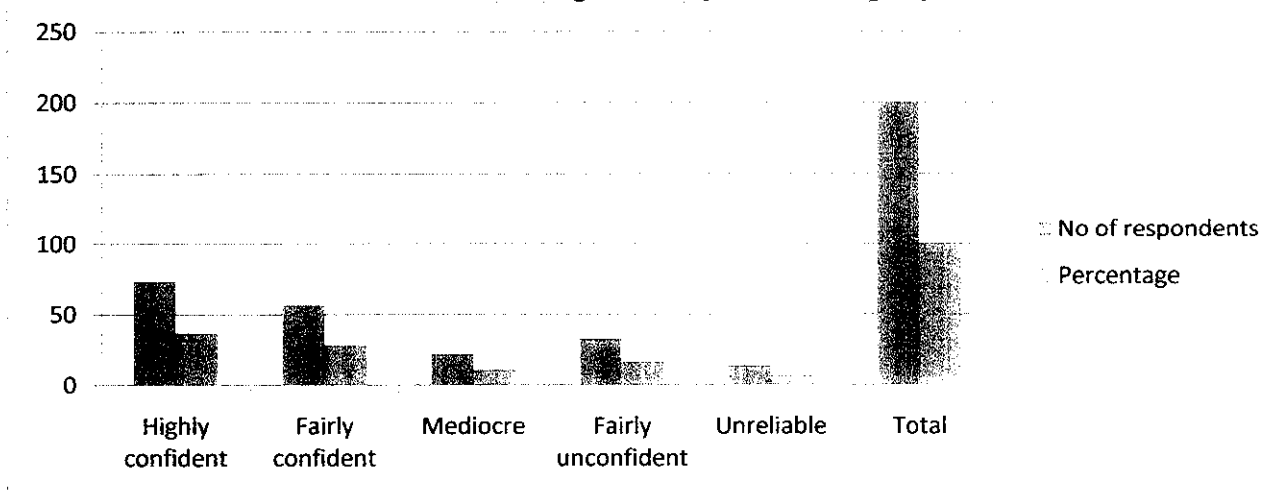


(D) Relationship**4.21 Table showing Visibility of the company**

Visibility of the company	No of Respondents	Percentage
Highly confident	74	37
Fairly confident	57	28.5
Mediocre	22	11
Fairly unconfident	33	16.5
Unreliable	14	7
Total	200	100

Interpretation :

Visibility of the company was said to be highly confident by most of the employees (37%) and hence it is not a reason for attrition in IT organizations in Bangalore.

4.21 Chart showing Visibility of the company

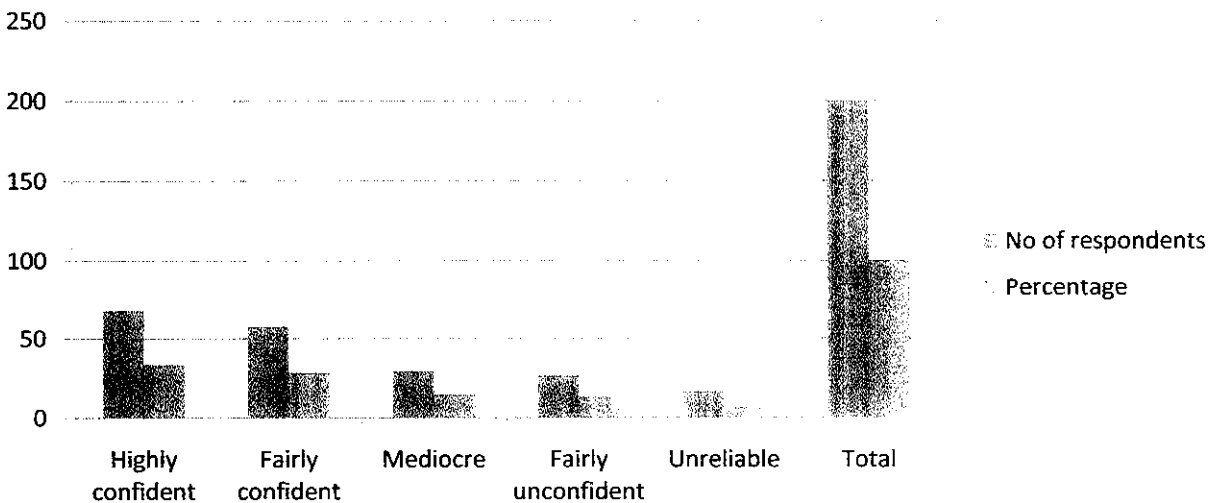
4.22 Table showing Career development

Career development	No of Respondents	Percentage
Highly confident	68	34
Fairly confident	58	29
Mediocre	30	15
Fairly unconfident	27	13.5
Unreliable	17	8.5
Total	200	100

Interpretation :

The maximum number of respondents 34% are highly confident about their career development in the organization which indicates that it would not be a cause for attriton.

4.22 Chart showing Career development



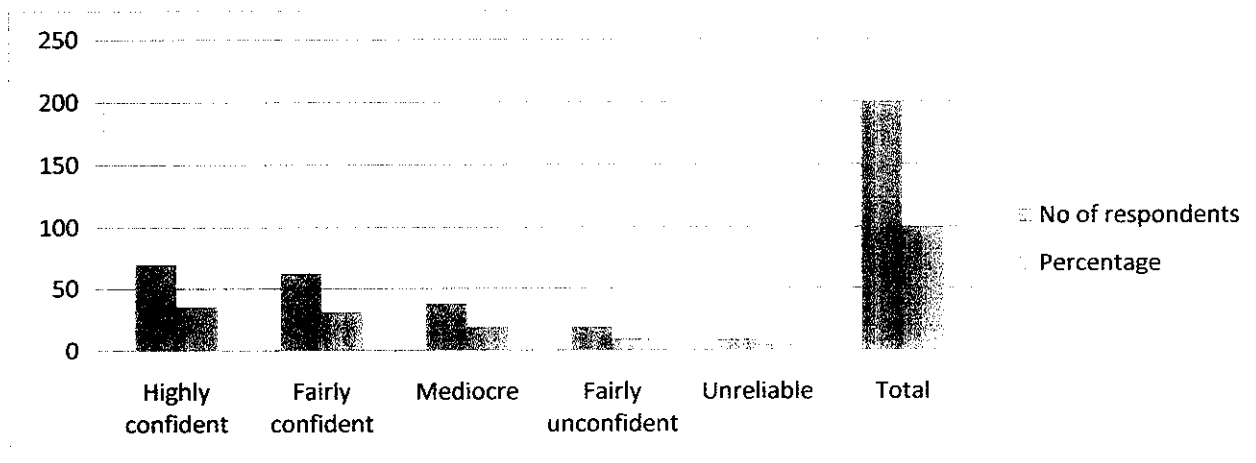
4.23 Table showing Performance recognition

Performance recognition	No of Respondents	Percentage
Highly confident	71	35.5
Fairly confident	63	31.5
Mediocre	38	19
Fairly unconfident	19	9.5
Unreliable	9	4.5
Total	200	100

Interpretation :

More number of respondents feel that they have good performance recognition in their organization and they cannot be a reason for attrition.

