

Impact of Facility Layout on Employee Productivity at Banking Sector

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Abstract: The term productivity refers to the ratio to measure how well an organization converts input resources into goods and services. Increased personal control and comfort needs of employees triggered the concern among organizations to provide them with an environment and office design, which fulfills the employees' needs and helps to boost their productivity. Most people spend fifty percent of their lives within indoor environments, which greatly influence their mental status, actions, abilities, and performance. Better outcomes and increased productivity are assumed to be the result of better workplace environment. Better physical environment of office will boost the employees and ultimately improve their productivity. The purpose of this study is to find out the relationship between facility layout and its impact on employee productivity. The area chosen is the banking sector. The study was carried on the 6 branches of syndicate bank in Bijapur district. The data was collected through a structured questionnaire.

Keywords: Employees, Productivity, layout, Covid, Banking sector

1. Introduction

A widely accepted assumption is that better workplace environment produces better results. Mostly the office is designed with due importance to the nature of job and the individuals that are going to work in that office. The performance of an employee is measured by the output that the individual produces and it is related to productivity. At corporate level, productivity is affected by many factors such as employees, technology, and objectives of the organization. It is also dependent on the physical environment and its effect on health and employees' performance.

1.1 Definition of facility layout

Facility layout is defined by BNet Business Dictionary (2008) as, "the arrangement of workspace so that work can be performed in the most efficient way". Facility layout involves office design which incorporates both ergonomics and workflow, which examine the way in which work is performed to optimize layout. Office design is an important factor in job satisfaction. It affects the way in which employees work, and many organizations have implemented open-plan offices to encourage teamwork. Office design is very vital in employee satisfaction, and the broad concept of office design also includes the workflow. The work is analyzed initially, and it is identified that how it is accomplished and then the overall setting of the office is made according to that flow. This ensures the smooth running of work in the office without hindrances.

1.2 Defining Productivity

Rolloos (1997) defined the productivity as, "productivity is that which people can produce with the least effort". Dorgan (1994) defines productivity as, "the increased functional and organizational performance, including quality". Productivity is a ratio to measure how well an organization converts input resources into goods and services. In this case, we are considering performance increase as when there is less absenteeism, fewer employee leaving early and less breaks; whereas in a factory setting, increase in performance can be measured by the number of units produced per employee per hour. In this study, subjective productivity measurement method is used. The measures of this method are not based on quantitative operational information. Instead, they are based on personnel's subjective assessments.

1.3 Workplace and Productivity

Over the years, many organizations have been trying new designs and techniques to construct office buildings, which can increase productivity, and attract more employees. Many authors have noted that, the physical layout of the workspace, along with efficient management processes, is playing a major role in boosting employees' productivity and improving organizational performance.

2. Literature Review:

An independent research firm conducted research on US workplace environment. In March 2006, a survey was conducted by taking a sample size of 2013. The research was related to, Workplace designs, work satisfaction, and productivity. 89 percent of the respondents rated design, from important to very important. Almost 90 percent of senior officials revealed that effective workplace design is important for the increase in employees' productivity. The outcome of the survey suggested that businesses can enhance their productivity by improving their workplace designs. A rough estimation was made by executives, which showed that almost 22 percent increase can be achieved in the company's Performance if their offices are well designed.

But practically, many organizations still do not give much importance to workplace design. As many as 40 percent of the employees believe that their companies want to keep their costs low that is why their workplaces have bad designs; and 46 percent of employees think that the priority list of their company does not have workplace design on top. When data was summarized, almost

one out of every five employees rated their workplace environment from, 'fair to poor'. 90 percent admitted that their attitude about work is adversely affected by the quality of their workplace environment. Yet again 89 percent blamed their working environment for their job dissatisfaction (Gensler, 2006).

The American Society of Interior Designers (ASID, 1999) carried out an independent study and revealed that the physical workplace design is one of the top three factors, which affect performance and job satisfaction. The study results showed that 31 percent of people were satisfied with their jobs and had pleasing workplace environments. 50 percent of people were seeking jobs and said that they would prefer a job in a company where the physical environment is good.

Brill et al. (1984) ranked factors, which affect productivity according to their importance. The factors are sequenced based on the significance: Furniture, Noise, Flexibility, Comfort, Communication, Lighting, Temperature and the Air Quality. Springer Inc (1986) stated that “an insurance company in a study revealed that the best ergonomic furniture improved performance by 10 to 15 percent.

Leaman (1995) conducted a survey which is briefly highlighted here. Author attempted to find the relationship between indoor environment, dissatisfied employees and their productivity. The results revealed that the productivity of the work is affected because the people were unhappy with temperature, air quality, light and noise levels in the office. The productivity level was measured by the method of self-reported measurement, which is a 9 point scale from greater than -40 and less than +40 percent (loss/gain). The scale was associated with the question: “Does your office environment affect your productivity at work?”

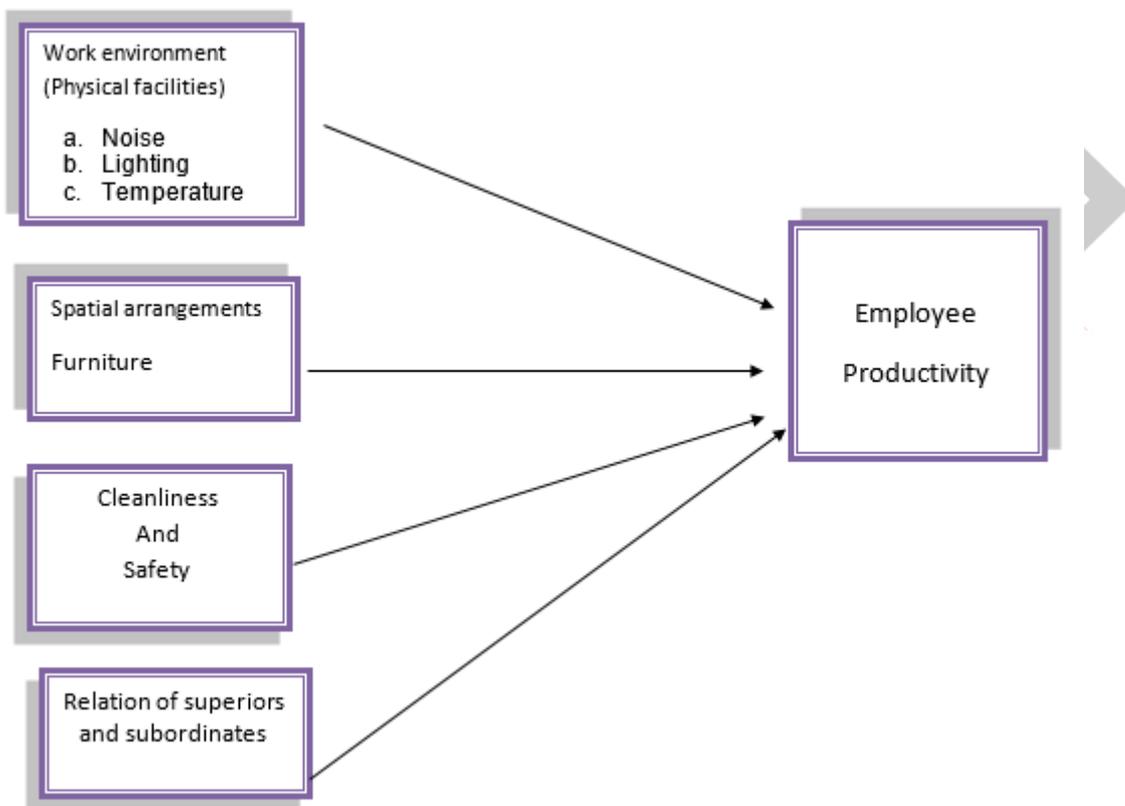
2.1 Conceptual framework

Based on the literature review, the relationship between office design and productivity can be conceptualized and depicted in Figure . The relationship is defined in such a way that the set of factors impact on an individual, which in turn determine the final outcome in terms of increased or decreased productivity of that individual.

