CHAPTER 4 – DATA ANALYSIS I

CHAPTER CONTENTS -

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- Analysis of Research Tool
- Descriptive Data Analysis and Interpretation
- Chapter Conclusion

4.1 CHAPTER INTRODUCTION

In this chapter the researcher attempts to understand HRIS as an approach to manage workplace systems and processes. Information technology and systems has revolutionized the way businesses function and operate and has attracted interest of many researchers to investigate the resultant impact and outcomes. HRIS is a key management tool which collects, maintains, analyses and reports information on people and jobs. It is a system because it integrates all the relevant data, which otherwise might have been lying in a fragmented and scattered way at various points in the larger system, converts this data into meaningful conclusions or information and makes it accessible to the persons, who need it for their decisions.

The researcher used a Structured Questionnaire to measure variables underlying HRIS processes and performance to identify effectiveness of it in large scale organizations. The valuable data so collected through the research tool is analyzed in this chapter. Research approach adopted in the tool design research highlights the use of the Questionnaire with three sections – the first section comprises of questions attempting to profile the respondent and respondent organization, the second section comprised of questions pertaining to the DNA of the HRIS software itself which is used by sample respondents and the third part consists of question related to user satisfaction with existing HRIS features and application. At the outset the researcher presents an analysis of the questionnaire in the subsequent section.

4.2 ANALYSIS OF RESEARCH TOOLS

In order to achieve research objectives and carry out an extensive field exercise the researcher designed a structured questionnaire. The questionnaire was then used to collect data on pre-defined research variables. This section analyzes the questionnaires used as primary data collection tools. As stated the questionnaire used for the purpose composed of three parts –Respondent and Organization Profile, About HRIS and User Satisfaction with HRIS, as exhibited in the following figure.

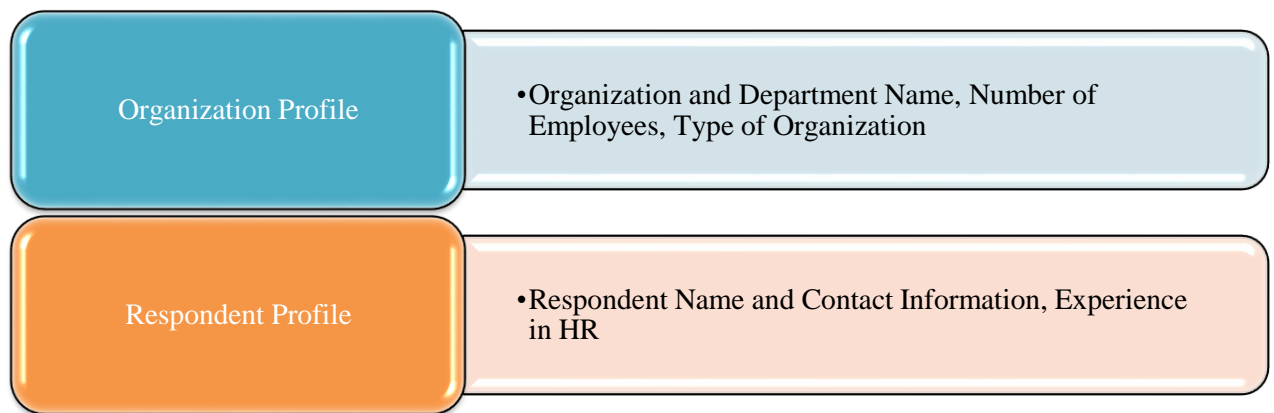### Figure 4.1 – Primary Research Tool
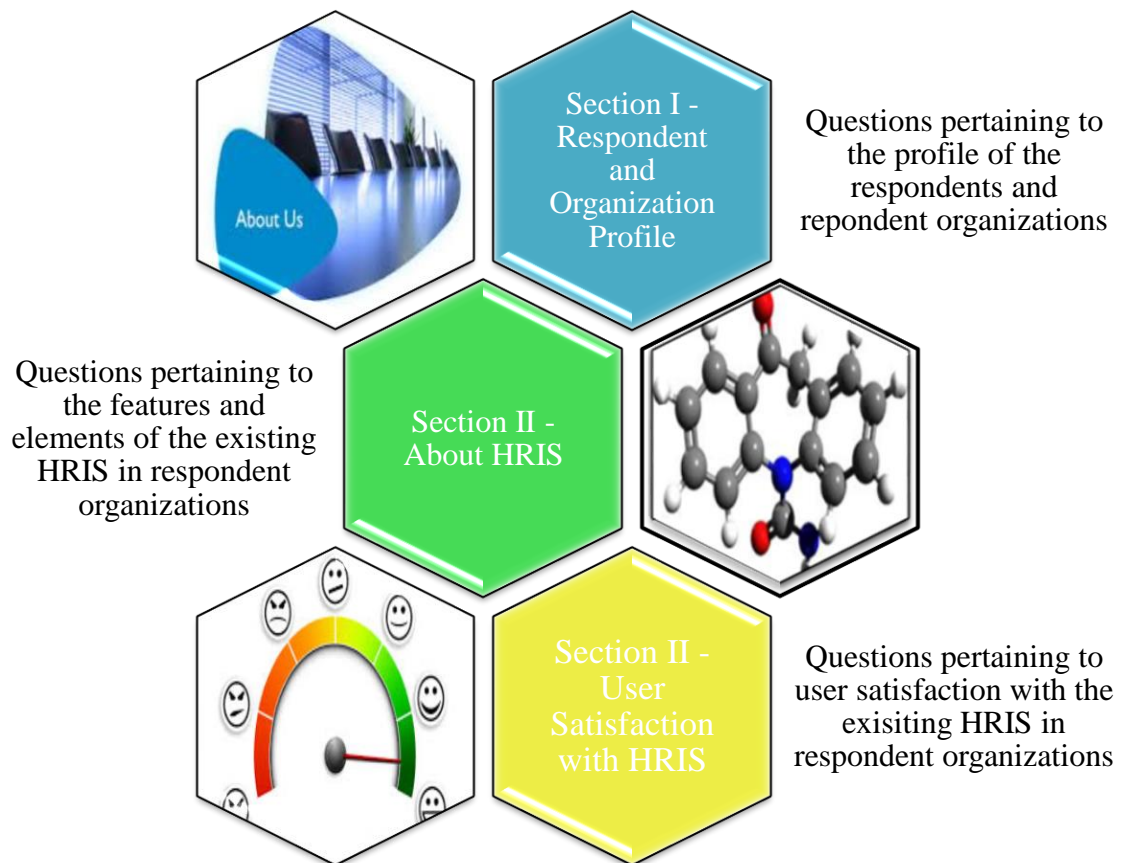
Accordingly, the analysis in this chapter integrates the two information sets for gathering information on research variables and testing research hypothesis. In order to understand how the researcher arrived at the findings here is an examination of the questionnaire.
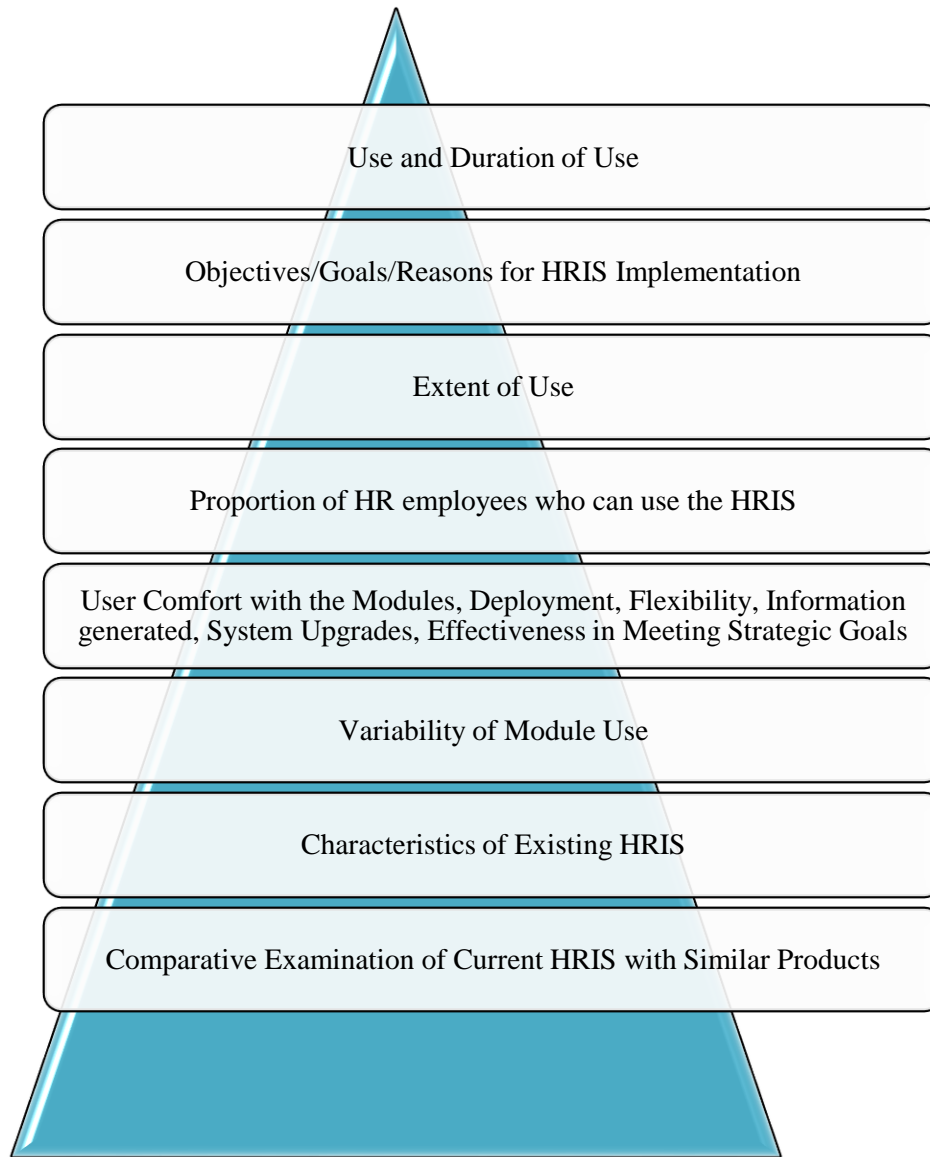
In the first section the researcher attempts to profile the respondents and their organizations on select parameters. Profiling of the respondent organization enables the researcher to identify those companies that fit in the research criteria and therefore are eligible for the research exercise. Respondent profile also enabled the researcher an investigation of the respondent experience, association and work profile with the current organization. The richness that is added to the information enabled authenticates the researcher findings. The following figure presents an analysis of the questions of the first section in the questionnaire.