4.23 Chart showing Performance recognition



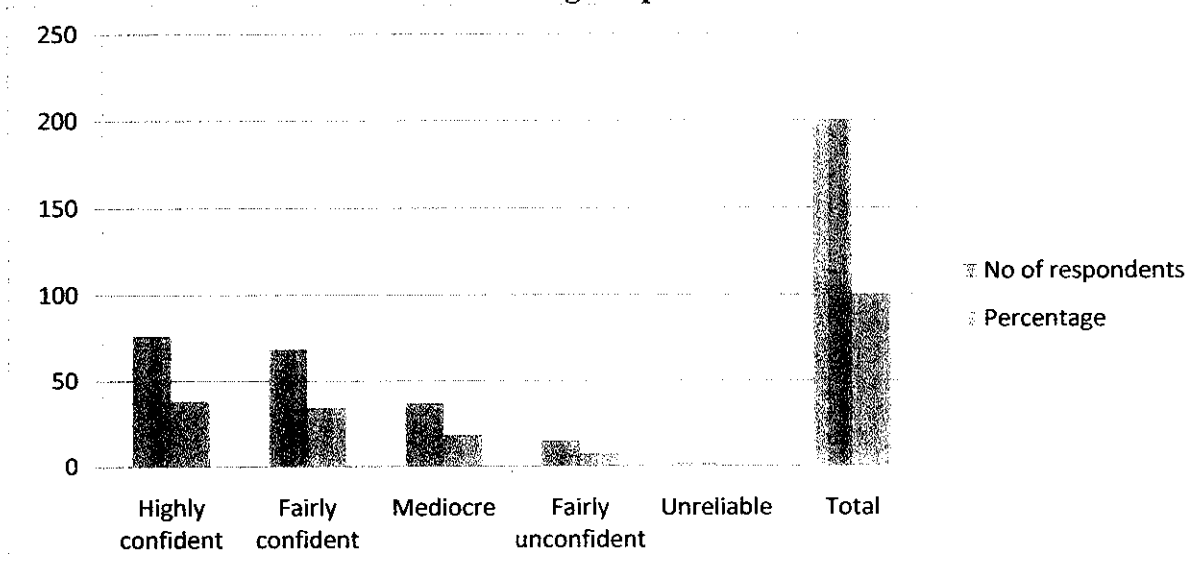
4.24 Table showing Corporate Governance

Corporate Governance	No of Respondents	Percentage
Highly confident	77	38.5
Fairly confident	69	34.5
Mediocre	37	18.5
Fairly unconfident	15	7.5
Unreliable	2	1
Total	200	100

Interpretation :

Only 7.5% of the respondents say that corporate governance is fairly unconfident in their organization and 1% say it is unreliable and hence corporate governance cannot be taken as a factor for attrition.

4.24 Chart showing Corporate Governance



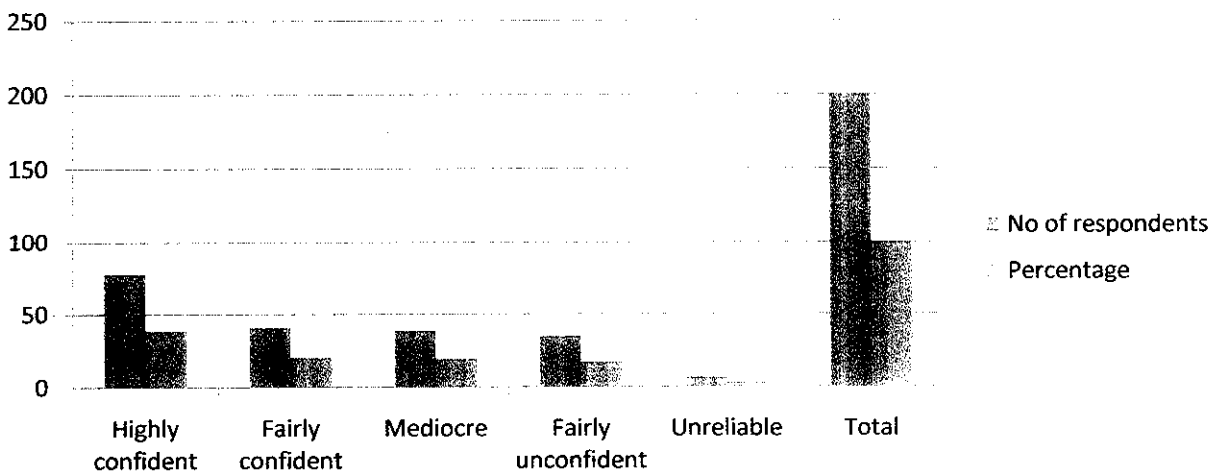
4.25 Table showing Empathetic relationship among peer groups

Empathetic relationship among peer groups	No of Respondents	Percentage
Highly confident	78	39
Fairly confident	41	20.5
Mediocre	39	19.5
Fairly unconfident	35	17.5
Unreliable	7	3.5
Total	200	100

Interpretation :

Most of the employees (about 39%) in IT organizations in Bangalore have a highly confident empathetic relationship between peer groups and so attrition cannot be due to empathetic relationship.