Conceptual framework

Independent variables

Dependent variables



2.2 Need for the study

It is often understood that workplace environment and its related issues are significantly neglected. It is also evident that there is less importance given to office design, incentives and assisting facilities and often the facilities are not even available to the employees. The worst situation is that they cannot even complain about their inconveniences. These circumstances are affecting the performance of the employees greatly, in the form of delay in work completion, frustration, effect on personal growth etc. This study “**IMPACT OF FACILITY LAYOUT ON EMPLOYEES’ PRODUCTIVITY**”, will try to throw light on the effects of facility layout that is office design in terms of furniture, noise, lighting, temperature and spatial arrangement on employees’ productivity.

2.3 OBJECTIVES

- To understand the facility layout of the branches of Syndicate banks.
- To analyze different factors the facility layout the branches of Syndicate banks.
- To assess whether office design is one of the factors in affecting employees’ productivity.
- To determine the impact of office design on employees’ productivity.

2.4 SAMPLE DESIGN

Questionnaire on impact of the office design on employee’s productivity at syndicate bank, Bijapur .

2.4.1 SAMPLE SIZE

The Banking sector of Syndicate Bank has been chosen as the population for the study. Out of all Syndicate bank branches, 5 bank branches in Bijapur city were taken as sample. A total of 44 employees from these 5 branches were taken as the sample size. The distribution of sample among banks and number of employees taken from each bank are given.

2.4.2 DATA COLLECTION

Primary data is collected from the employees through questionnaire and interview method. Secondary data is collected from various book provided by syndicate bank, Bijapur and through website.

2.5 Limitations of the Study

- The sample size was not diverse enough to give the image of all organizations functioning in syndicate bank.
- The data collected was based on subjective productivity measurement; some other objective method of collecting data can also be used.
- Data was collected by employing the simple method of structured questionnaires; other methods like observation and interview schedule could have been used for collecting data.

3. DATA ANALYSIS AND INTERPRETATION:

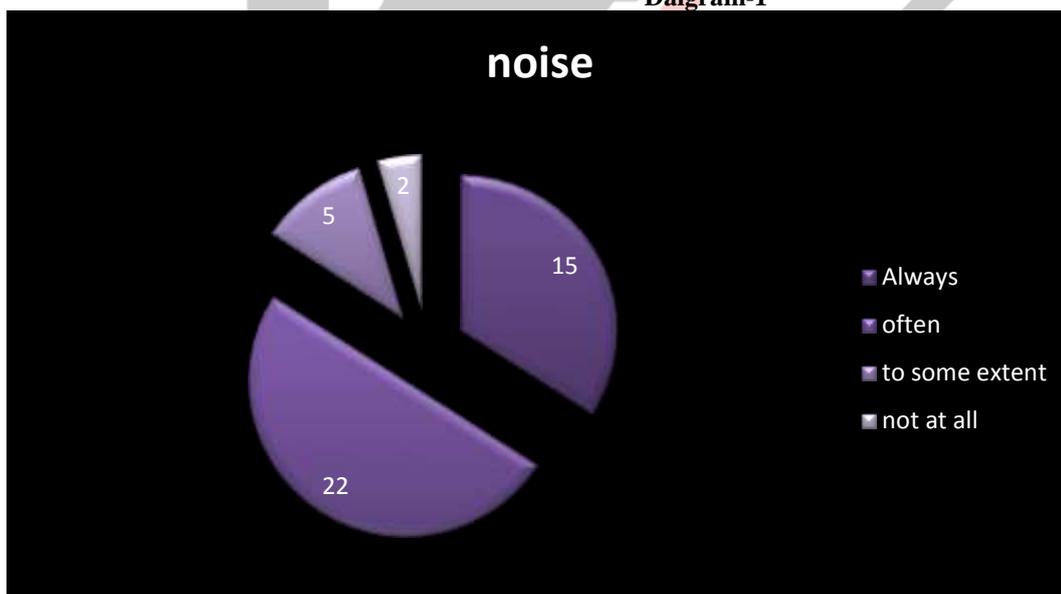
Noise

Table-1

1) Is your work environment is quite

Options	No of respondents
Always	15
Often	22
to some extent	5
not at all	2
Total	44

Daigram-1



Interpretation 1:

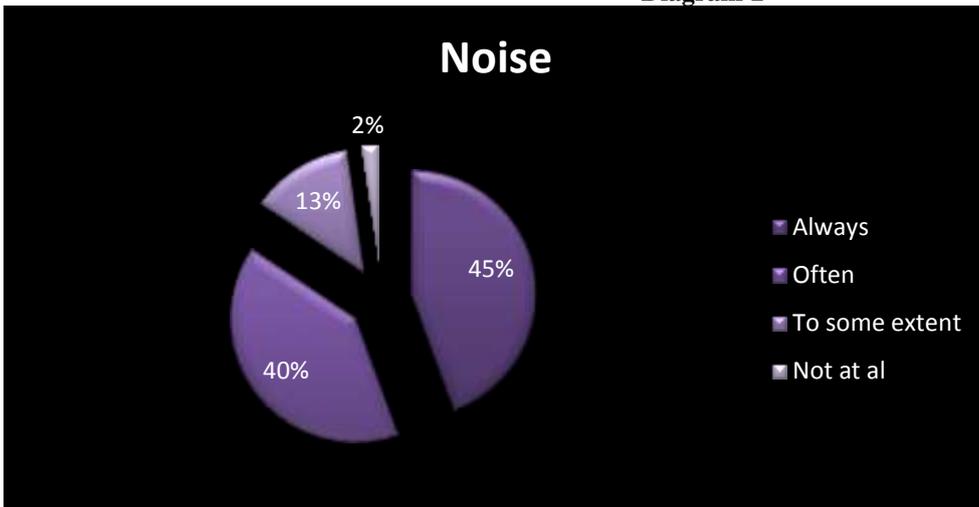
The study reveals that more than 50% of the employees are satisfied with the environment.

2) Do you able to have quite and undisturbed time alone

Table-2

Options	No of respondents
Always	20
Often	18
to some extent	06
not at all	0
Total	44

Diagram-2



Interpretation 2:

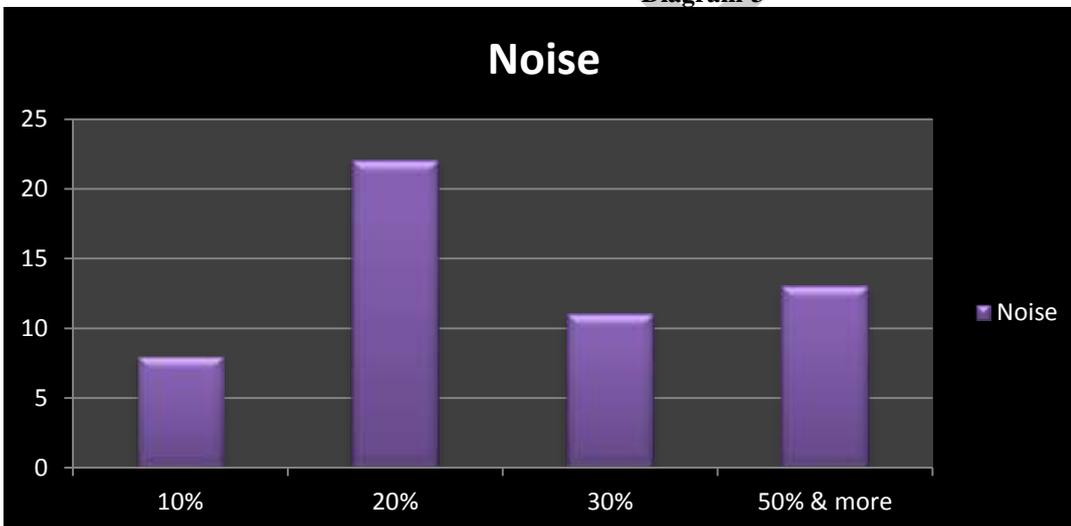
The above table shows that out of 44 employees 50% employees says that they are able to have quite and undisturbed time in the organization.

3) Noise free environment will increase your productivity by-

Table-3

Options	No of respondents
10%	8
20%	22
30%	11
50% or more	13
Total	44

Diagram-3



Interpretation- 3:

The above diagram shows that noise free environment will increase productivity and it has positive effect on productivity.