Figure 4.2 – Analysis of the Research Tool – Section I

Organization Profile	•Organization and Department Name, Number of Employees, Type of Organization
Respondent Profile	•Respondent Name and Contact Information, Experience in HR

As stated earlier the second section of the primary research tool comprised of questions pertaining to the DNA of the HRIS software itself which is used by sample respondents. The researcher was able to gauge various structural aspects and features of the HRIS software which is implemented in the sample respondent organizations. Since HRIS has multiple functionalities and significant variability of use by business organizations, such information enabled researcher to understand and capture various aspects of this variability. The following figure analyzes the second section of the questionnaire.

Figure 4.3 – Analysis of the Research Tool – Section II

Use and Duration of Use

Objectives/Goals/Reasons for HRIS Implementation

Extent of Use

Proportion of HR employees who can use the HRIS

User Comfort with the Modules, Deployment, Flexibility, Information generated, System Upgrades, Effectiveness in Meeting Strategic Goals

Variability of Module Use

Characteristics of Existing HRIS

Comparative Examination of Current HRIS with Similar Products

The third section of the research tool attempted to understand and document the respondent satisfaction with the current HRIS. Accordingly the researcher incorporated questions aiming to capture user satisfaction with the HRIS on select parameters. These parameters were carefully identified by the researcher based on the research objectives and hypothesis. The intended outcome was to investigate and comprehend the respondent opinion on the selected parameters and then critically assess the use, functionality and application of HRIS.

The following lays down the various aspects of the third section of the structured questionnaire.

Figure 4.4– Analysis of the Research Tool – Section III

HRIS User Satisfaction with -	Current Services from HRIS
	Improved HR functions
	Forecast staff needs
	Improved the data maintenance process
	Decreased time spent on organization-wide communication, correcting errors, processing of HR services, recruitment, training, staffing decisions, processing paper work, data input expense, cost per hire, recruiting expenses, training expenses, Salary expenses
	Cost saving on the HR functions
	Increased coordination, security concerns, levels of useful information,
	Effectiveness of decision making, promotion decisions, decisions in choosing better people, decions regarding when training and development is necessary,
	Improved the training process, HR Planning Process, Recruitment process, Selection process, Orientation, Training & Development process, Career planning and development process, Performance appraisal process, Employee Compensation and benefits process, Occupational health and safety process.
	Accurate Identification of unfilled positions
	Use of e-recruiting
	Knowledge of Technical details, hardware required, software's required, upgradation of HRIS system.

Using the primary tool which has been described above, the researcher collected the data which has been presented and interpreted in the subsequent sections.

4.3 DESCRIPTIVE DATA ANALYSIS AND INTERPRETATION

At the outset the researcher presents the data from first section of the questionnaire which profiles the respondents and the organizations to which the respondents belong.

Number of Employees in the Sample Organization

The researcher attempted to profile the number of employees in the sample organizations. The researcher classified the organizations in three categories – employees less 300, employees between 300 and 2000, and employees above 2000. The findings have been presented in the table and figure below.

Table 4.1– Number of Employees in the Sample Organizations

Employee Strength	Frequency	Frequency %
Less than 300	4	6
> 300 and < 2000	34	55
2000 and more	24	39
Total	62	100

Figure 4.5- Number of Employees in the Sample Organizations
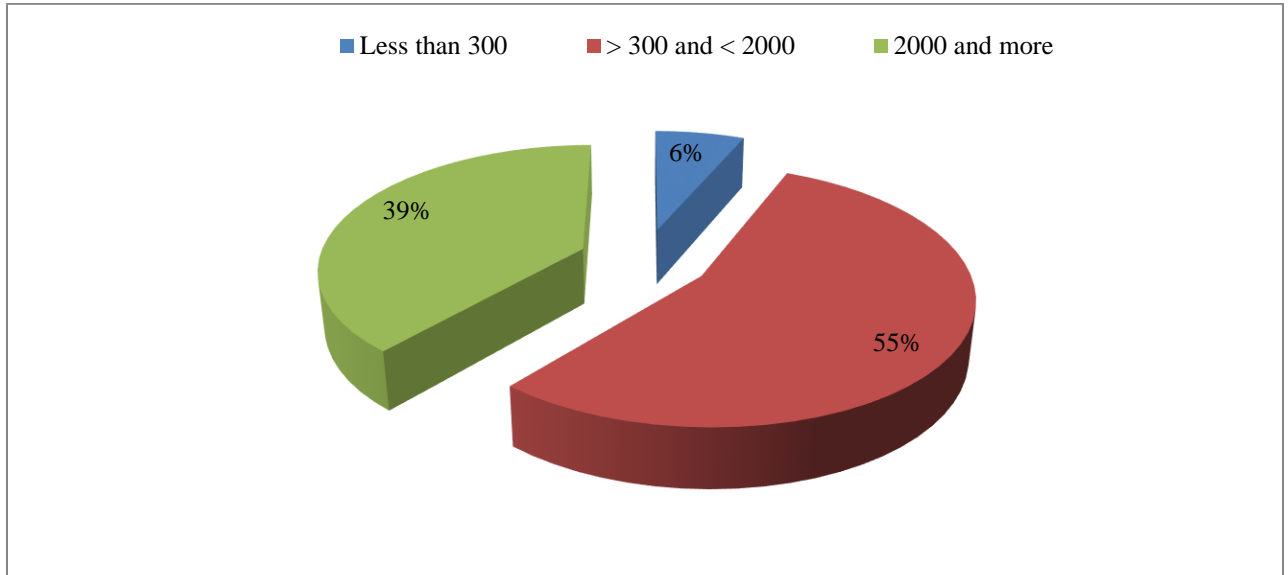
The findings indicate that 6% respondents researched belong to organizations which have an employee strength of less than 300 employees, 55% of them have an employee strength of 300 to 2000 employees and 39% have an employee strength of more than 2000 employees. These figures indicate that all organizations are large scale and are eligible for the current research.

Employee Experience in HR in Sample Organizations

The researcher found out the experience of employees in the current organization. The employees were classified into four categories based on their experience, namely, less than five years, between five and 10 years, between 10 and 15 years and more than 15 years.

The findings are presented in the following table and figure.

Table 4.2 – Employee Experience in HR in Sample Organizations

Employee Experience in HR	Frequency	Frequency %
Less than 5 years	150	24
More than 5 and Less than 10 years	320	52
More than 10 and Less than 15 years	100	16
More than 15 years	50	8
Total	620	100

Figure 4.6- Employee Experience in HR in Sample Organizations
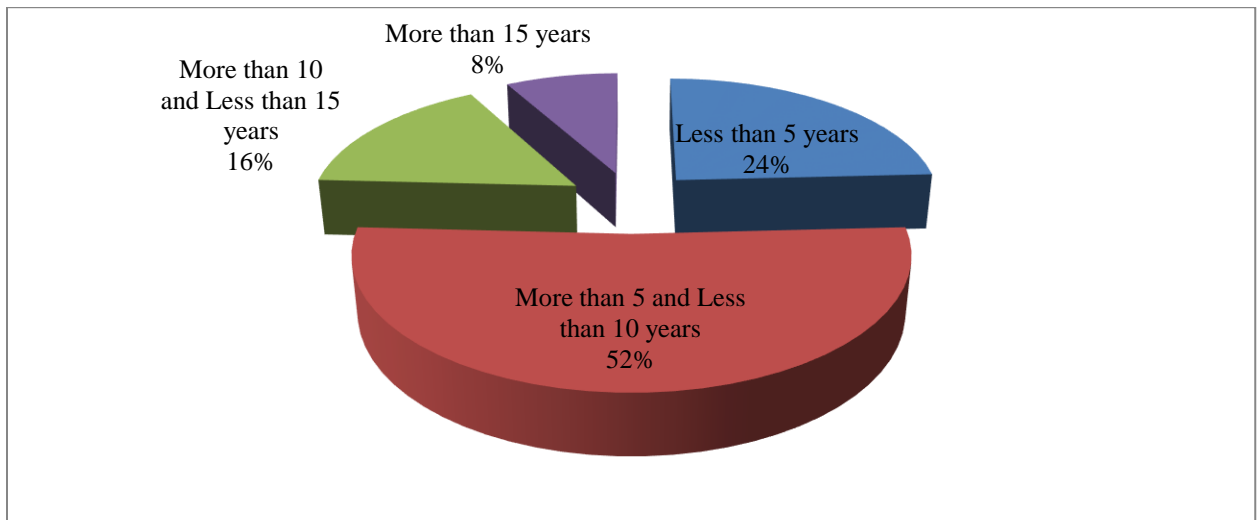
Out of the 620 employees surveyed 24% respondents have less than five years' experience, 52% have between five and 10 years' experience, 16% have between 10 to 15 years, and 8% have more than 15 years of experience. These figures indicate –

- an appropriate spread between all categories of employees based on experience
- sufficient experience of respondents to be able to perceptively respond to the questionnaire
- adequate coverage of fresh and timeworn perspectives

Organization Type of Sample Organizations

The researcher also found the type of organizations. This is because HRIS use and application may differ across various organizations. The sample organizations were classified in categories, namely, Manufacturing, Financial, Agri-business, IT, Service Sector, and Other. The findings are presented in the following table and figure.