4.25 Chart showing Empathetic relationship among peer groups



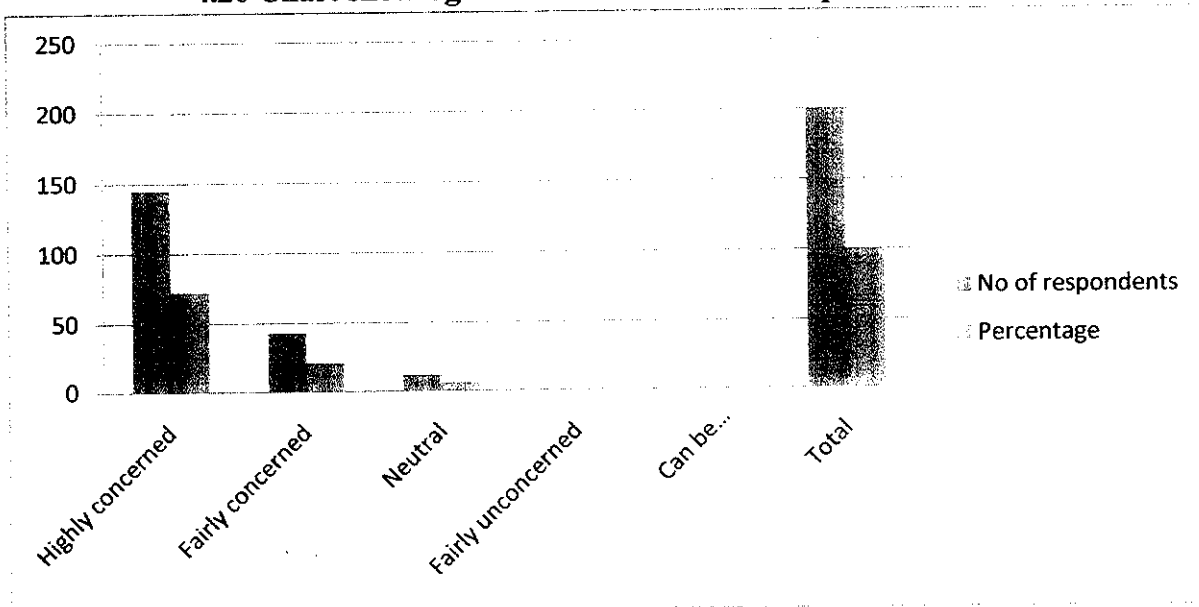
(E) EXPECTATIONS OF THE EMPLOYEES FROM IT ORGANIZATIONS
4.26 Table showing Career advancement and Promotion

Career advancement and Promotion	No of Respondents	Percentage
Highly concerned	145	72.5
Fairly concerned	43	21.5
Neutral	12	6
Fairly unconcerned	0	0
Can be ignored	0	0
Total	200	100

Interpretation :

The maximum number of respondents 72.5% expect their organization to highly concern about career advancement and promotion in order to reduce attrition.

4.26 Chart showing Career advancement and promotion



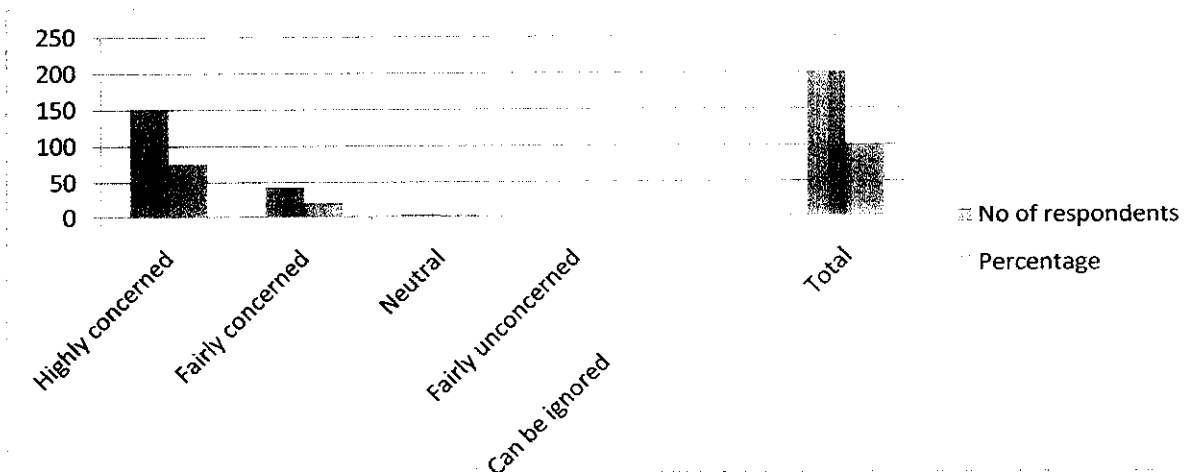
4.27 Table showing Pay structures and schedules

Pay structures and schedules	No of Respondents	Percentage
Highly concerned	152	76
Fairly concerned	44	22
Neutral	4	2
Fairly unconcerned	0	0
Can be ignored	0	0
Total	200	100

Interpretation :

The employees are highly concerned about the pay structure and schedules so that attrition can be decreased in a organization.

4.27 Chart showing Pay structures and schedules



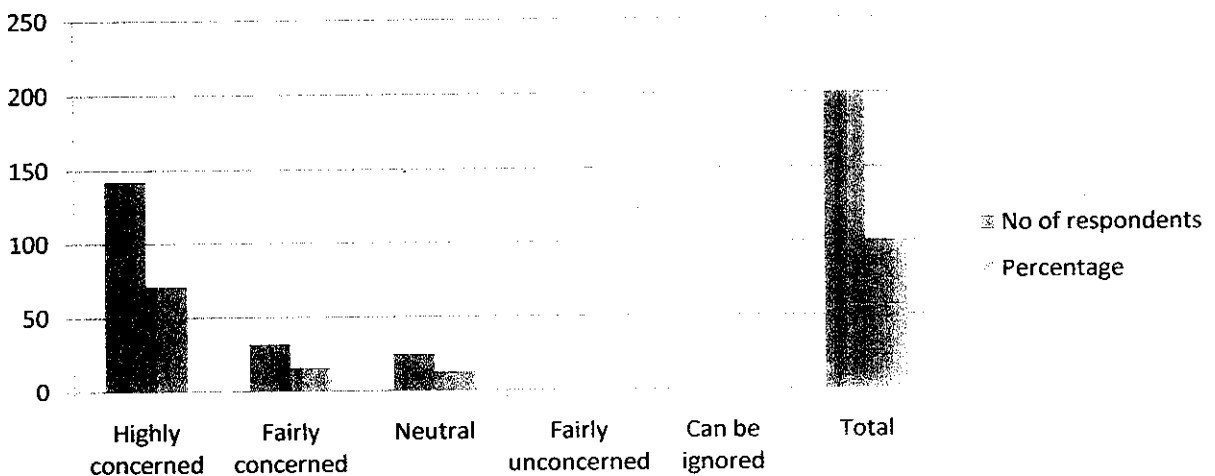
4.28 Table showing Training and Development

Training and Development	No of Respondents	Percentage
Highly concerned	143	71.5
Fairly concerned	32	16
Neutral	25	12.5
Fairly unconcerned	0	0
Can be ignored	0	0
Total	200	100

Interpretation :

To reduce attrition maximum number of respondents 71.5% expect the organization to highly concern about training and development.