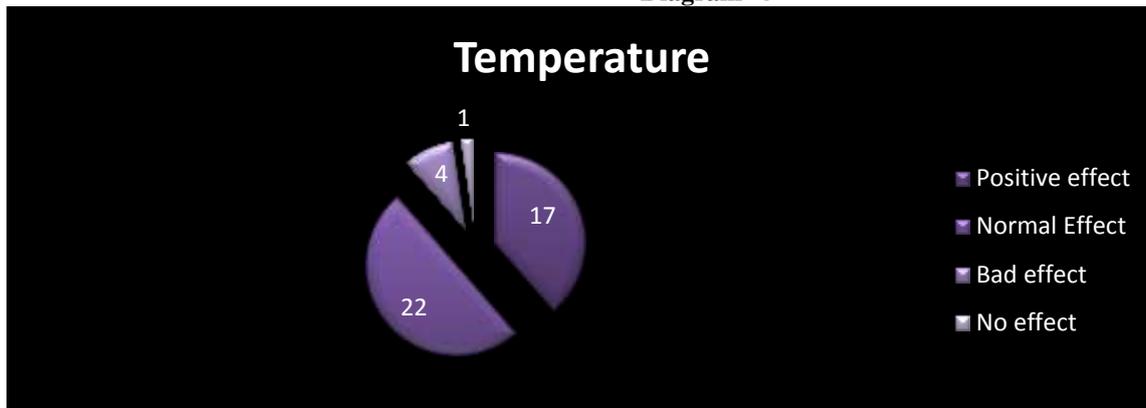
Temperature:

1) To what extent your room temperatures affect your normal level of productivity

Table -4

Options	No of respondents
Positive effect	17
Normal effect	22
Bad effect	04
No effect	01
Total	44

Diagram -4



Interpretation 4:

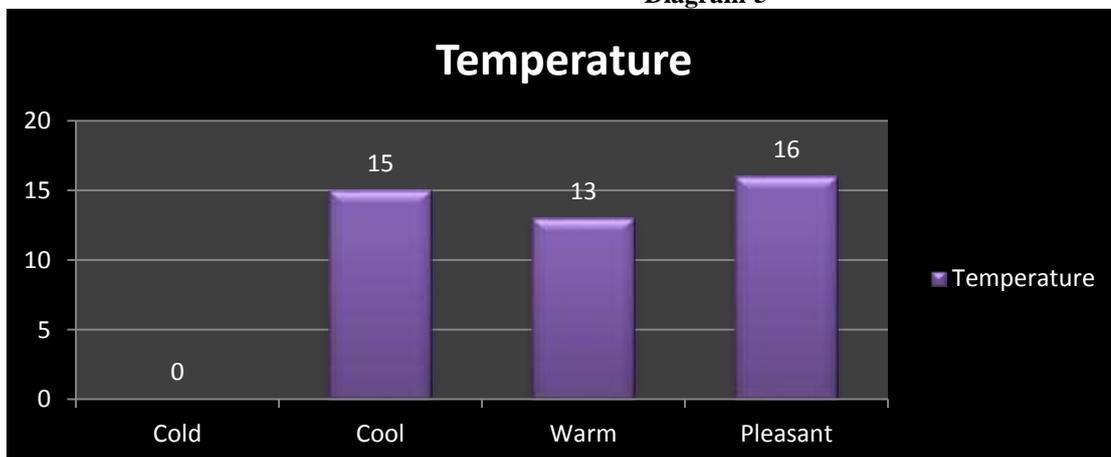
From the above analysis we came to know that the room temperatures effect normal level of productivity, Were as 17 employees said that it has positive effect, 22 employees said it has got normal effect on productivity and 4 employees said it has bad effect on organization productivity.

The overall temperature of your work place is –

Table-5

Options	No of respondents
Cold	00
Cool	15
Warm	13
Pleasant	16
Total	44

Diagram-5



Interpretation 5:

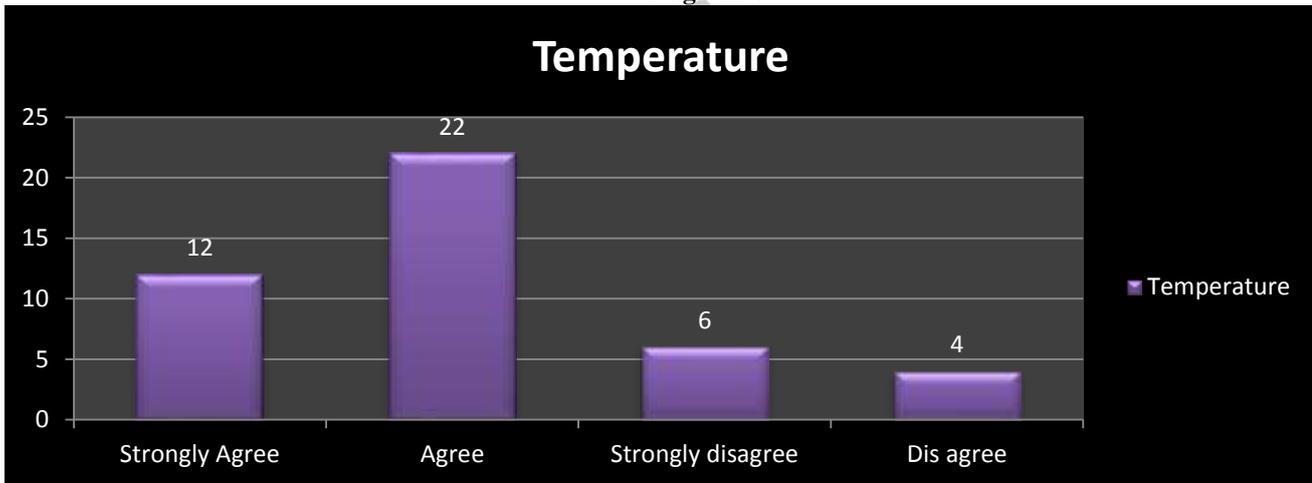
It shows that the overall temperature of work place is quite good. So its shows that the employees are satisfied with the temperature at the work place.

Do you able to control temperature or airflow in your office

Table -6

Options	No of respondents
Strongly Agree	12
Agree	22
Strongly disagree	06
Disagree	04
Total	44

Diagram-6



Interpretation 6:

The above table shows that around 50% of the employees are satisfied with the arrangement.

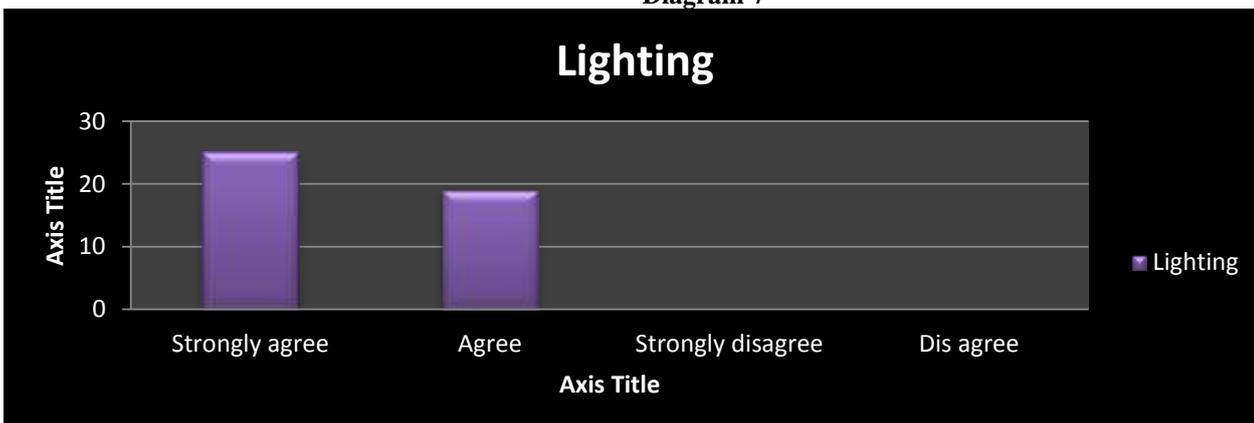
Lighting:

1) **Is your workplace provided with efficient lighting so that you can work easily without getting strain on eyes**

Table -7

Options	No of respondents
Strongly agree	25
Agree	19
Strongly disagree	00
Dis agree	00
Total	44

Diagram-7



Interpretation 7:

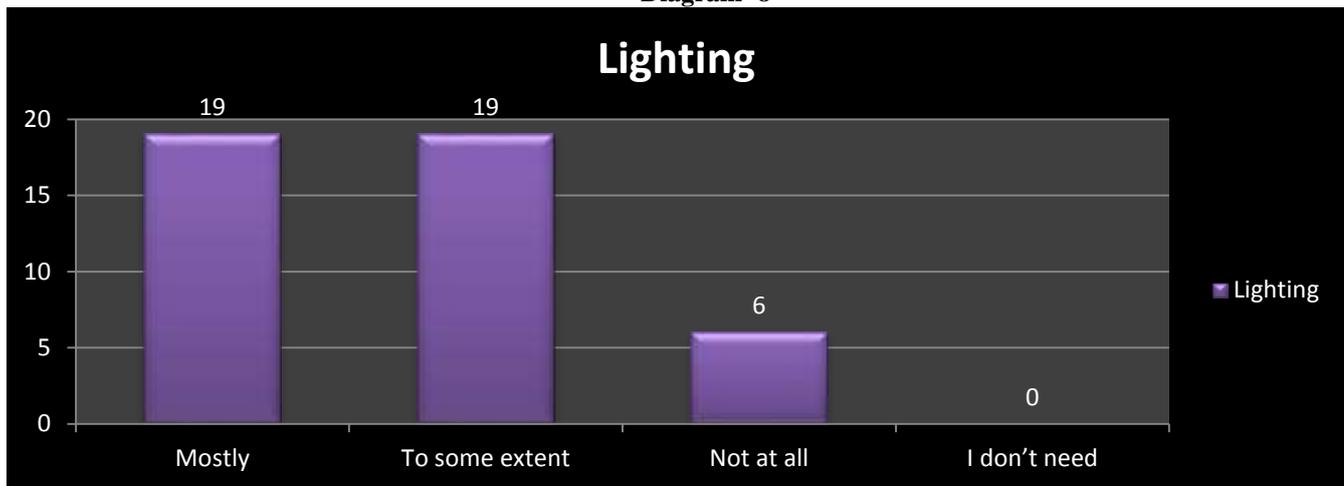
The study reveals that the employees of an organization are satisfied with lighting arrangement in a work place.

2) Is ample amount of natural light comes into your office

Table-8

Options	No of respondents
Mostly	19
To some extent	19
Not at all	06
I don't need	00
Total	44

Diagram -8



Interpretation 8:

The above diagram shows that out of 44 respondents 19 employees says that the ample amount of natural light comes in to office , 19 members said that to some extent it comes in to work place, were as 6 employees are not at all satisfied because they are not getting ample amount of natural light in to work place. This is effecting on their productivity.

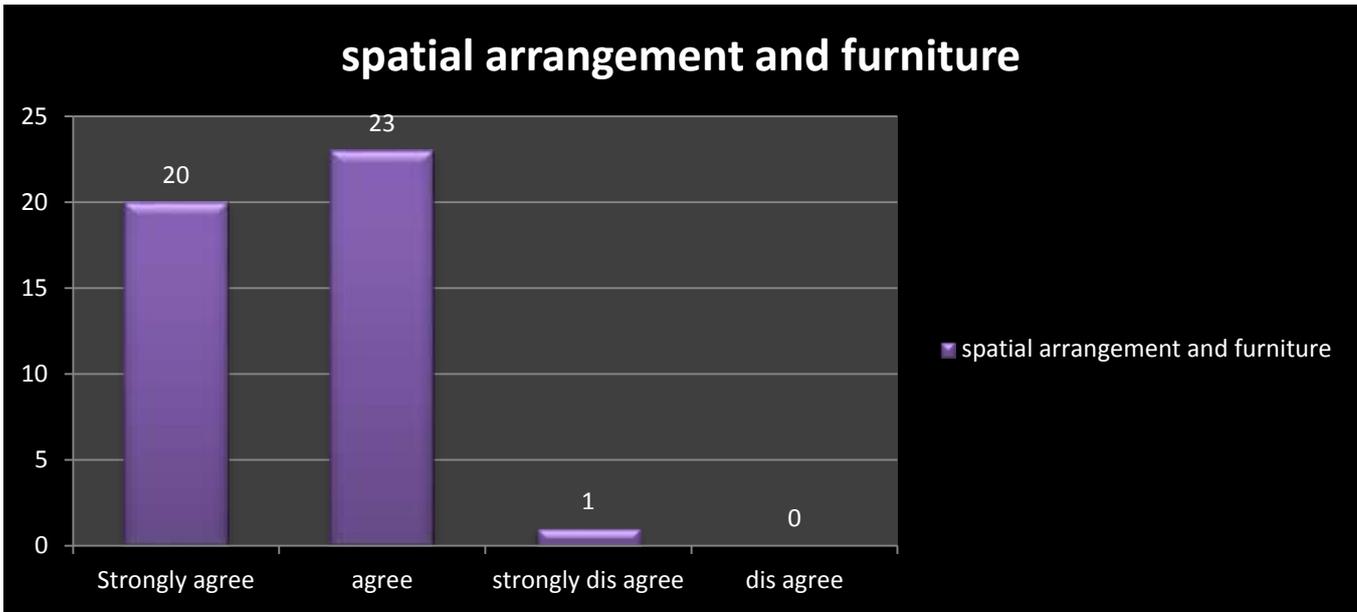
Spatial arrangement and furniture:

1) The office/branch is open enough to see my colleagues working

Table - 9

Options	No of respondents
Strongly agree	20
Agree	23
Strongly dis agree	01
Dis agree	00
Total	44

Diagram-9



Interpretation 9:

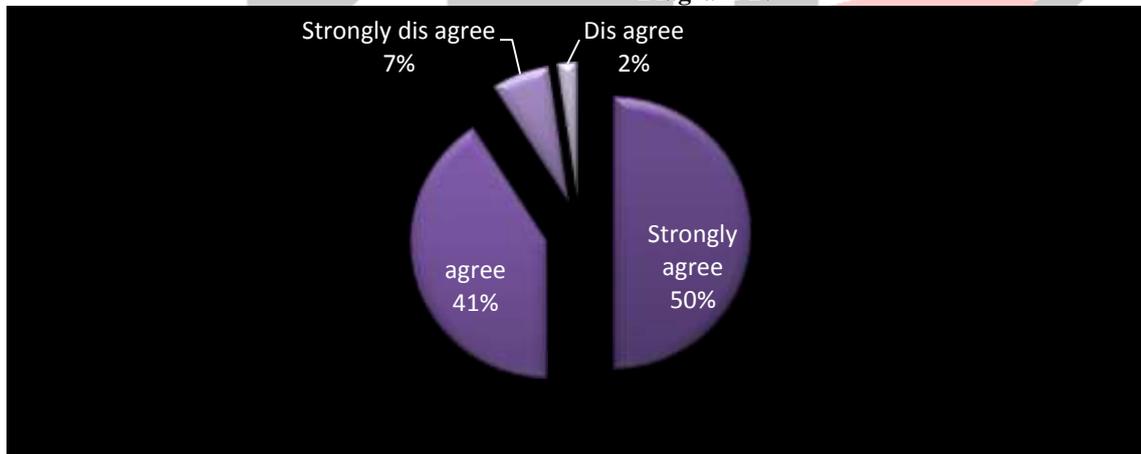
The above table shows that 99% of the employees are satisfied with work place environment and spatial arrangement.