Table 4.3 – Organization Type of Sample Organizations

Organization Type	Frequency	Frequency %
Manufacturing	18	29
Financial	6	10
Agri-business	8	13
IT	25	40
Service Sector	4	6
Other	1	2
Total	62	100

Figure 4.7 - Organization Type of Sample Organizations
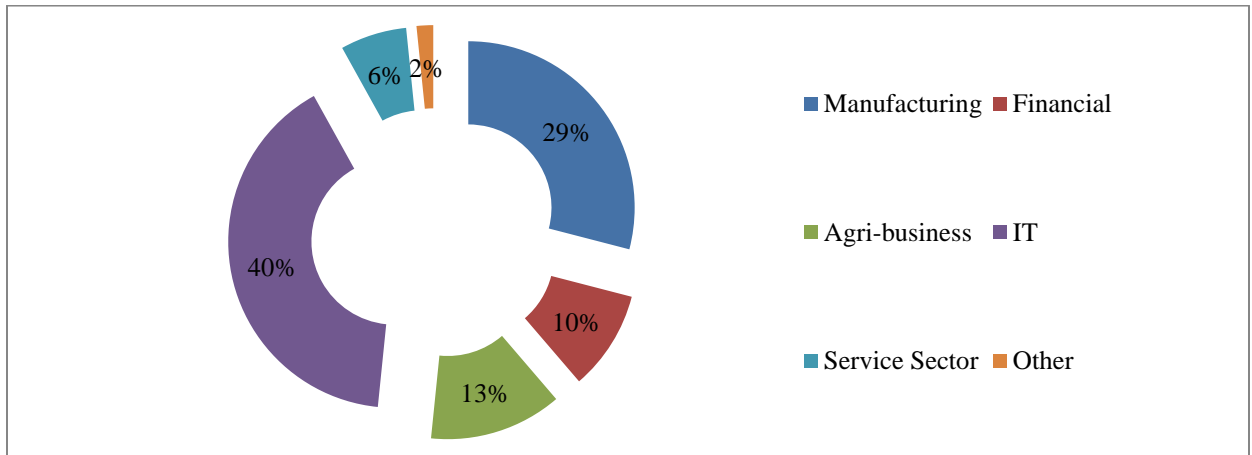
The findings indicate the organization type of sample organizations, namely, Manufacturing - 18, Financial – 6, Agri-business – 8, IT – 25, Service Sector – 4, and other – 1. These findings reveal that –

- Wide coverage of all sectors
- Majority of sample organizations from IT and Manufacturing since the study was based out of Pune which is a manufacturing and IT hub.

Number of Years of Use of HRIS

The researcher aspired to document the experience of respondent use of HRIS. This helped researcher understand the depth of respondent exposure to HRIS. The findings are presented in the following table and figure.

Table 4.4 – Number of Years of Use of HRIS

Number of Years	Frequency	Percent
Less than 5 years	345	51.6
More than 5 years	275	40.3
Total	620	100

Figure 4.8 – Number of Years of Use of HRIS
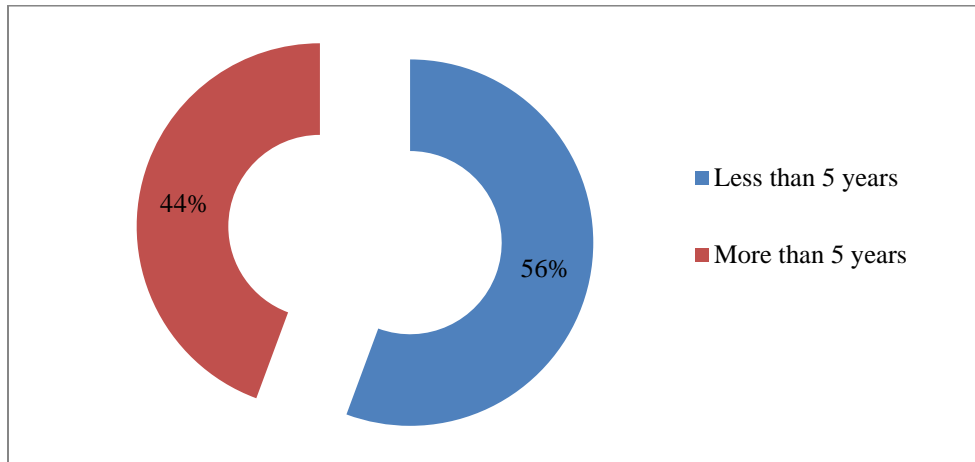
The findings reveal that 56% of respondents have an HRIS user experience of less than five years and 44% have an experience of more than five years. These findings indicate that significantly large number of respondents has been using HRIS for long time. Hence, their user experience is a vital value addition to their perspectives on research variables.

Year of HRIS Installation in Sample Organizations

The respondents were also asked the year of installation of HRIS in their respective organizations. This was with the view to gauge their organizational experience in the use of HRIS. It is also exhibits the organization's integration, systematic and structural adoption of HRIS and the experience, thereof. The findings are presented in the table and figure below.

Table 4.5 – Year of HRIS Installation in Sample Organizations

Year of Installation	Frequency
2003	6
2006	5
2007	4

2008	10
2009	5
2010	5
2012	13
2013	14
Total	62

Figure 4.9 – Year of HRIS Installation in Sample Companies
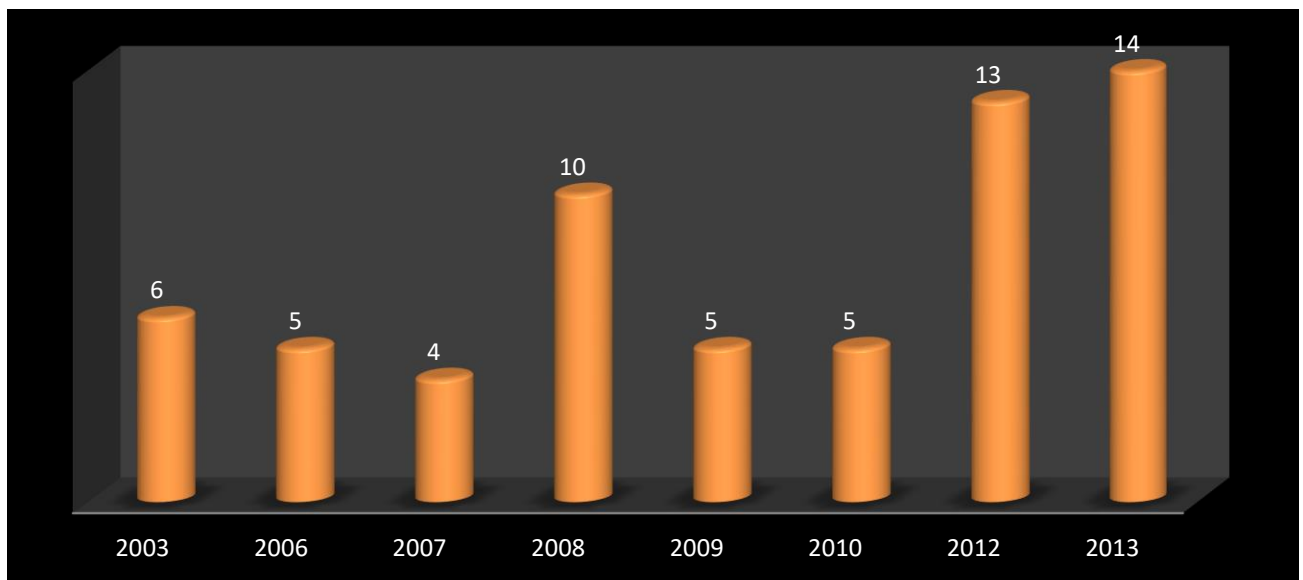
The researcher analyzed the above information using descriptive statistical tools. The outcomes are presented in the following table.

Table 4.6: Years of HRIS Installation in Sample Organization.

Descriptive Tool	Finding
Mean	7.75
Standard Error	1.411053305
Median	5.5
Mode	5
Standard Deviation	3.991061441
Sample Variance	15.92857143
Kurtosis	-1.26506465
Skewness	0.838195936
Range	10
Minimum	4
Maximum	14
Sum	62
Count	8

In the second section of the questionnaire the researcher aspired to understand the features and elements of the HRIS implemented in the sample organizations. The findings of the questions so asked are presented below.

Major objectives/goals/reasons for which HRIS is implemented in organizations

The research tool incorporated an open-ended qualitative question to know and comprehend the major objectives/goals/reasons for which HRIS was implemented in sample organizations. Accordingly the respondents were asked to list out their perspectives. The findings are presented in the following table -

Table 4.7 - Major objectives/goals/reasons for which HRIS is implemented in organizations

Compliances for HR budgeting	Actual data for compensation and benefits	Statutory compliances
Better data management	Time and Cost optimizing	Easy access to data
Multiple reports	System works smoothly	Speed of Data Access
Standard procedures are adopted	Online Attendance which is quick and paperless	Payroll administration is easy
Employee Information is maintained	Reduced transactional activity time of HR	More engaged employees
Seamless flow of communication in the organization	Accuracy of data	Speed of Information
Record keeping for future	Robust HR administration	Fully automated and secured system
Track and manage Resource	Transparency between management and employee	Resource optimization
Instill discipline	Get timely updates and reports	Avoid Discrepancy

The above findings revealed a wide variety of benefits of HRIS implementation realized by sample respondents.

Extent of Use of HRIS in percent in Sample Organization

The benefits of HRIS comprehended by respondents should be reflected in its use. The tool attempted to investigate the extent of use of HRIS in respondent organizations. The findings are presented in the following table and figure -

Table 4.8- Extent of Use of HRIS in percent in Sample Organization

Extent of Use of HRIS in Organization	Frequency
Less than 50%	56
51-75%	378
76-100%	142
NA (Don't know or Unsure)	44
Total	620

Figure4.10- Extent of Use of HRIS in percent in Sample Organization
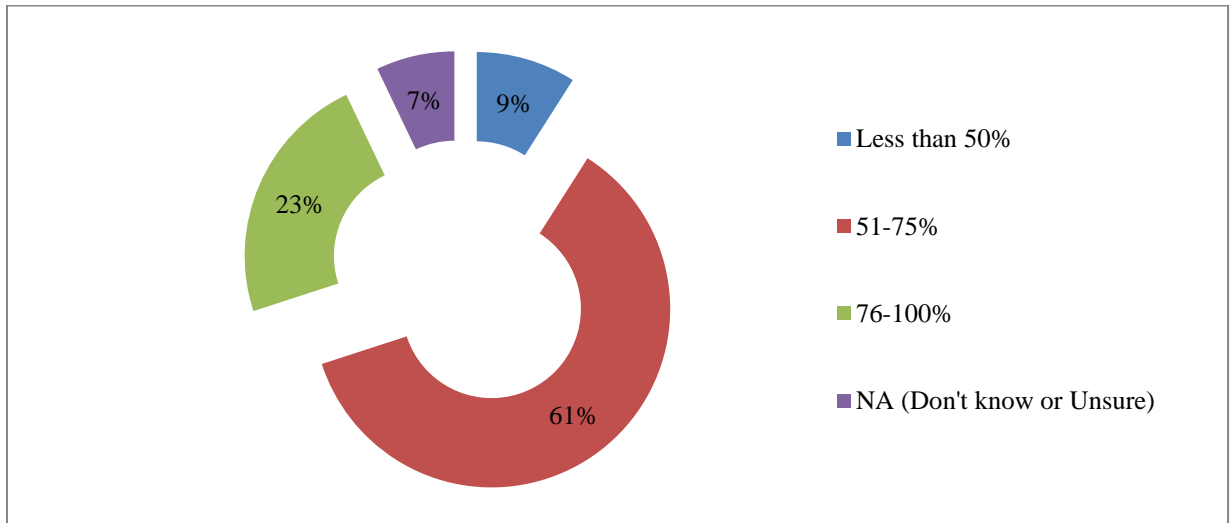
The findings reveal that 9% respondents say that there is less than 50% HRIS implementation, 61% say that the implementation is between 51-75%, and 23% of the respondents believe that the implementation is between 76-100%. Only 7% of the respondents do not know or are unsure. This indicates that in majority of the sample organizations the HRIS implementation is more than 50%. A meager frequency falls in the less than 50% category of implementation. It can be drawn out that the perceived benefits of HRIS reflect in its adoption and implementation in organizations.