4.28 Chart showing Training and Development



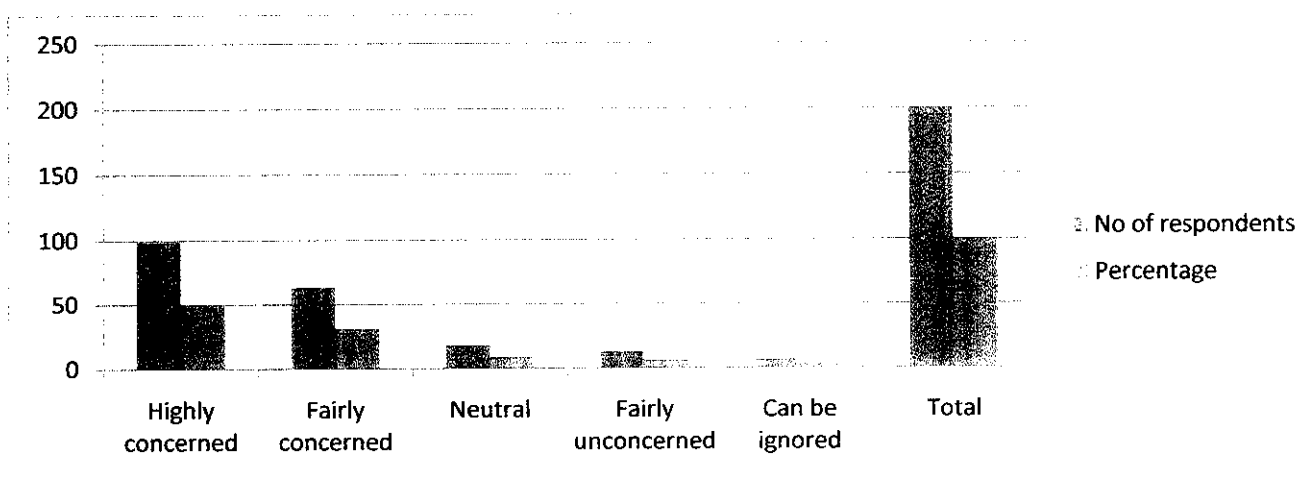
4.29 Table showing Corporate Governance and style

Corporate governance and style	No of Respondents	Percentage
Highly concerned	99	49.5
Fairly concerned	63	31.5
Neutral	18	9
Fairly unconcerned	13	6.5
Can be ignored	7	3.5
Total	200	100

Interpretation :

Corporate governance and style was considered to be one of the factor for attrition and hence employees expect organization to highly concern about it.

4.29 Chart showing Corporate governance and style



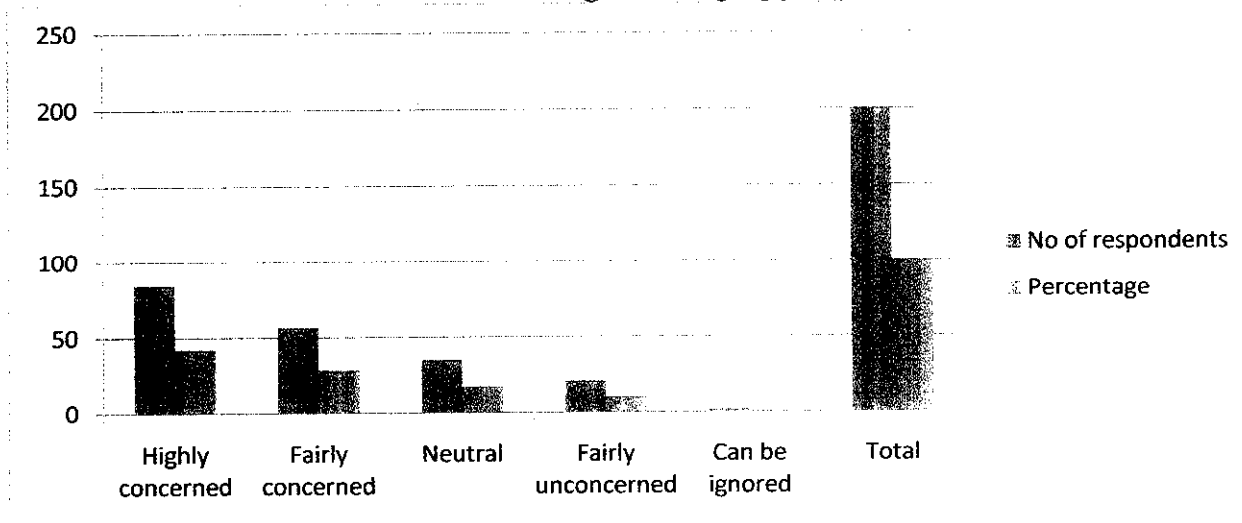
4.30 Table showing Challenging job profile

Challenging job profile	No of Respondents	Percentage
Highly concerned	85	42.5
Fairly concerned	57	28.5
Neutral	35	17.5
Fairly unconcerned	21	10.5
Can be ignored	2	1
Total	200	100

Interpretation :

The employees wish to have more challenging job profile in order to retain in a company. More number of respondents(42.5%) highly concern about the job profile.