2) Is the work area is sufficiently equipped for your typical needs

Table - 10

Options	No of respondents
Strongly agree	22
Agree	18
Strongly dis agree	03
Dis agree	01
Total	44

Diagram-10



Interpretation 10:

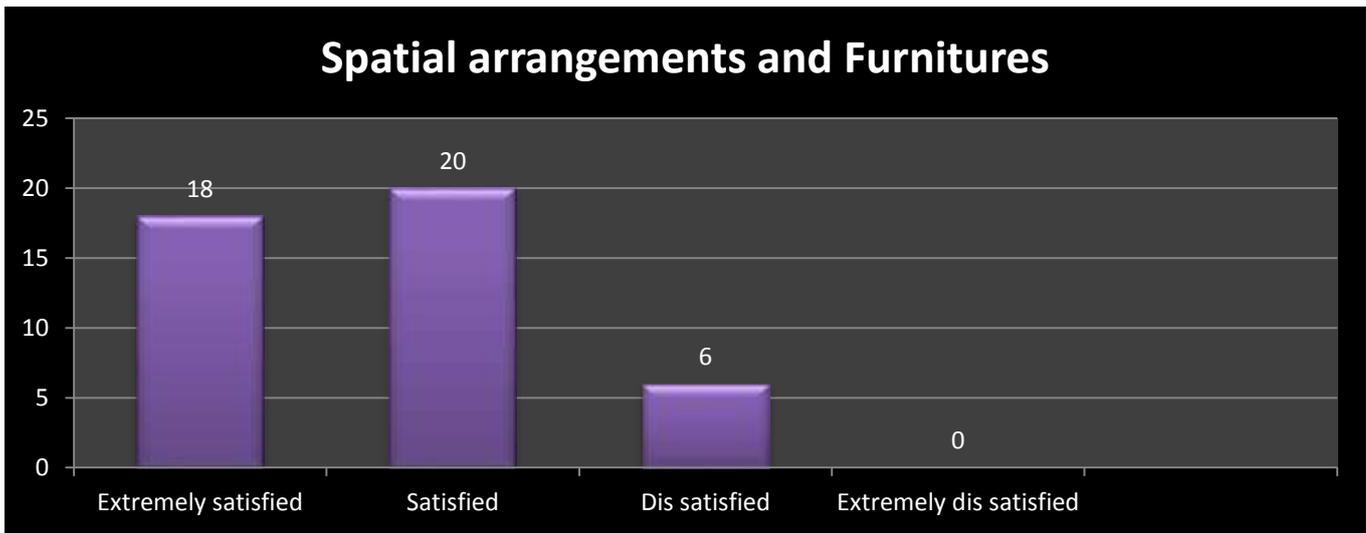
The above diagram shows that Out of all the respondents 50% strongly agree and 41% employee agree that the work area is sufficiently equipped for their typical needs. It drives that the employees of an organization are satisfied with the spatial arrangement in a work environment.

3) Are you satisfied with the amount of space for storage and displaying important materials

Table -11

Options	No of respondents
Extremely satisfied	18
Satisfied	20
Dis satisfied	06
Extremely dis satisfied	00
Total	44

Diagram-11



Interpretation 11:

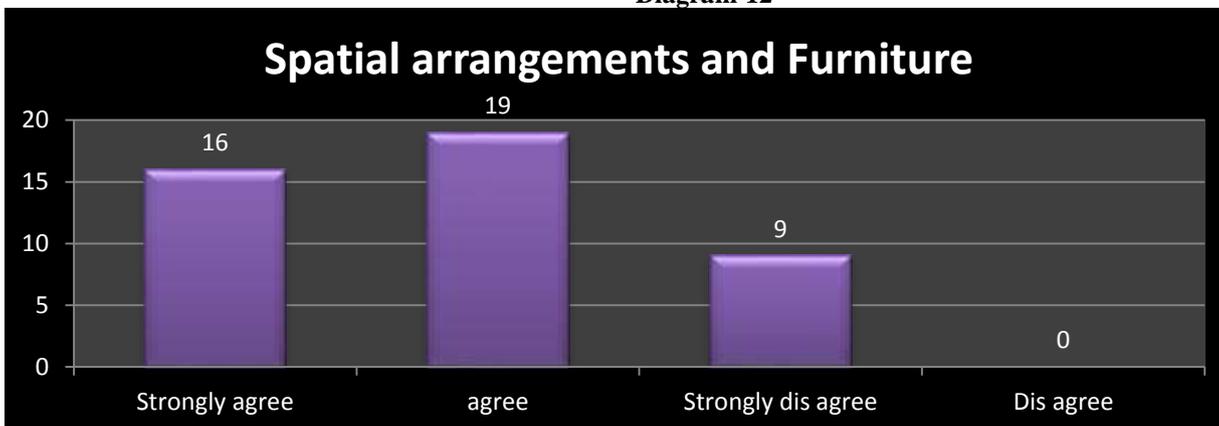
It shows that more than 75% of the employees in the organization are satisfied with the amount of space for storage and displaying important materials in a work place.

Is your work place serves multipurpose function for informal and instant meetings

Table-12

Options	No of respondents
Strongly agree	16
Agree	19
Strongly dis agree	9
Dis agree	00
Total	44

Diagram-12



Interpretation 12 :

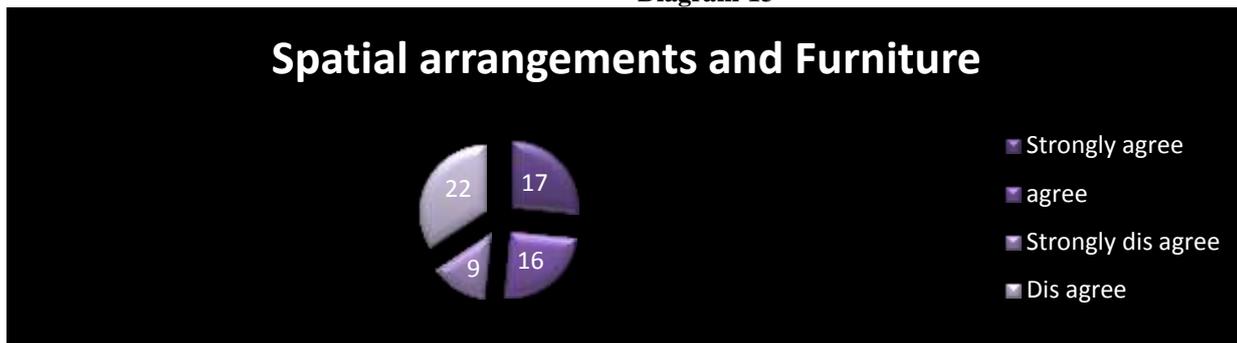
This shows that more than 50% of the employees are satisfied with work place environment because it doesn't serves multipurpose function for informal and instant meetings.

4) Is the furniture is comfortable enough, so that you can work without getting tired till evening

Table-13

Options	No of respondents
Strongly agree	17
Agree	16
Strongly dis agree	09
Dis agree	22
Total	44

Diagram-13



Interpretation 13:

This study reveals that more than 50% of the employees agree that the furniture in work place is comfortable enough, so that they can work without getting tired till evening.

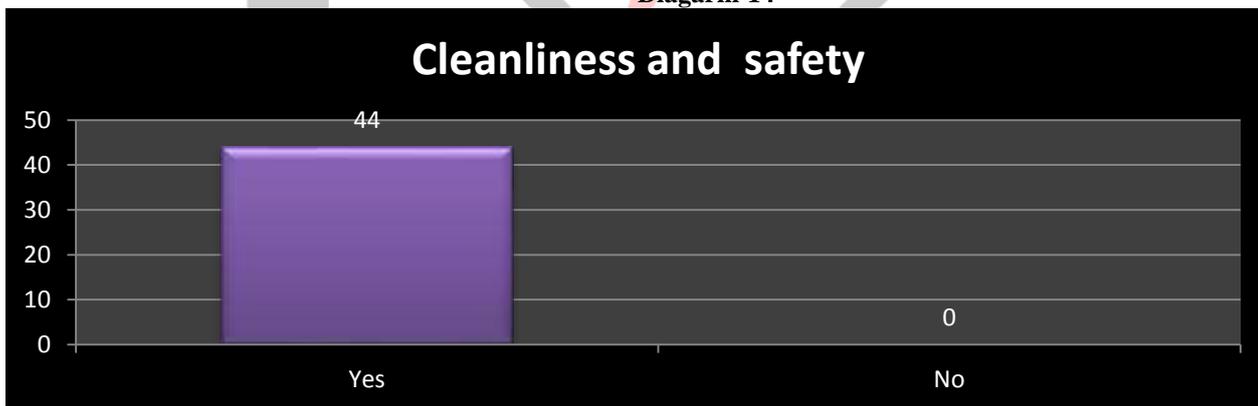
Cleanliness and Safety:

1) Whether the building has fire extinguishers in case of fire accidents

Table-14

Options	No of respondents
Yes	44
No	0
Total	44

Diagram-14



Interpretation 14:

The above diagram shows that all the respondents agree that building has fire extinguishers in case of fire accidents.