Percentage of HR employees who can use the Human Resource Information System

Significantly that HRIS is implemented depends on the skill of the user. The researcher tried to find out whether HR employees are able to use HRIS. The findings are presented in the following table and figure -

Table 4.9- Percentage of HR employees who can use the Human Resource Information System in Sample Organizations

HR employees able to use the Human Resource Information System	Frequency
All	235
Mostly Yes	350
Mostly No	21
None	14
Total	620

Figure 4.11- Percentage of HR employees who can use the Human Resource Information System in sample Organizations
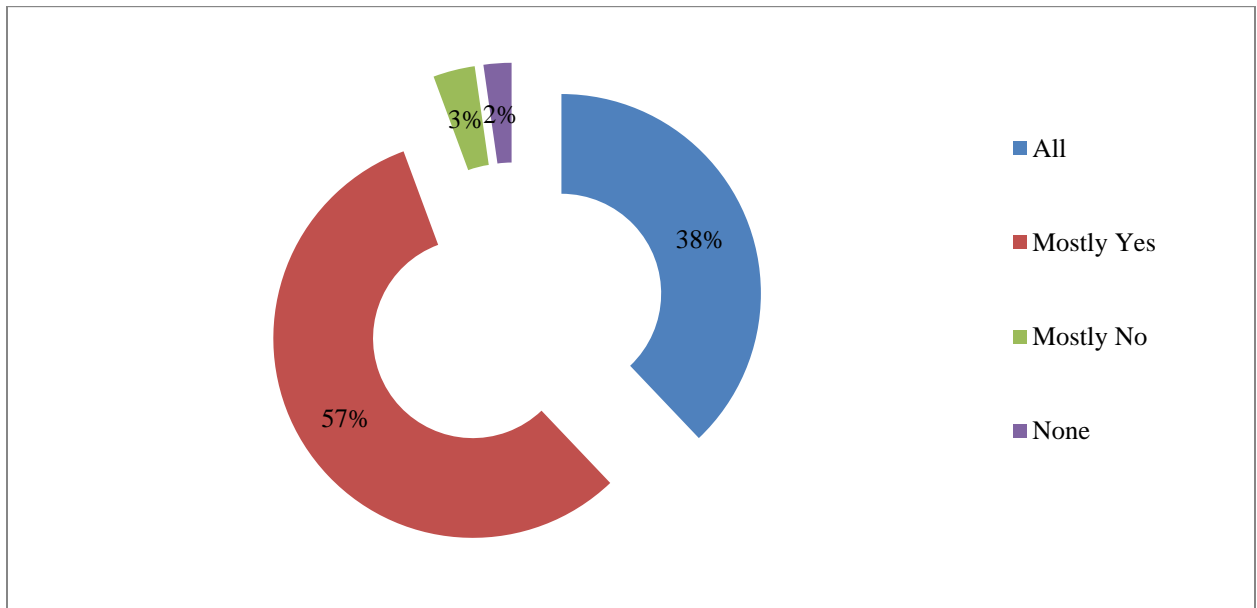
The findings indicate that 38% of the respondents believed that all HR employees can use HRIS, 57% of the respondents responded "Mostly Yes" to the percentage of HR employees who can use HRIS, only 3% respondents believe that HR employees can mostly not use HRIS, and 2% respondents believe that none can use HRIS. One can draw

out that all or most HR employees are skilled in using HRIS. Discussions during in-depth interviews revealed that technological glitches arrive from time to time which may hamper processes which are sorted out. In some cases the HR function or parts of it are outsourced where respondents may perceive that the existing HR employees may not be skilled to use the HRIS used by the outsourcing partner.

Employee Satisfaction with Various Aspects of HRIS

By capturing the user satisfaction with the current HRIS, the researcher attempts to critically assess the effectiveness of implementation and user comfort with the system and processes. In any technological adoption the effectiveness is primarily dependent on the user comfort and satisfaction. Rigorous training and engagement at all levels is carried out by organizations in a systematic and structured manner to ensure that this adoption process is smooth and hassle free. From the point of view of the employees technology is an enabler as it substantially increases speed and efficiency of workflow. This in turn also has a positive impact on their individual performances.

It is absolutely imperative that the researcher attempts to investigate user comfort and satisfaction with HRIS. The various parameters defining the user satisfaction are in tune with the research objectives and hypothesis. The findings are presented in the following table and figure -

Table 4.10– Employee Satisfaction with Various Aspects of HRIS

Employee Satisfaction with -	No	Yes	Total
HRIS Functionality	139	481	620
HRIS Use	201	419	620
Installed modules available for use	119	501	620

Deployment of HRIS in organization	23	597	620
Flexibility of HRIS in organization	183	437	620
Way in which system upgrades have been installed.	11	609	620

Figure 4.12 – Employee Satisfaction with Various Aspects of HRIS
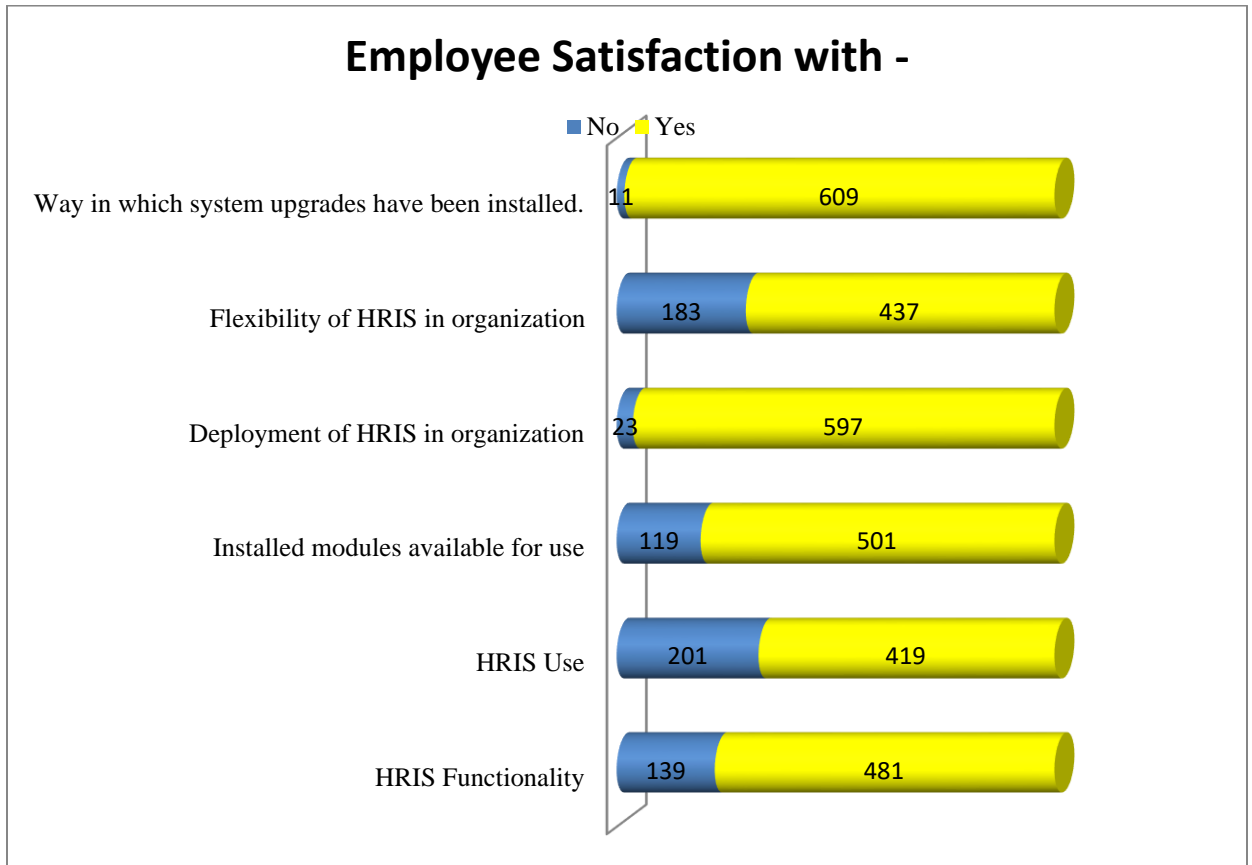
The findings of the researcher effort in this context are listed below –

- Majority of the respondents, 78% believe that they are satisfied with HRIS functionality and 22% are not satisfied on this parameter.
- 68% of the respondents are satisfied with HRIS use and 32% are not satisfied

- Installed modules available for use satisfy 81% of the respondents and do not satisfy 19% of them

- 96% of the respondents are satisfied by the deployment of HRIS in organization and 4% of the respondents are not.

- Regarding the flexibility of HRIS in organization 70% are satisfied and 30% respondents are not.

- 985 respondents are satisfied with the upgrades that have been installed in their current HRIS and 2% of the respondents are not.

These figures indicate a high degree of user satisfaction and give a positive stimulus to the efforts made at the organization level to implement HRIS.