4.30 Chart showing Challenging job profile



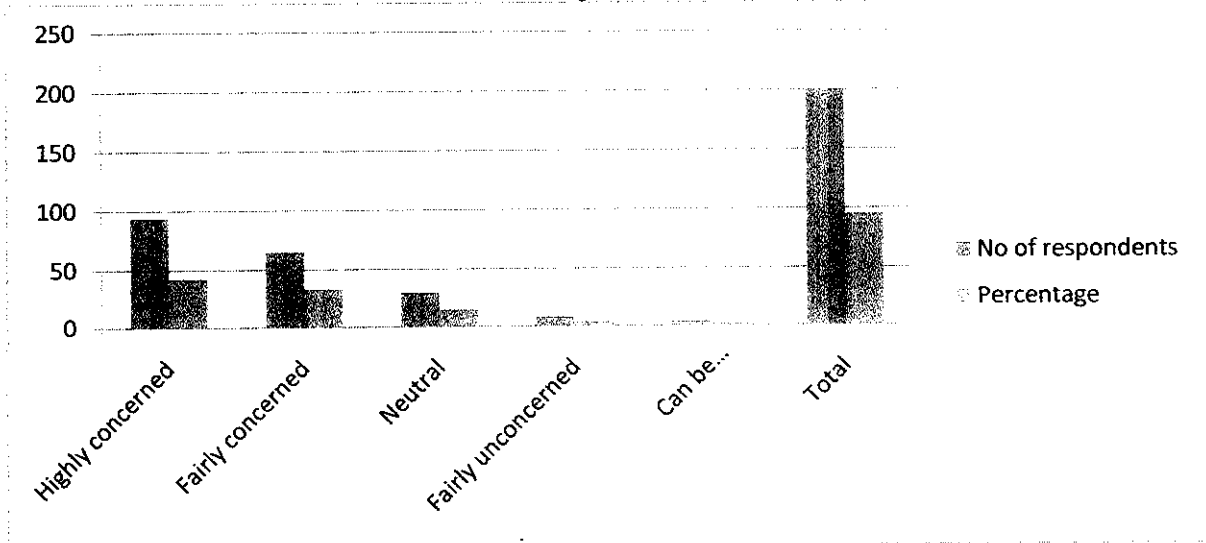
4.31 Table showing Conditions of service

Conditions of service	No of Respondents	Percentage
Highly concerned	94	47
Fairly concerned	65	32.5
Neutral	29	14.5
Fairly unconcerned	8	4
Can be ignored	4	2
Total	200	100

Interpretation :

The maximum number of respondents 47% expect the organization to highly concern about their conditons of service.

4.31 Chart showing Conditions of service



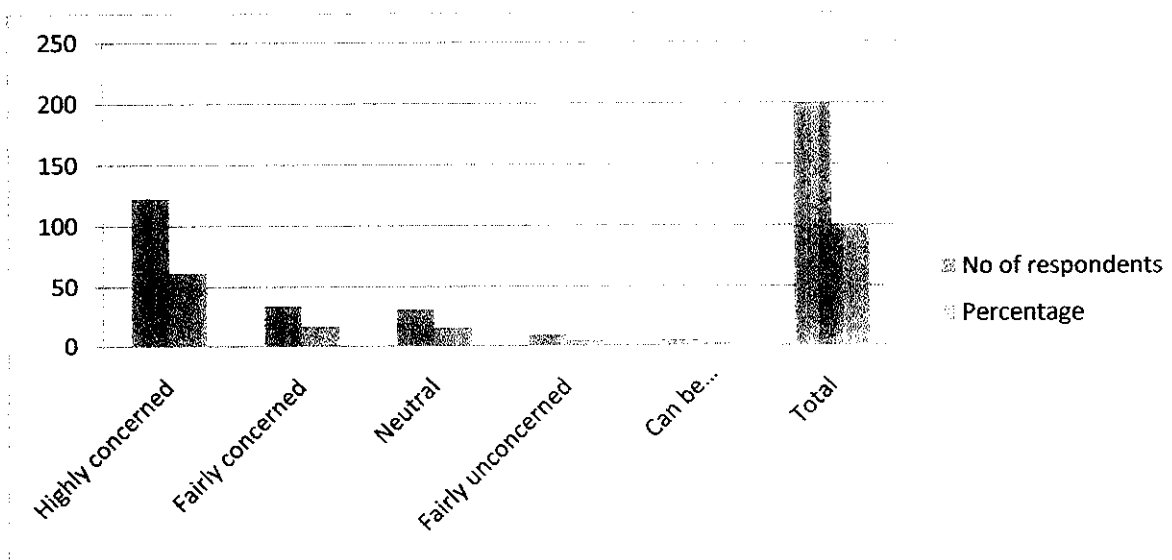
4.32 Table showing Flexi Timings

Flexi Timings	No of Respondents	Percentage
Highly concerned	123	61.5
Fairly concerned	33	16.5
Neutral	30	15
Fairly unconcerned	9	4.5
Can be ignored	5	2.5
Total	200	100

Interpretation :

Flexi timings is expected by most of the employees (61.5%) in their organization.

4.32 Chart showing Flexi Timings



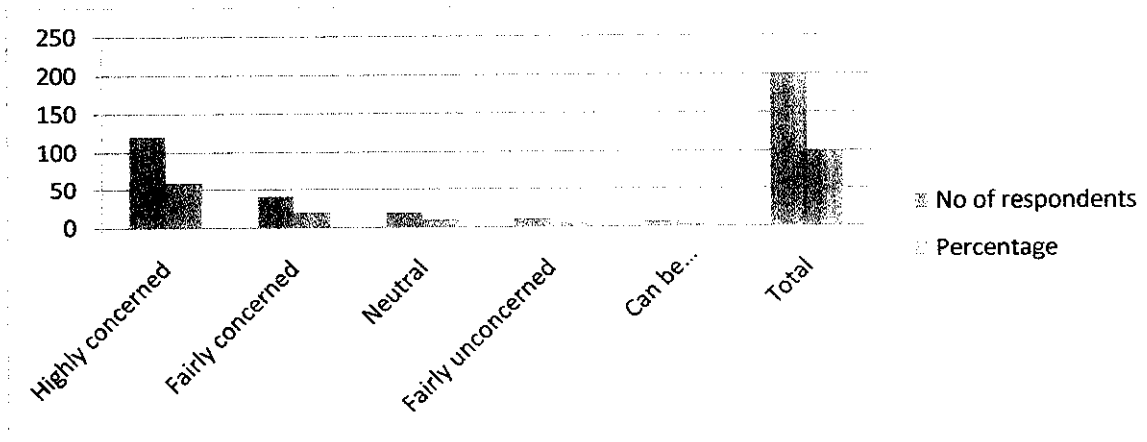
4.33 Table showing Work environment

Work environment	No of Respondents	Percentage
Highly concerned	121	60.5
Fairly concerned	41	20.5
Neutral	20	10
Fairly unconcerned	11	5.5
Can be ignored	7	3.5
Total	200	100

Interpretation :

The maximum number of respondents 60.5% expect the organization to highly concern about the work environment..