2) How many times sweeper cleans in a day:

Table -15

Options	No of respondents
Once in a day	07
Twice in a day	26
Often	08
not at all	02
Total	44

Diagram -15



Interpretation 15:

This shows that more than 50% employees say that sweeper cleans twice in a day .so it shows that the organization maintains cleanliness in a work place.

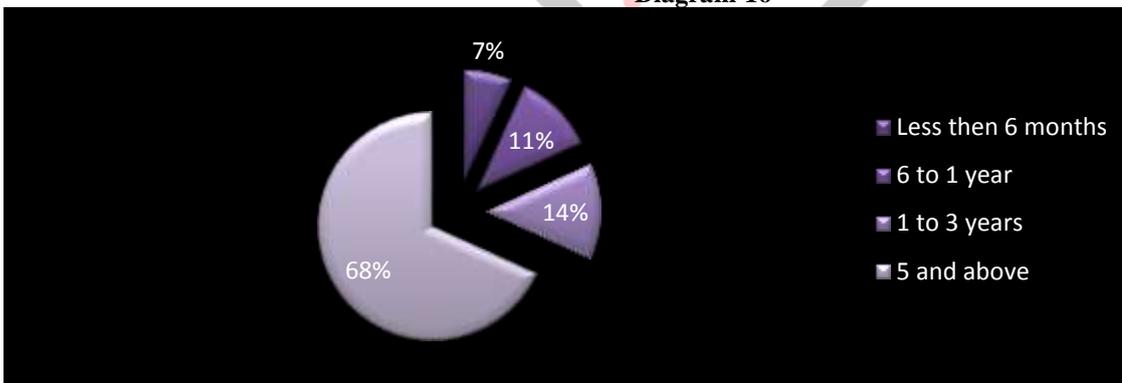
Relation between superior’s subordinates peers

1) How long you have worked at this company

Table -16

Options	No of respondents
Less than 6 months	03
6 to 1 year	05
1 to 3 years	06
5 and above	30
Total	44

Diagram-16



Interpretation 16:

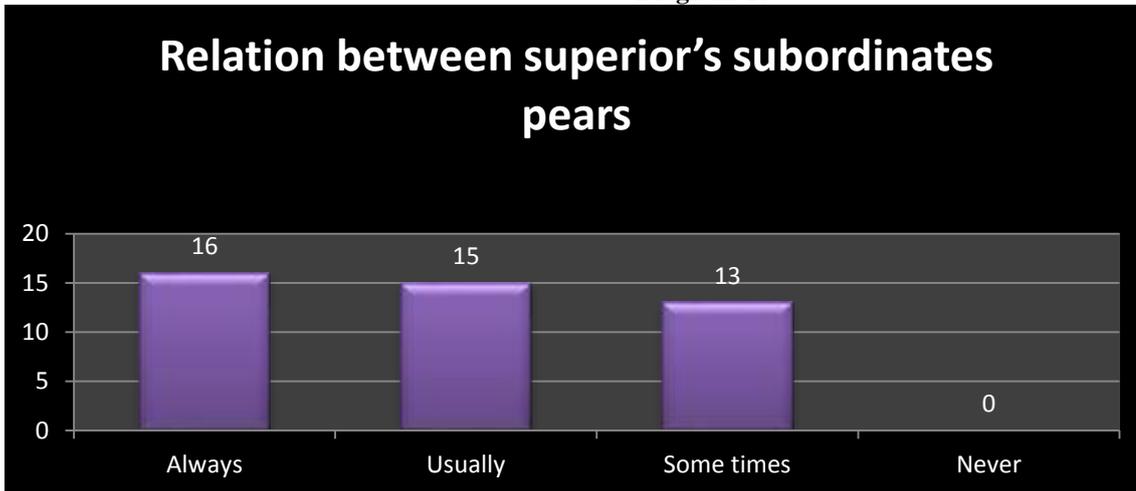
This diagram shows that more than 68% of the employees’ have been working in the organization form past 5 years.

2) Do you feel that employees are recognized as individuals

Table-17

Options	No of respondents
Always	16
Usually	15
Some times	13
Never	00
Total	44

Diagram-17



Interpretation 17:

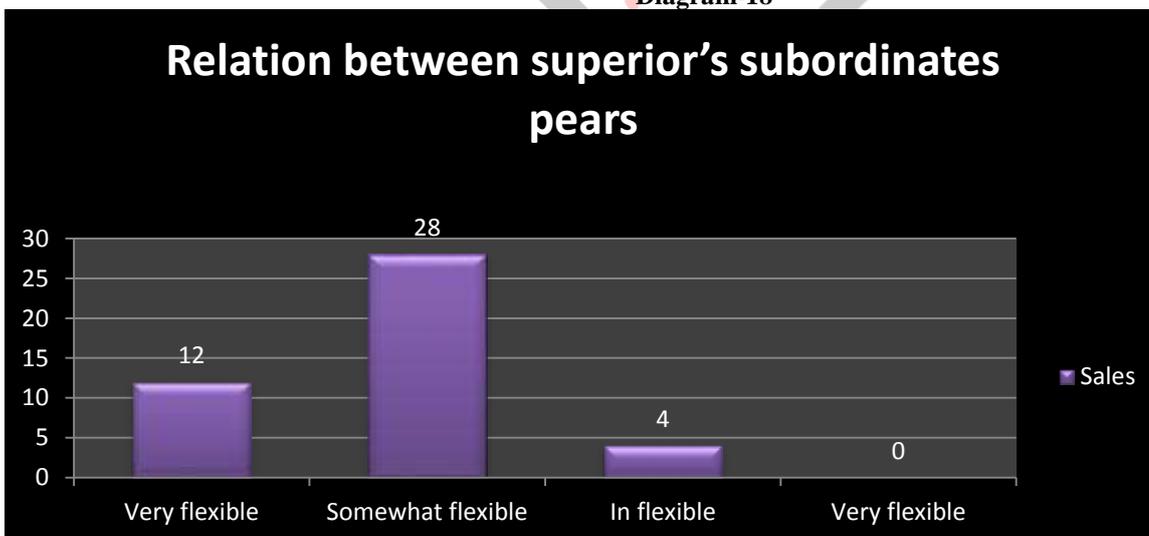
The study shows that the employees feel that they are always recognized as individuals.