Utilization of Information generated from HRIS by top management

The researcher attempted to find whether information generated from HRIS is underutilized by top management. The findings are presented in the following table and figure -

Table 4.11 - Utilization of Information generated from HRIS by top management

	No	Yes
Information generated from HRIS is underutilized by top management.	179	441

Figure 4.13- Utilization of Information generated from HRIS by top management
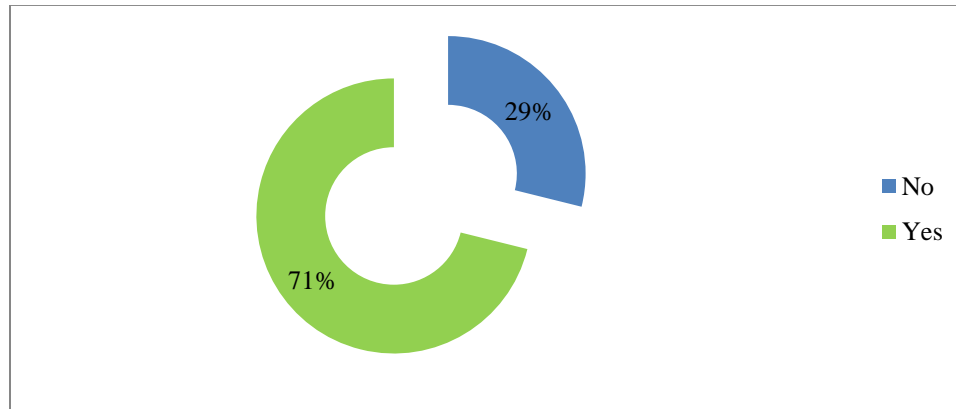
71% of the respondents believe that there is underutilization of information generated from HRIS by top management and 29% of the respondents do not believe so. This perhaps emerges because in general the use of analytics and predictive tools is a field which is yet emerging and developing in the world of business. Accordingly the findings of the researcher reveal that majority of the respondents believe that there is scope for more utilization of information that is divulged by HRIS in their organization. This also implies that organizations should research and ideate on how such information can be utilized for the overall benefits of organizations and bottomlines.

Overall Effectiveness of HRIS in meeting Strategic Goals

It is imperative to investigate the overall effectiveness of HRIS in meeting strategic goals. The researcher's effort in this direction is presented in the following table and figure -

Table 4.12 – Overall Effectiveness of HRIS in meeting Strategic Goals

	Yes	No
Overall the HRIS is effective in meeting strategic goals.	97	523

Figure 4.14 - Overall Effectiveness of HRIS in meeting Strategic Goals
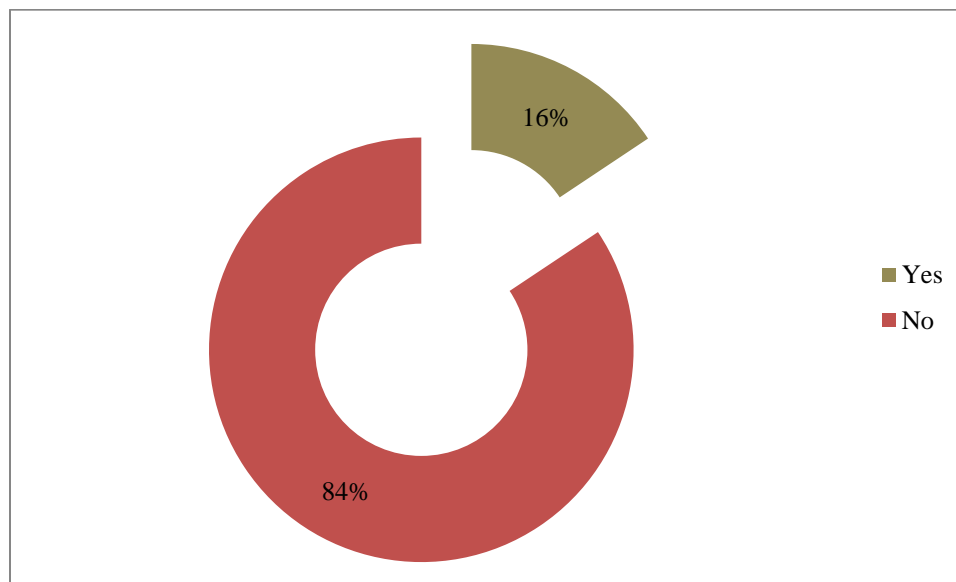
84% of the respondents HRIS is not effective in meeting strategic goals and 16% respondents believe otherwise. This perspective of the respondent finds its justification from the premise that how far is the HR function in sync with the strategic goals of the organization. If HR function takes a back seat in business strategy formulation, it is only inevitable that HRIS will remain ineffective in meeting strategic goals of the organization.

Modules of HRIS Currently in Use in Sample Organizations

To understand the existing HRIS in its entirety the researcher attempted to find out various modules that are popularly used by sample organizations.

Table 4.13 - Modules of HRIS Currently in Use in Sample Organizations

Modules of HRIS in Use	No	Yes	Total
Employee information system	27	35	62
Applicant tracking and placement information system	13	49	62
Performance management	13	49	62
Government reporting	10	52	62
Pay role	27	35	62
Recruitment management	11	51	62
Training	11	51	62
Leave management	21	41	62
Time management	16	46	62
Incentive management	11	51	62

Figure 4.15- Modules of HRIS Currently in Use in Sample Organizations

Module	No	Yes
Incentive management	11	51
Time management	16	46
leave management	21	41
Training	11	51
Recruitment management	11	51
Pay role	27	35
Government reporting	10	52
Performance management	13	49
Applicant tracking and placement information system	13	49
Employee information system	27	35
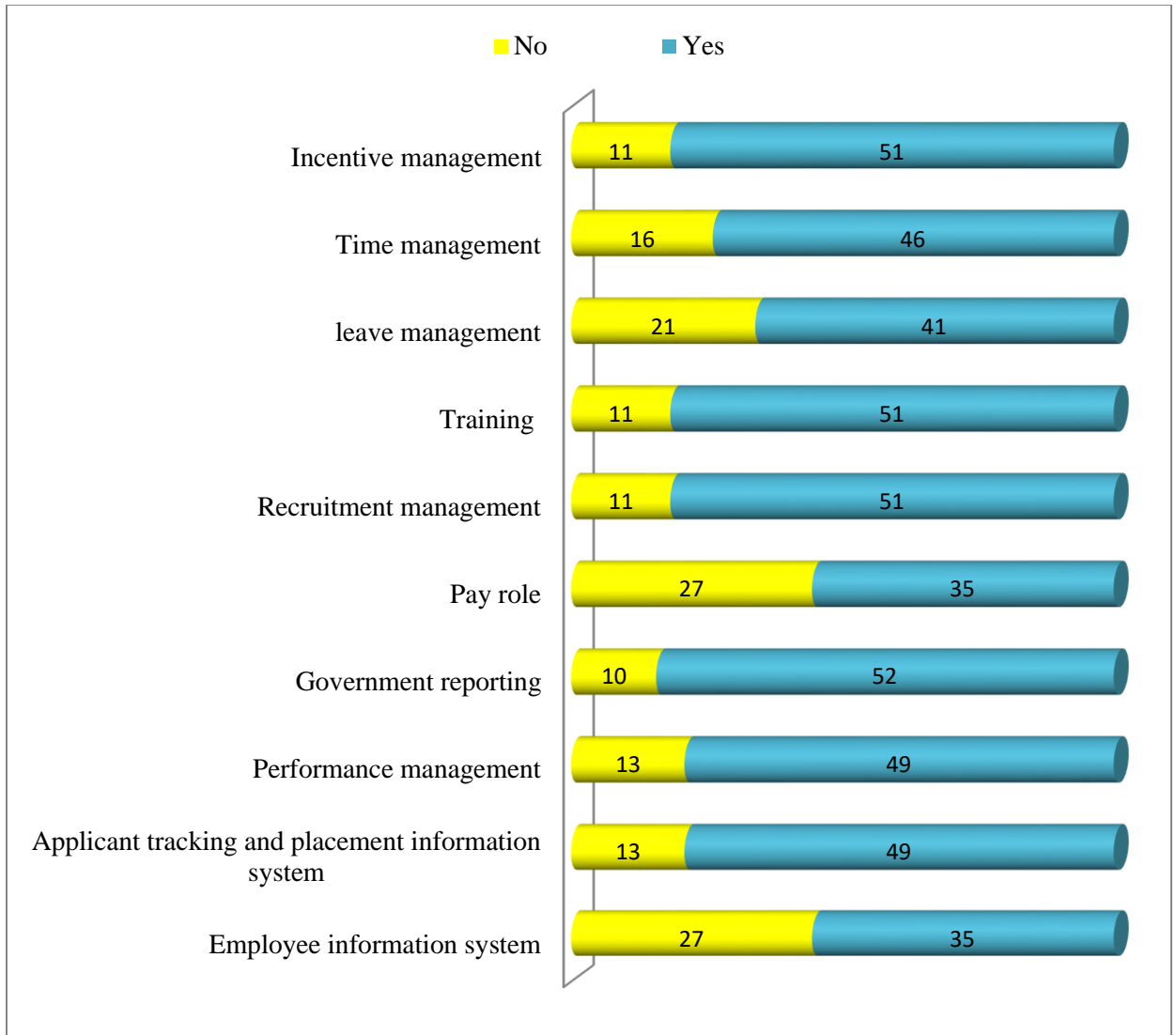
The findings of the research reveal the following points –

- 56% of respondent organizations use employee information system and 44% do not.

- 79% of sample organizations use application tracking and placement information system and 21% don't.

- 79% of sample organizations use performance management module in HR information system and 21% say otherwise.

- 84% respondents are positive about use of government reporting module in HRIS and 16% indicate otherwise.

- 56% respondent organizations use pay role module in HRIS and 44% do not.

- 82% of respondent organizations use recruitment management module and 18% do not.

- 82% of respondent organizations use training module and 18% do not.

- 66% respondent organization use leave management module and 34% do not.

- 74% respondent organizations use time management module and 26% do not.

- 82% of the organizations use incentive management module and 18% do not.