4.33 Chart showing Work environment



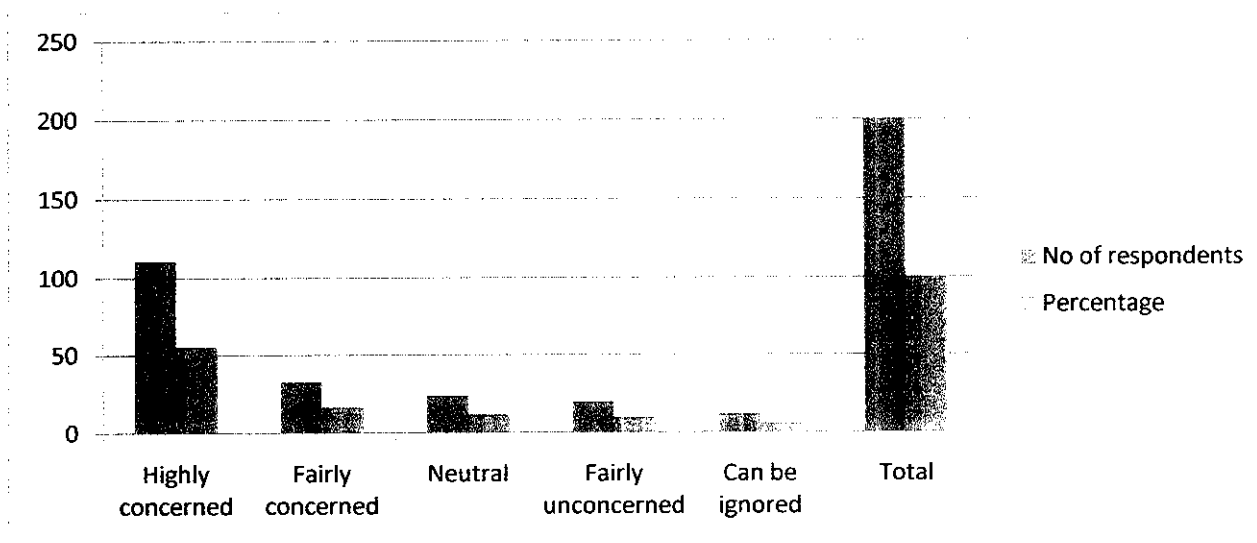
4.34 Table showing Nature of work/job satisfaction

Nature of work/job satisfaction	No of Respondents	Percentage
Highly concerned	111	55.5
Fairly concerned	33	16.5
Neutral	24	12
Fairly unconcerned	20	10
Can be ignored	12	6
Total	200	100

Interpretation :

The maximum number of respondents 55% expect the organization to highly concern about their job satisfaction.

4.34 Chart showing Nature of work/job satisfaction



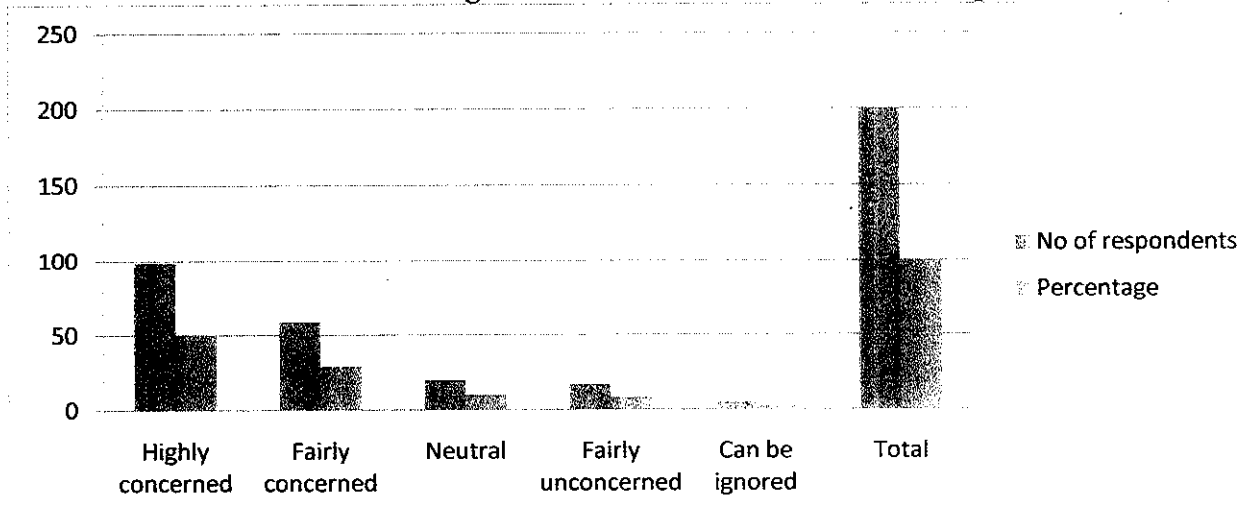
4.35 Table showing Distance /time taken to reach work place

Distance /time taken to reach work place	No of Respondents	Percentage
Highly concerned	99	49.5
Fairly concerned	59	29.5
Neutral	20	10
Fairly unconcerned	17	8.5
Can be ignored	5	2.5
Total	200	100

Interpretation :

The maximum number of respondents 49.5% expect the organization to highly concern about distance and time taken to reach work place.

4.35 Chart showing Distance /time taken to reach work place



4.2 WEIGHING AVERAGE METHOD ANALYSIS

Weighted average is an average in which each quantity to be averaged is assigned a weight. These weightings determine the relative importance of each quantity on the average. Weightings are the equivalent of having that many like items with the same value involved in the average.

The likert rating scale are given weightage from 1-5 .In the table below the numbers in the parentheses are the weighted values assigned to the columns. The number multiplied with the weighted value is the respondent count or the "frequency" of those that picked that rating. After multiplying the weighted values with the actual number of respondents who picked that rating, sum the totals. We will add the respondent totals (or frequency number) of those that picked the ratings. Last, we're able to obtain the rating average by dividing the sum of the weights by the sum of the number of responses.

Table 4.36 Respondents opinion to the current job profile

S.No	Parameters	Exceeds expectation (1)	Meets expectations (2)	On par with others (3)	Do not meet expectation (4)	Irky (5)	Sum of weights * Frequency	Rating average
1	Pay structure	5	57	21	110	7	657	3.285
2	Statutory Benefits (PF, gratuity etc.,)	0	43	94	23	40	660	3.3
3	Allowances and Compensatory packs	0	65	56	78	1	615	3.075
4	Incentives and bonus provided	0	35	51	97	17	696	3.48
5	Fringe benefits	2	43	59	85	11	660	3.3
							Total Average	3.288

Interpretation:

From the above analysis it is clear that the average of rating average of all factors regarding employees job profile is 3.288 which indicates that most of the employees lie in between the factors on par with others and do not meet expectations. Hence these factors contribute to attrition.