3) How flexible is the company with respect to your family responsibilities

Table-18

Options	No of respondents
Very flexible	12
Somewhat flexible	28
In flexible	04
Very flexible	00
Total	44

Diagram-18



Interpretation 18:

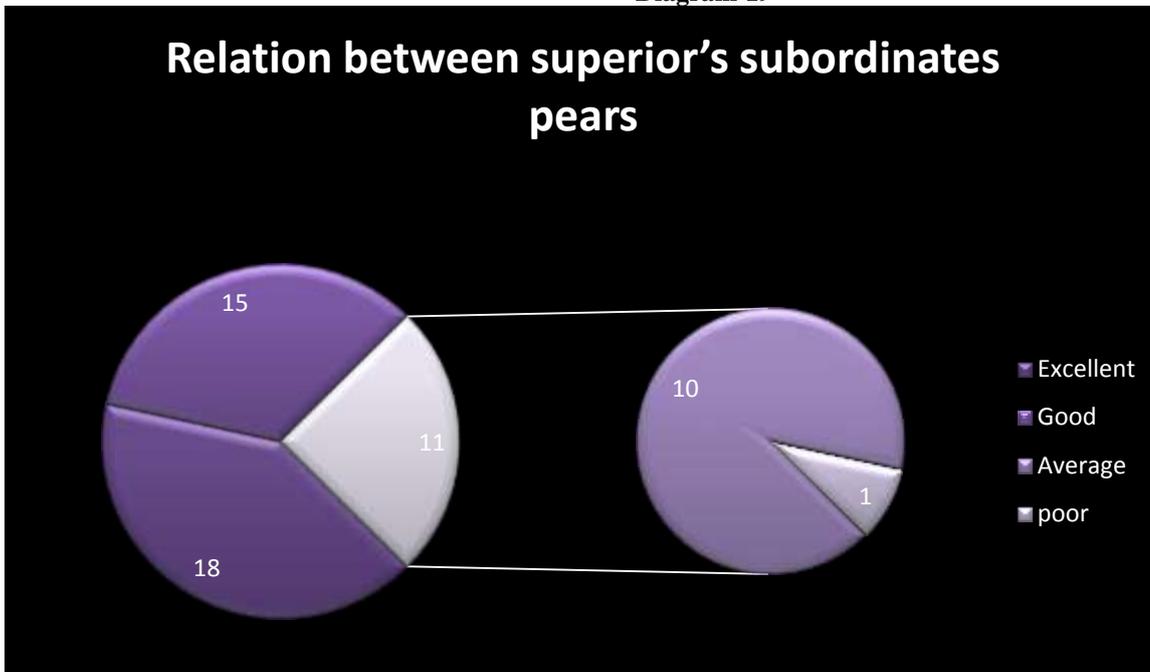
This table shows that more than 75% of the employees say that the company is flexible with respect to their family responsibilities.

4) How is the flow of communication in the organization

Table-19

Options	No of respondents
Excellent	18
Good	15
Average	10
Poor	01
Total	44

Diagram-19



Interpretation 19:

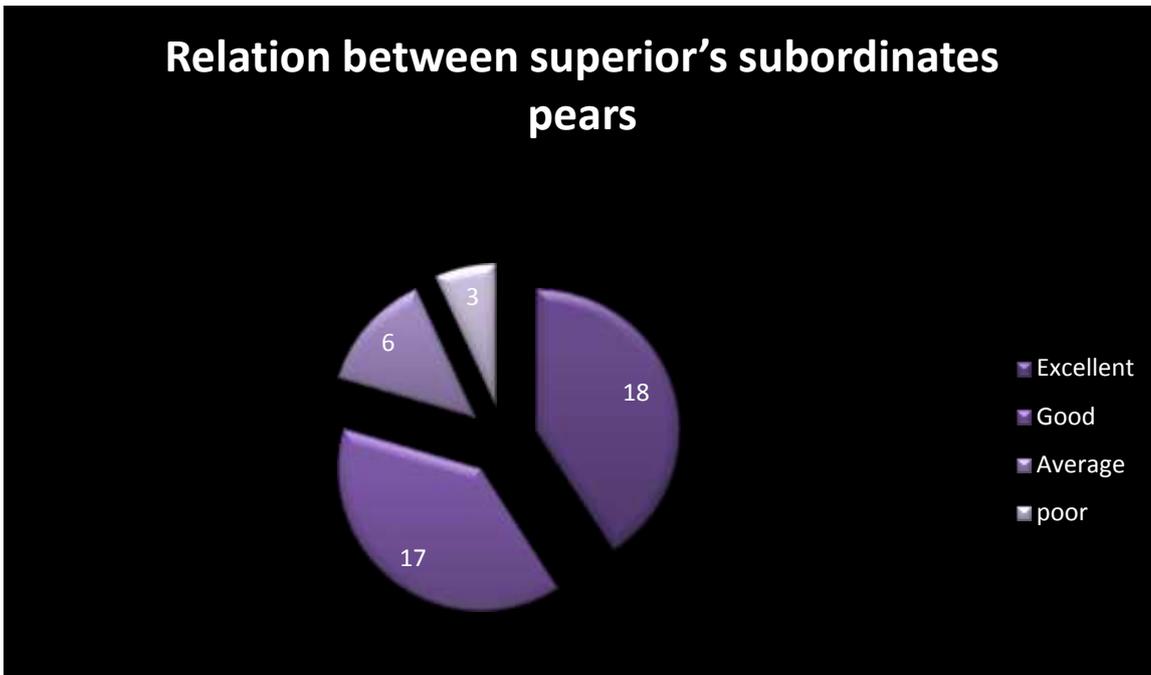
This diagram shows that more than 70% of the employees are satisfied with the flow of the communication the organization. It shows there is positive relation between superior's subordinates and peers.

How is the interpersonal relationship in the organization

Table-20

Options	No of respondents
Excellent	18
Good	17
Average	06
Poor	03
Total	44

Diagram-20



Interpretation 20:

The above table shows that 70% of the employees have good relationship.

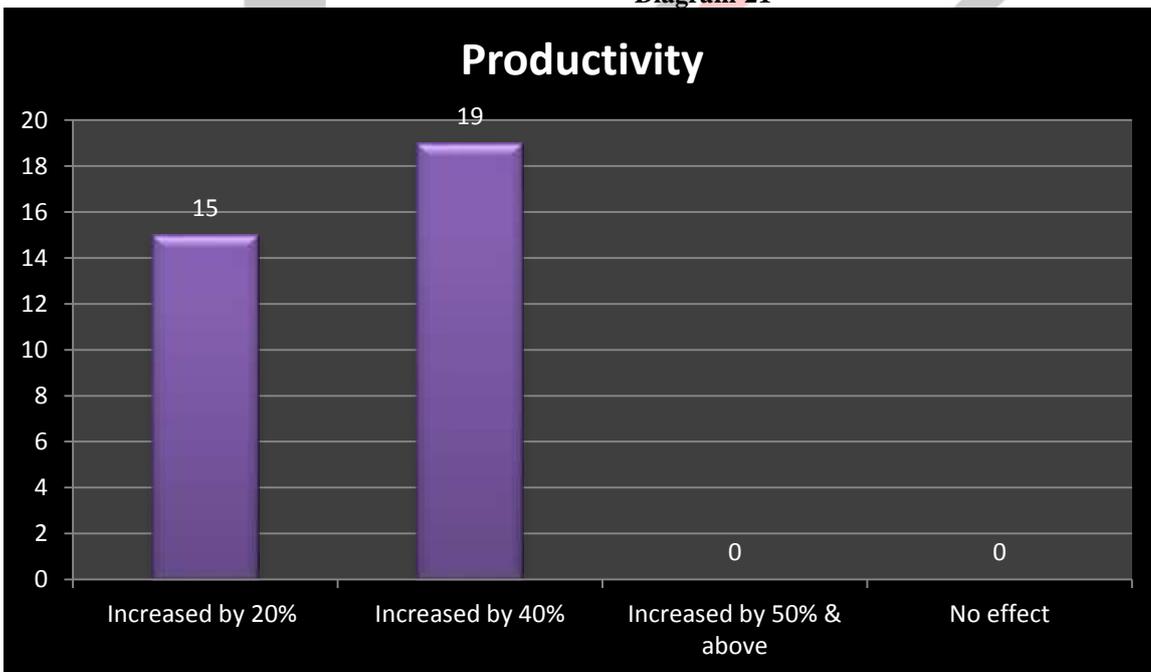
Productivity:

1) Favorable environmental conditions in the office building will increase your productivity at work

Table-21

Options	No of respondents
Increased by 20%	15
Increased by 40%	19
Increased by 50% & above	00
No effect	00
Total	44

Diagram-21



Interpretation 21:

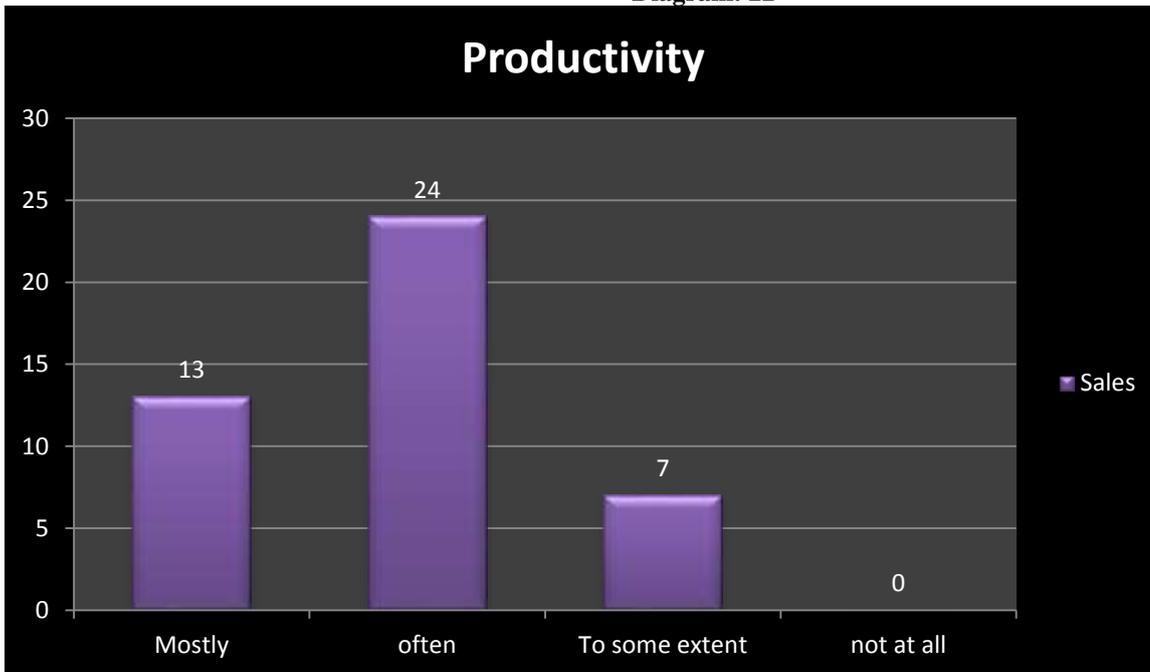
The above diagram shows that Favorable environmental conditions in the office building will increase your productivity at work out of 44 respondents 19 employees' said 40% increases and 15 said 20% increases.

1) Due to overall office environment can you complete your daily task easily

Table 22

Options	No of respondents
Mostly	13
Often	24
To some extent	07
not at all	00
Total	44

Diagram: 22

**Interpretation 22:**

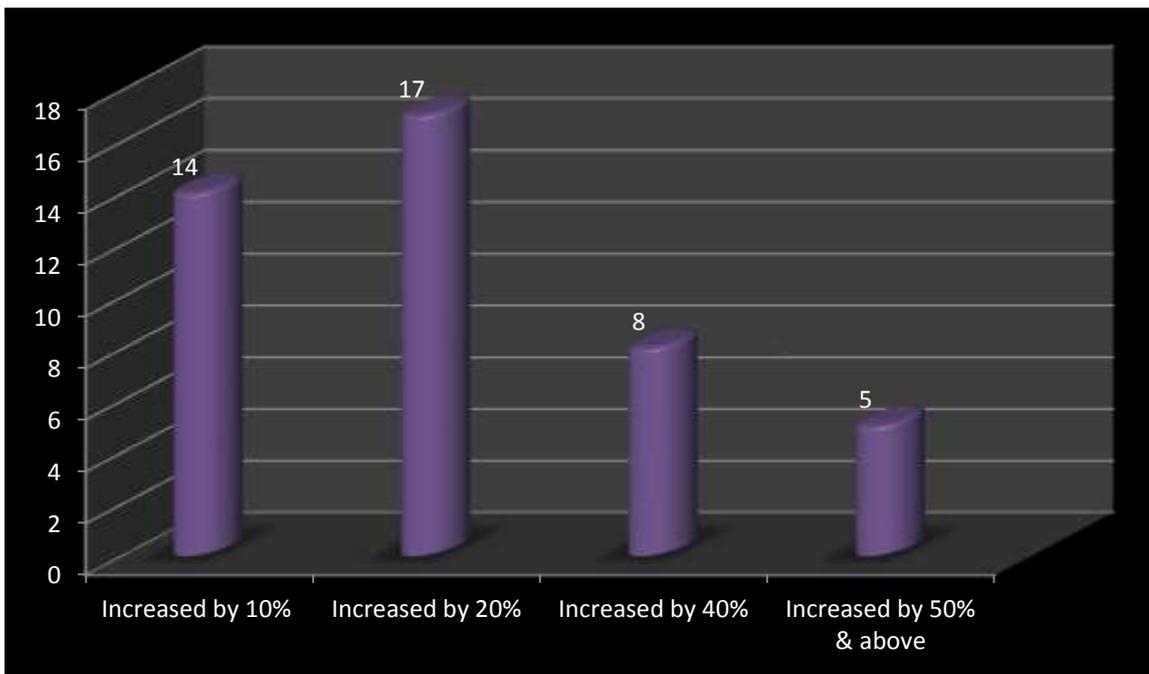
This table shows that more than 50% of the employees say that they are often able to complete their daily task easily.

2) By what percentage your overall productivity would increase in the related office environment problem are solved:

Table 23:

Options	No of respondents
Increased by 10%	14
Increased by 20%	17
Increased by 40%	08
Increased by 50% & above	05
Total	44

Diagram 23:



Interpretation 23:

This diagram shows that 17 employees says there is 20% increase, 14 employees says that 10% increase and 8 employees says that increase by 40% were as 5 employees says there will be 50% and above, if the the related office environment problem are solved.

4. SUMMARY OF FINDINGS:

- The study reveals that more than 50% of the employees are satisfied with the environment.
- Out of 44 employees 50% employees says that they are able to have quite and undisturbed time in the organization.
- The room temperatures effect normal level of productivity, Were as 17 employees said that it has positive effect, 22 employees said it has got normal effect on productivity and 4 employees said it has bad effect on organization productivity.
- The overall temperature of work place is quite good. So its shows that the employees are satisfied with the temperature at the work place.
- Out of 44 respondents 45% employees says that the ample amount of natural light comes in to office , 45% members said that to some extent it comes in to work place, were as 10% employees are not at all satisfied because they are not getting ample amount of natural light in to work place. This is effecting on their productivity.
- 99% of the employees are satisfied with work place environment and spatial arrangement.
- Out of all the respondents 50% strongly agree and 41% employee agree that the work area is sufficiently equipped for their typical needs. It drives that the employees of an organization are satisfied with the spatial arrangement in a work environment.
- 75% of the employees in the organization are satisfied with the amount of space for storage and displaying important materials in a work place.
- 75% of the employees are satisfied with work place environment because it serves multipurpose function for informal and instant meetings.
- 50% of the employees agree that the furniture at work place is comfortable enough, so that they can work without getting tired till evening.
- Than 75% of the employees say that the company is flexible with respect to their family responsibilities.
- 70% of the employees are satisfied with the flow of the communication the organization. It shows there is positive relation between superior's subordinates and peers.
- 50% of the employees say that they are often able to complete their daily task easily.
- 17 employees says there is 20% increase, 14 employees says that 10% increase and 8 employees says that increase by 40% were as 5 employees says there will be 50% and above, if the the related office environment problem are solved.

4.1 SUGGESTIONS:

- Lighting was found to be the major factor, which is affecting the daily and overall productivity of employees in offices. Therefore, it is recommended to have proper and adequate artificial as well as natural light to improve the office design for better performance.
- Most of the organizations do not give importance to office design; this study will give them ample reasons to consider office design as an important factor in increasing their employees' productivity.

4.2 CONCLUSION:

By this study we came to know that the office design plays very important role in enhancing employee's productivity. It would therefore make sense to develop, in the near future, a validated human model in which at least the thermal environment in combination with the lighting conditions can be evaluated in terms of comfort and loss of productivity.

The organization environment, lighting and thermal environment have the biggest influence on employees' productivity. In order to bring a greater productivity, which combines human resource management, workplace layout and performance management, needs to be developed.

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