Modules which are necessary but are not the part of current HRIS

In order to holistically investigate the research problem the researcher aspired to inquire whether there were any HRIS modules which were necessary but were not a part of the existing system in respondent organization. The underlying idea was to understand and document the deficiencies or inaptness of the current HRIS in organizations. An open-ended question was accordingly framed to elicit all possible responses from the respondents. The findings reveal an array of responses ranging across various HR aspects. These are enumerated and presented in the table below –

Table 4.14: Modules which are necessary but are not the part of current HRIS

Modules which are necessary but are not the part of current HRIS
Intelligent/ emotional quotient E/IR
Security
Employee information system, recruitment module
Appraisal system upgrades
Expense claim
Attendance system
Compensation Management
Payroll and fringe benefit record

These findings reveal the user perspectives on the way forward for HRIS implementation in their respective organization. It is indicative of the acceptance and comfort with the existing modules and that the user approval of moving ahead for wider implementation of HRIS.

HRIS Characteristics in Sample Organizations

To understand the characteristics of HRIS currently in use has been perhaps one of the most important areas covered by the researcher within the research framework. The parameters chosen to study this aspect are in tune with the research objectives and are

drawn from an exhaustive literature review. These characteristic elements are presented in the following figure –

Figure 4.16 – HRIS Characteristics

User Friendly

Compatible

Reliability

Efficiency

Security

Flexibility

Maintainability

Clarity

Consistency

Stability

Accuracy
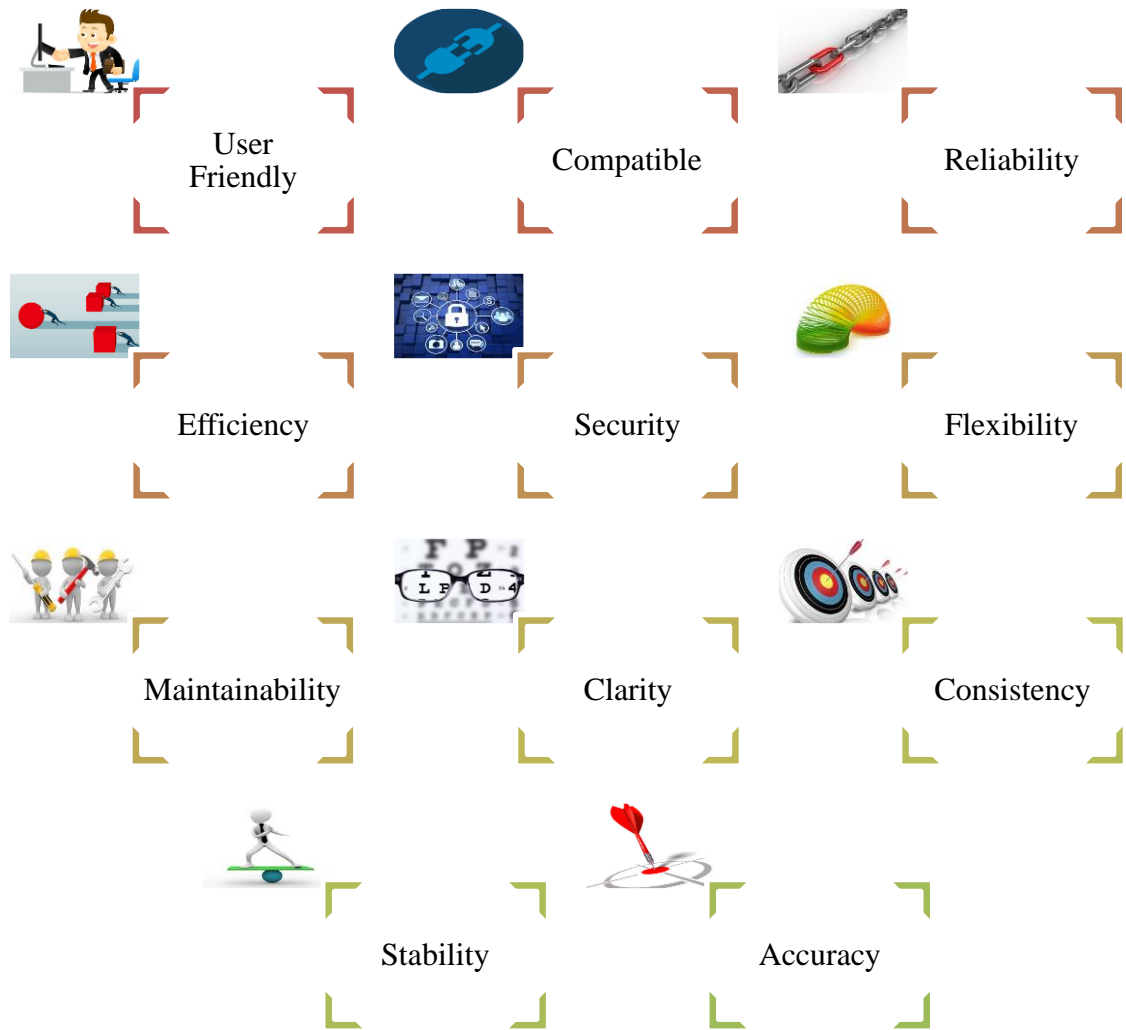
The findings of the research exercise to meter the characteristics of the existing HRIS are presented in the table and figure below -

Table 4.15- HRIS Characteristics in Sample Organizations

HRIS Characteristics	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree
User Friendly	10	22	80	170	340
Compatible	1	29	80	250	260
Reliability	9	61	40	250	260
Efficiency	7	23	140	180	270
Security	53	87	210	190	80
Flexibility	21	65	198	180	156
Maintainability	13	17	150	190	250
Clarity	11	19	70	180	340
Consistency	30	10	60	230	290
Stability	6	24	170	150	270
Accuracy	0	30	50	220	320

Figure 4.17 - HRIS Characteristics in Sample Organizations

HRIS Characteristics

Legend: ■ Strongly Disagree ■ Moderately Disagree ■ Neutral ■ Moderately Agree ■ Strongly Agree

Characteristic	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree
Accuracy	0	30	50	220	320
Stability	6	24	170	150	270
Consistency	30	10	60	230	290
Clarity	11	19	70	180	340
Maintainability	13	17	150	190	250
Flexibility	21	65	198	180	156
Security	53	87	210	190	80
Efficiency	7	23	140	180	270
Reliability	9	61	40	250	260
Compatible	12	9	80	250	260
User Friendly	10	22	80	170	340

The findings of the query can be summarized into the following points –

- The respondents seem to support the HRIS in their organization on all characteristic parameters except for Flexibility and Security, indicating their perspectives that there is a deficiency in the current HRIS on these two parameters.

- The most favored characteristics of existing HRIS appear to be Accuracy, followed by Clarity and Consistency.

Features that make current HRIS is better than similar products

A comparison was also drawn out by the respondents on being asked, between the HRIS in their organization and similar products. The findings of the comparison are presented in the following table –

Table 4.16: Features that make current HRIS is better than similar products

Why current HRIS is better than similar Products?
user friendly
It is tailor made according to organizational need
Easy to upgrade/change
Is standard product
Results generated are universal
It was chosen as per the requirement after thorough evaluation of all products

Access control and accessibility
Government reporting - easy to prepare
Because of performance management system

The above table enumerates all the features in respondents' current HRIS which makes it better than similar products. The responses are diverse and cover wide variety of HRIS characteristics, since the researcher collected this data using an open-ended question, in order to be inclusive towards all possible perspectives.

Employee Satisfaction with the HRIS

Key accomplishment of a system is when the users are satisfied with it. The researcher attempted to measure employee satisfaction from the HRIS on diverse criteria based on the research variables and objectives. The findings are presented in the following table and figure -

Table 4.17- Use of HRIS has -

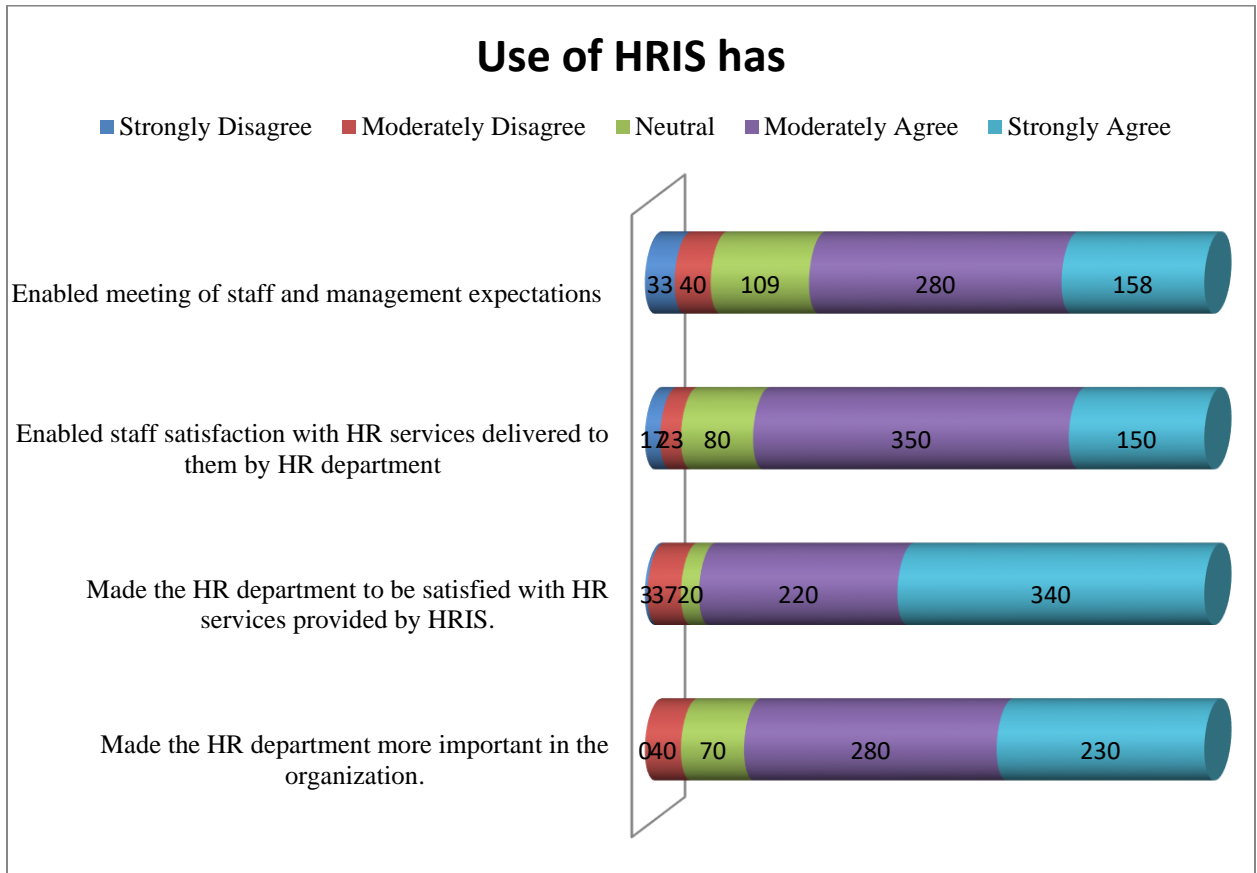| Use of HRIS has -	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree	Total
Made the HR department more important in the organization.	0	40	70	280	230	620