Table 4.37 Job Environment

S.No	Parameters	Excellent (1)	V. Good (2)	Good (3)	Average (4)	Poor (5)	Sum of weights * Frequency	Rating average
1	Work environment	81	65	39	10	5	393	1.965
2	Safety and Welfare	60	76	51	9	4	421	2.105
3	Amenities	71	63	47	11	8	422	2.11
4	Working Hours	20	28	52	40	60	692	3.46
5	Distribution of workload	23	33	27	16	101	739	3.695
							Total Average	2.667

Interpretation:

The total average of rating average indicates that the job environment is between very good and good as rated by respondents and hence does not have a major effect on attrition.

Table 4.38 Career Development

S.No	Parameters	Proactive (1)	Favorable (2)	Acceptable (3)	Unfavorable (4)	Reactive (5)	Sum of weights * Frequency (6)	Rating average (7)
1	Support for higher education	20	44	42	72	22	632	3.16
2	Performance appreciation	61	47	41	29	22	504	2.52
3	Employee Engagement	67	51	33	38	11	475	2.375
4	Talent Management	72	61	30	25	12	444	2.22
5	Acceptance of suggestions	48	32	74	28	18	536	2.68
							Total Average	2.591

Interpretation:

The weighing average analysis indicates that the career development factors indicated is acceptable overall by most of the Information Technology employees in Bangalore and hence they would not be a cause for attrition.

Table 4.39 Relationship

Parameters	Highly confident (1)	Fairly confident (2)	Mediocre (3)	Fairly Unconfident (4)	Unreliable (5)	Sum of weights * Frequency (6)	Rating average (7)
Visibility of the company	74	57	22	33	14	456	2.28
Career development	68	58	30	27	17	467	2.335
Performance recognition	71	63	38	19	9	432	2.16
Corporate Governance	77	69	37	15	2	396	1.98
Empathetic relationship among peer groups	78	41	39	35	7	452	2.26
						Total Average	2.203

Interpretation:

The weighing average analysis indicates that most of the employees are fairly confident about their relationship in their organization and this would not be a cause for attrition.

Table 4.40 Expectations of the employees from IT organizations

Parameters	Highly concerned (1)	Fairly concerned (2)	Neutral (3)	Fairly Unconcerned (4)	Can be ignored (5)	Sum of weights * Frequency (6)	Rating average (7)
Career advancement and Promotion	145	43	12	0	0	267	1.335
Pay structures and schedules	152	44	4	0	0	252	1.26
Training and Development	143	32	25	0	0	282	1.41
Corporate governance and style	99	63	18	13	7	366	1.83
Challenging job profile	85	57	35	21	2	398	1.99
Conditions of service	94	65	29	8	4	363	1.815
Flexi Timings	123	33	30	9	5	340	1.7
Work environment	121	41	20	11	7	342	1.71
Nature of work/job satisfaction	111	33	24	20	12	389	1.945
Distance /time taken to reach work place	99	59	20	17	5	370	1.85
						Total Average	1.565

Interpretation: The analysis shows that the most of the employees in IT organizations in Bangalore are concerned about all the factors and not unconcerned about any of the factors mentioned.

CHAPTER V CONCLUSION

5.1 FINDINGS AND SUGGESTIONS

5.1.1 Findings:

From the interpretation the various reasons for attrition are as follows,

1. The major two reasons of attrition as indicated by maximum number of respondents are pay structure and then followed by workload.
2. The maximum number of respondents(55 %) say that they don't meet pay structure expectattions ,28.5% meet expectations, 10.5% say pay structure is on par with others, 3.5% say it is irky and 2.5% say it exceeds expectation.
3. Allowances and compensatory packs was also considered by most of the respondents (39%) as not meeting their expectations and hence causing attrition.
4. We also find that Incentives and bonus provided is also a factor for attrition responded by 48.5% of employees that they don't meet their expectations.
5. In most of the IT organizations in Bangalore, most of the fringe benefits provided is not meeting the employee's expectations and hence 42.5% feel that this may be a cause of attrition.
6. More respondents (about 30%) feel that working hours is not proper in their organization and this would be a factor of attrition.
7. Workload is considered as a major factor by most of the employees to leave the organization . About 50.5% of the repondents feel that workload is not proper in their organization and hence causing attrition.
8. The respondents feel (36%) support for higher education is not provided by most of the IT organizations in Bangalore and this is a cause for attrition where employees leave the organization for pursuing higher education.
9. The maximum number of respondents 76% expect the organization to highly concern about their pay structure.

10. The maximum number of respondents 71.5% expect the organization to highly concern about training and development.
11. The maximum number of respondents 49.5% expect the organization to highly concern about their corporate governance and style.
12. The maximum number of respondents 42.5% expect the organization to highly concern about challenging job profile.
13. The maximum number of respondents 47% expect the organization to highly concern about their conditions of service.
14. The maximum number of respondents 61.5% expect the organization to highly concern about their timings to be flexible.
15. The maximum number of respondents 60.5% expect the organization to highly concern about the work environment..
16. The maximum number of respondents 55% expect the organization to highly concern about their job satisfaction.
17. The maximum number of respondents 49.5% expect the organization to highly concern about distance and time taken to reach work place.
18. From the weighing average analysis it is clear that the average of rating average of all factors regarding employees job profile, most of the employees lie in between the factors on par with others and do not meet expectations. Hence these factors contribute to attrition.
19. The total average of rating average indicates that the job environment is between very good and good as rated by respondents and hence does not have a major effect on attrition.
20. The weighing average analysis indicates that the career development factors indicated is acceptable overall by most of the Information Technology employees in Bangalore and hence they would not be a cause for attrition.
21. The weighing average analysis indicates that most of the employees are fairly confident about their relationship in their organization and this would not be a cause for attrition.
22. The analysis shows that the most of the employees in IT organizations in Bangalore are concerned about all the factors and not unconcerned about any of the factors mentioned.

5.1.2 .Suggestions:

1. Since Fair and Competitive Salaries as well as Performance Related Incentives have been reported as highly significant factors of employee retention, the organizations should constantly monitor the salary structures and performance oriented incentives offered by the competing organizations in the same region so as to maintain parity with the competitors, thus reducing the chances of high employee attrition.
2. The organizations should provide handholding, care and support to the new joiners for a period when they are relatively new to the job. This support will help the organizations to improve employee retention and avoid the cost of recruiting the new employees time and again.
3. Similarly, the organizations should develop effective career planning programs for the employees after they attain significant work experience in order to ensure professional developmental opportunities within the organization itself so that the employees do not have to look for professional growth opportunities outside their organization.
4. As Educational Qualifications are reported to be significantly related with reduction in the retention of the employees at the Call Center/Tech Support level, it is recommended that the organizations in the ITeS sector should not hire over qualified candidates for these positions as they are less likely to be a part of the organization for a longer time period.
5. As no single factor can be considered detrimental for attaining high rate of employee retention, it is recommended that the organizations should look for variety of effective and suitable employee retention strategies and practices so that their combined effect can enable the organizations in the ITeS sector to retain their employees.
6. It is suggested that the organizations should incorporate certain fun - related activities, get together, and stress relieving games, flexi timings and other such activities so as to reduce the monotony of the work associated with the ITeS jobs. Transport facilities can be provided for the employees.

5.2 CONCLUSION

The study was made to study some of the factors which may be possible reason for an employee to leave his job in Information Technology organizations in Bangalore. This research will help the organization or management to study further on those areas and come out creative/innovative action plans to make the employee feel loyal, comfortable and interesting place to work place to work

The organization should analyze current level in the market and increase the salary level of the employees. This will certainly increase the job satisfaction level of employees and reduce attrition.

APPENDIX

APPENDIX I -QUESTIONNAIRE

1. **Gender :** a. Male b. Female
2. **Age:** a. Below 25 b. 26-30 c. 31 – 45 d. 45 and above
3. **Qualification:** a. Graduate (Tech) b. Graduate (Non Tech) c. Others
4. **Designation:** (Please give the various designations related to IT field)
5. **Job Level:** a) Senior Level b) Middle Level c) Junior level
6. **Total experience (in years) :** a. 0-2 b) 2 – 5 c) 5-7 d) 7 -10 e) Above 10

Rank the following accordingly that fits the best of your opinion

(a) Compensation

S.No	Parameters	Exceeds expectation	Meets expectations	On par with others	Do not meet expectation	Irky
1	Pay structure					
2	Statutory Benefits (PF, gratuity etc.,)					
3	Allowances and Compensatory packs					
4	Incentives and bonus provided					
5	Fringe benefits					

(b) Environment

S.No	Parameters	Excellent	V. Good	Good	Average	Poor
1	Work environment					
2	Safety and Welfare					
3	Amenities					
4	Working Hours					
5	Distribution of workload					

(c) Growth

S.No	Parameters	Proactive	Favorable	Acceptable	Unfavorable	Reactive
1	Support for higher education					
2	Performance appreciation					
3	Employee Engagement					
4	Talent Management					
5	Acceptance of suggestions					

(d) Relationship

S.No	Parameters	Highly confident	Fairly confident	Mediocre	Fairly Unconfident	Unreliable
1	Visibility of the company					
2	Career development					
3	Performance recognition					
4	Corporate Governance					
5	Empathetic relationship among peer groups					

(e) Expectations of employees from IT organizations

S.No	Parameters	Highly concerned	Fairly concerned	Neutral	Fairly Unconcerned	Can be ignored
1	Career advancement and Promotion					
2	Pay structures and schedules					
3	Training and Development					
4	Corporate governance and style					
5	Challenging job profile					
6	Conditions of service					
7	Flexi Timings					
8	Work environment					
9	Nature of work/job satisfaction					
10	Distance /time taken to reach work place					

REFERENCES

JOURNALS

- African Journal of Business Management Vol. 4(8), pp. 1447-1456, 18 July, 2010.
- Allen, N.J. and Meyer, J.P. (1990). 'The measurement and antecedent of affective, continuance and normative commitment to the Organization', *Journal of Psychology*, v63, pp. 1-18.
- Anderson, E.W., Sullivan, M.W., (1993), "The Antecedents and Consequences of Customer Satisfaction for Firms," *Marketing Science*, 12(2), 125-43.
- Argyris, C., Schon, D.A. (1978), *Organizational Learning: A Theory of Action Perspective*, Addison-Wesley, Menlo Park, CA., .
- Arthur, J. (1994), 'Effects of human resource systems on manufacturing performance and turnover.' In *Academy of Management Journal*, v37, pp. 670-87.
- Athanassopoulos, Antreas D. (2000), "Customer Satisfaction Cues to Support Market Segmentation and Explain Switching Behavior," *Journal of Business Research*, 47(3), 191-207.
- Azzam, (1989), the nature of Arabic reading and spelling errors of young children: a descriptive study. Unpublished doctoral dissertation, Teachers College, Columbia University, N.Y.
- Bame, S.I. (1993). 'Organizational characteristics and administrative strategies associated with staff turnover.' In *Health Care Management Review*, v18, n4, pp. 70-86.
- Bansal, H.S., Taylor, S.F., (1999), "The Service Provider Switching Model (SPSM): A Model of Consumer Switching Behavior in the Service Industry," *Journal of Service Research*, 2.2, 200-18.
- Beck, S. (2001). 'Why Associates Leave, and Strategies To Keep Them.' In *American Lawyer Media L.P.*, v5, i2, pp. 23-27.
- Clarke, K.F. (2001). 'What businesses are doing to attract and retain employee becoming an employer of choice.' In *Employee Benefits Journal*, March, pp. 34-37.
- Coff, R.W., (1997), "Human Assets and Management Dilemmas: Coping with Hazards on the Road to Resource- Based Theory", *Academy of Management Journal*, Vol. 22, pp.374- 402.
- Cronin, J.J., Taylor, S.A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing*, Vol. 56 No.3, pp.55-68.
- Davidow, W.H., Uttal, B. (1989), *Total Customer Service: The Ultimate Weapon*, Harper and Row, New York, NY, .
- Delaney, J. and Huselid, M. (1996). 'The impact of HRM practices on perceptions of organizational performance.' In *Academy of Management Journal*, v39, pp. 949-69.
- Desai, K.K., and Mahajan, V., (1998) "Strategic role of affect-based attitudes in the acquisition, development and retention of customers", *Journal of Business Research*, Vol.42, July, pp.309-24.

- Eskildsen, J.K., Nussler, M.L. (2000), "The managerial drivers of employee satisfaction and loyalty", Total Quality Management, Vol. 11 No.4 and 5.

LINKS

- 1) <http://www.academicjournals.org/AJBM>
- 2) <http://epa.sagepub.com/cgi/content/abstract/27/4/309>
- 3) <http://erx.sagepub.com/cgi/content/abstract/21/6/423>
- 4) www.researchtools.com