Made the HR department to be satisfied with HR services provided by HRIS.	3	37	20	220	340	620
Enabled staff satisfaction with HR services delivered to them by HR department	17	23	80	350	150	620
Enabled meeting of staff and management expectations	33	40	109	280	158	620

Figure 4.18- Use of HRIS

Use of HRIS has

■ Strongly Disagree ■ Moderately Disagree ■ Neutral ■ Moderately Agree ■ Strongly Agree

	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree
Enabled meeting of staff and management expectations	33	40	109	280	158
Enabled staff satisfaction with HR services delivered to them by HR department	12	3	80	350	150
Made the HR department to be satisfied with HR services provided by HRIS.	3	37	20	220	340
Made the HR department more important in the organization.	0	40	70	280	230

- The findings of the research can be summarized in to the following observations –
- Majority of the respondents agree/strongly agree that HRIS has made the HR department more important in the organization. This authenticates the positive impact HRIS is having on overall system and processes in the organization.
- Majority of the respondents agree/strongly agree that use of HRIS has made the HR department satisfied with HR services provided by HRIS. This is indicative of both system adoption and comfort of use.
- This is further authenticated by overall staff members who also agree/strongly agree with the HR services delivered to them by the HR department.
- On further investigating whether the staff expectations are met there was a positive response from majority of sample respondents who agree/strongly agree.

Use of HRIS has improved –

In order to carry out the research within a descriptive research framework the researcher further investigated the impact points of HRIS. The underlying idea was to identify aspects which have improved on account of use of HRIS. The findings are presented in the table and figure below –
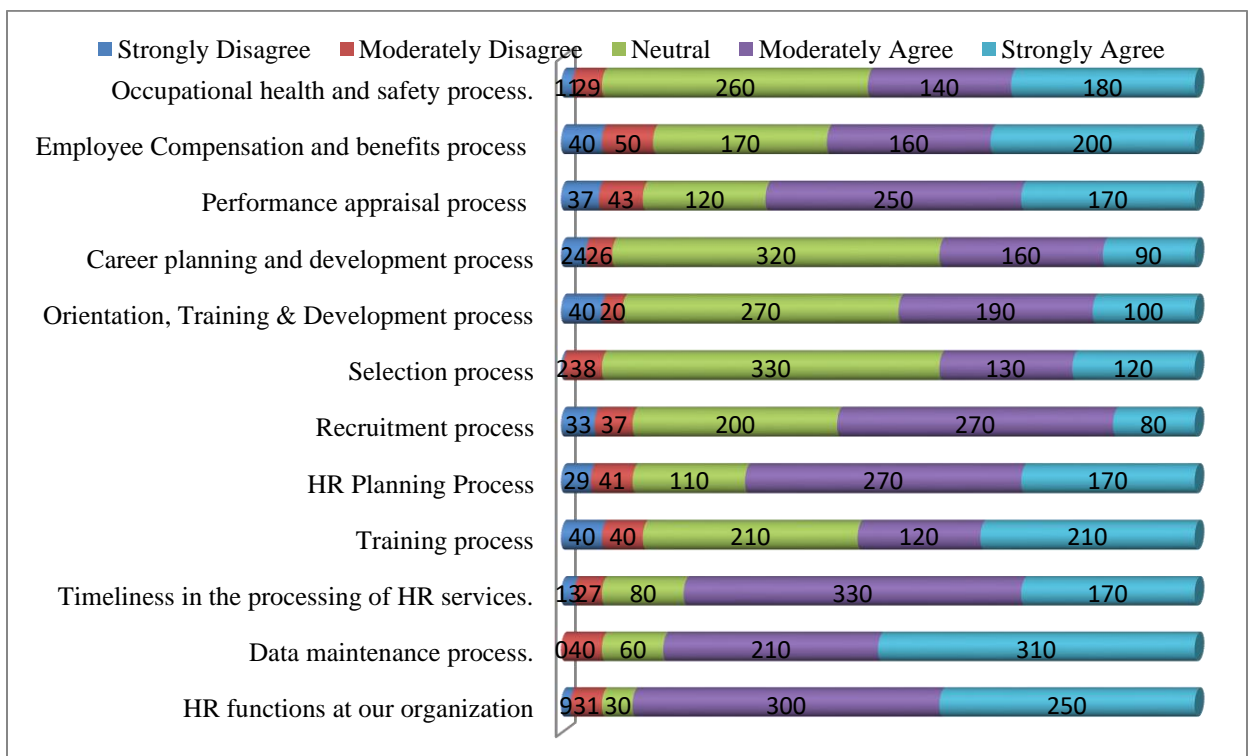
Table 4.18 – Use of HRIS has Improved -

Use of HRIS has Improved -	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree	Total
HR functions at our organization	9	31	30	300	250	620
Data maintenance process.	0	40	60	210	310	620
Timeliness in the processing of HR services.	13	27	80	330	170	620
Training process	40	40	210	120	210	620
HR Planning Process	29	41	110	270	170	620
Recruitment process	33	37	200	270	80	620
Selection process	2	38	330	130	120	620
Orientation, Training & Development process	40	20	270	190	100	620

Career planning and development process	24	26	320	160	90	620
Performance appraisal process	37	43	120	250	170	620
Employee Compensation and benefits process	40	50	170	160	200	620
Occupational health and safety process.	11	29	260	140	180	620

Figure 4.19 – Use of HRIS has Improved -

The findings of the research effort enable the researcher to draw out following observations –

- Majority of the respondents agree/strongly agree that use of HRIS has improved HR functions in their organizations, Data maintenance process, Training process, HR planning process, recruitment process, Performance Appraisal process, Employee compensation and benefits, Occupational health and safety process.
- Majority of respondents do not agree/strongly agree that use of HRIS has improved Selection process, Orientation, Training and Development process, and Career planning and development process.

These observations are in sync with which HR processes and functions can be standardized and easily carried out using technology and software, and which require judicious human interface. The findings should also be seen in context of the individual organizations requirements and availability of software that fulfills specific HR needs. Qualitative observations and respondent interaction also reveal subjectivity of responses. One cannot discount perceptual difference of opinion among respondents from the same company.

Use of HRIS has decreased –

Further, to carry out the research within a descriptive research framework the researcher also investigated the impact points of HRIS in terms of what use of HRIS has decreased. The findings are presented in the table and figure below –

Table 4.19 – Use of HRIS has Decreased -

Use of HRIS has decreased -	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree	Total
Time spent on communicating information with in organization.	19	21	120	230	230	620

Time spent on correcting errors	4	36	150	230	200	620
Costs on the HR functions	75	215	10	160	160	620
Time spent on recruitment	40	10	250	250	70	620
Time spent on training	2	38	250	240	90	620
Time spent on making staff decisions	15	35	260	230	80	620
Decreased the time spent on processing paperwork	9	31	40	310	230	620
Data input expense	2	38	150	360	70	620
Cost per hire	15	25	210	190	180	620
Recruiting expenses	21	19	210	280	90	620
Training expenses	0	40	240	240	100	620
Overall HR staff salary expense	24	16	160	330	90	620

Paperwork	3	37	40	200	340	620

Figure 4.20 – Use of HRIS has Decreased

A study of HRIS processes and performance to identify effectiveness of it in large scale organizations in Western India. Page 119
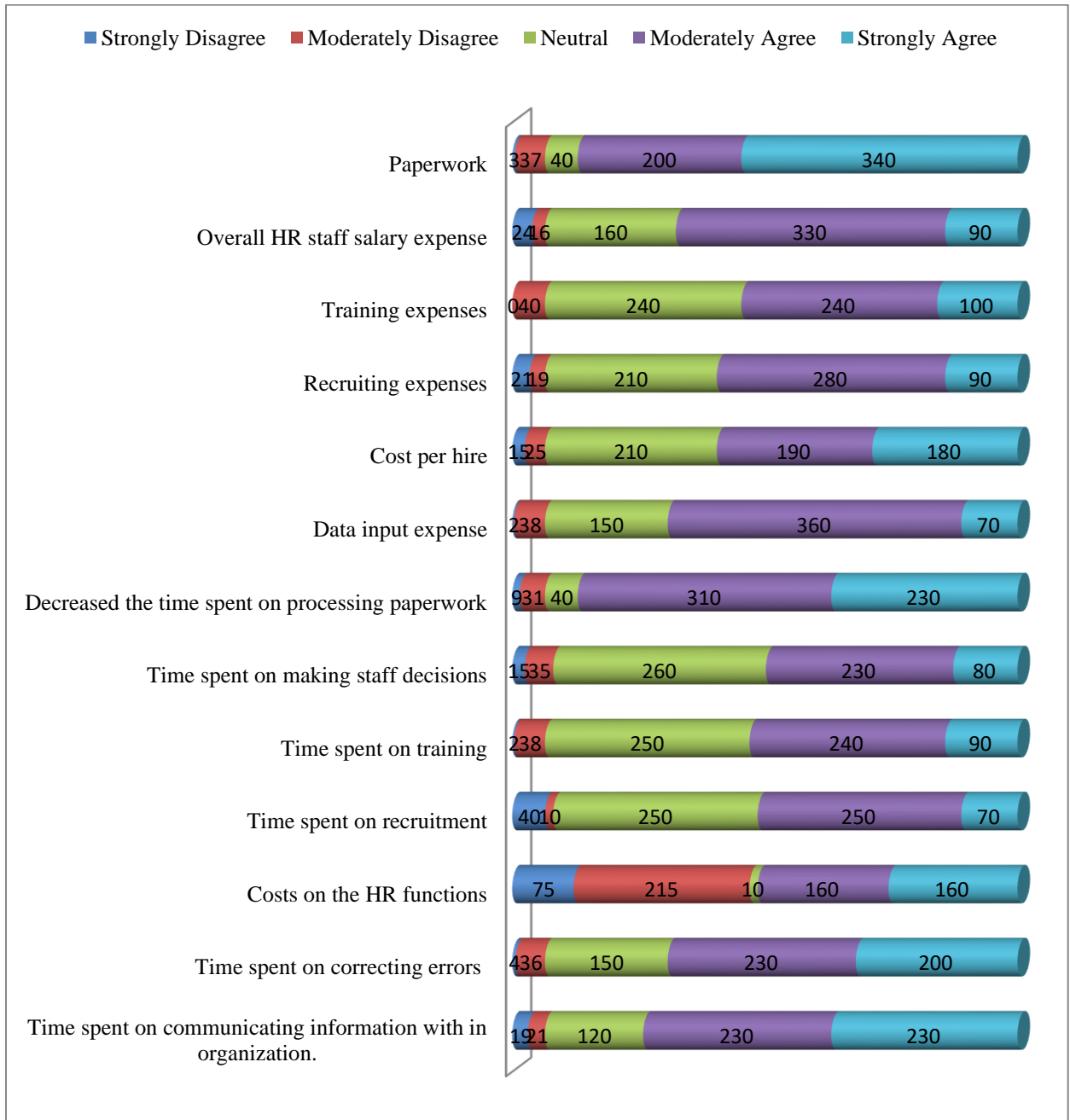
A detailed analysis of the findings from the researcher investigation reveals that majority of respondents agree/strongly agree that use of HRIS has led to a decrease in -

- Time spent on communicating information with in organization.
- Time spent on correcting errors
- Costs on the HR functions
- Time spent on recruitment
- Time spent on training
- Time spent on making staff decisions
- Decreased the time spent on processing paperwork
- Data input expense
- Cost per hire
- Recruiting expenses
- Training expenses
- Overall HR staff salary expense
- Paperwork

These observations are indicative of overall efficiency and cost effectiveness of HRIS. While most of the above variables are measurable in quantitative terms, which are not, the researcher goes by the respondent experience and value judgment.

Use of HRIS has increased

To further assess the impact points the researcher investigated what the use of HRIS has increased in the organization of the sample respondents. The findings are presented in the following table and figure –
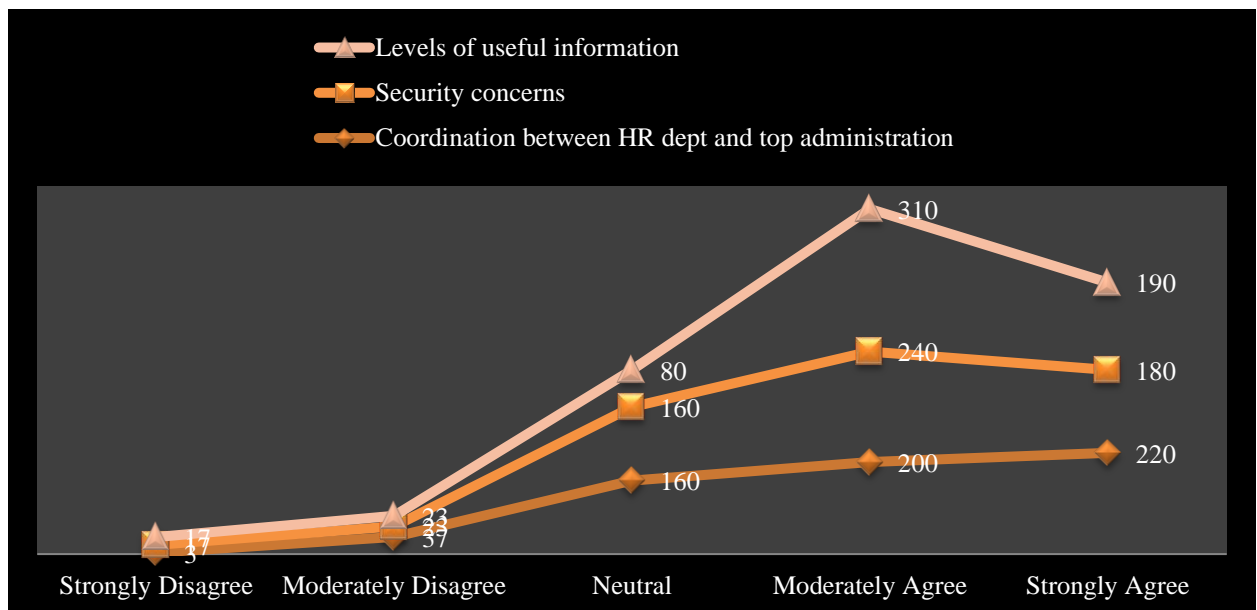
Table 4.20 – Use of HRIS has increased -

Use of HRIS has increased -	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree	Total

Coordination between HR department and top administration	3	37	160	200	220	620
Security concerns	17	23	160	240	180	620
Levels of useful information	17	23	80	310	190	620

Figure 4.21 – Use of HRIS has Increased

In this context the researcher draws out observations both from a positive and a negative perspective. This stated in following points -

- From the positive perspective majority of respondents strongly agree/agree that use of HRIS has increased Coordination between HR department and top administration and Levels of useful information

- From the negative perspective majority of respondents strongly agree/agree that use of HRIS has increased Security concern

Use of HRIS has enabled

Another set of primary tool queries aspired to analyze what HRIS has enabled. The findings of the research are presented in the following table and figure –

Table 4.21 – Use of HRIS has enabled

Use of HRIS has enabled -	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree	Total
Forecasting staff needs	11	29	130	300	150	620
Effective HR decision making	17	23	60	350	170	620
Effective promotion decisions	7	33	290	130	160	620
Organizations to decide when to hire	11	45	417	93	54	620
Organization to make better decisions in choose better people	10	30	160	220	200	620
Organizations to decide when training and skill development are necessary	16	24	100	310	170	620
Accurate identification of unfilled positions	17	23	240	240	100	620
Analyze employees in each position	23	17	290	170	120	620

Maintain skill inventory	3	57	56	378	126	620
Recruitment through HRIS e-recruiting	40	100	330	60	90	620

Figure 4.22 – Use of HRIS has Enabled -

Legend: ■ Strongly Disagree ■ Moderately Disagree ■ Neutral ■ Moderately Agree ■ Strongly Agree

Category	Values
Recruitment through HRIS e-recruiting	40, 100, 330, 60, 90
Maintain skill inventory	3, 57, 56, 378, 126
Analyse employees in each position	23, 17, 290, 170, 120
Accurate identification of unfilled positions	1, 23, 240, 240, 100
Organizations to decide when training and skill development are necessary	16, 24, 100, 310, 170
Organization to make better decisions in choose better people	1, 30, 160, 220, 200
Organizations to decide when to hire	1, 145, 417, 93, 54
Effective promotion decisions	7, 33, 290, 130, 160
Effective HR decision making	1, 23, 60, 350, 170
Forecasting staff needs	1, 29, 130, 300, 150

According to the findings HRIS has enabled many deliverables, while falling short on some of them. These are described in following points –

- Majority of the respondents agree/strongly agree that HRIS has enabled in their organizations forecasting staff need, effective HR decision-making, better decisions to choose better people, to decide when training and skill development are necessary, accurate identification of unfilled positions, and maintain skill inventory.
- Majority of the respondents do not agree/strongly agree that HRIS has enabled effective promotion decisions, to decide when to hire, analyze employee in each position, and recruitment through e-recruiting.

The researcher would like to reiterate that these observations are in sync with which HR processes and functions can be standardized and easily carried out using technology and software, and which require judicious human interface. The findings should also be seen in context of the individual organizations requirements and availability of software that fulfills specific HR needs. Qualitative observations and respondent interaction also reveal subjectivity of responses. One cannot discount perceptual difference of opinion among respondents from the same company.

HRIS users know, handle and help

The research objectives required the investigation of the contribution of HRIS users in smooth implementation, use and development of HRIS in their organizations. The findings are presented in the following table and figure .

Table 4.22 - HRIS users know, handle and help

	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree	Total
HRIS users know technical details of HRIS	56	106	160	100	198	620

system.						
HRIS users know hardware required to implement HRIS system.	106	289	156	69	0	620
HRIS users know software's required to implement HRIS system.	17	107	106	240	150	620
HRIS user handles technical issues during HRIS use.	91	289	161	79	0	620
HRIS users help in up gradation of HRIS system.	0	40	70	280	230	620

Figure 4.23 - HRIS users know, handle and help

Legend: ■ Strongly Disagree ■ Moderately Disagree ■ Neutral ■ Moderately Agree ■ Strongly Agree

Statement	Strongly Disagree	Moderately Disagree	Neutral	Moderately Agree	Strongly Agree
HRIS users helps in upgradation of HRIS system.	0	40	70	280	230
HRIS user handles technical issues during HRIS use.	91	289	161	79	0
HRIS users know software's required to implement HRIS system.	17	107	106	240	150
HRIS users know hardware required to implement HRIS system.	106	289	156	69	0
HRIS users know technical details of HRIS system.	56	106	160	100	198

The findings can be summarized in following points –

- Majority of the respondents do not agree/strongly agree that HRIS users know technical details of HRIS system.
- Majority of the respondents do not agree/strongly agree that HRIS users know hardware required to implement HRIS system.
- Majority of the respondents agree/strongly agree that HRIS users know software's required to implement HRIS system.

- Majority of the respondents do not agree/strongly agree that HRIS user handles technical issues during HRIS use.

- Majority of the respondents agree/strongly agree that HRIS users help in upgradation of HRIS system.

4.4 CHAPTER CONCLUSION

In this chapter, the researcher has presented research output from the analysis of the questionnaire responses using descriptive statistical tools. The researcher has presented the employees and managers perspectives on the research variables. Presentation of both the viewpoints makes a comprehensive coverage of the analysis of research variables. At this stage in this compendium, descriptive statistics have been used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they have formed the basis of virtually every quantitative analysis of data.

Descriptive statistics are typically distinguished from inferential statistics. With descriptive statistics the researcher has simply described what is or what the data shows. Descriptive Statistics are used to present quantitative descriptions in a manageable form. In a research study we may have lots of measures. Or we may measure a large number of people on any measure. Descriptive statistics help us to simplify large amounts of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary. In the next chapter the researcher presents the data analysis from hypothesis testing using inferential statistical tools.