

**A STUDY ON CHALLENGES FACED IN INVENTORY
MANAGEMENT AT ORCHID PHARMA PRIVATE LTD**

Submitted in partial fulfillment of the requirements

for the award of

MASTER OF BUSINESS ADMINISTRATION

by

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SCHOOL OF MANAGEMENT STUDIES

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade “A++” by NAAC | 12B Status by UGC

Approved by AICTE

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119

NOVEMBER 2023



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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **NANDITHA.N (42410112)** who carried out the project entitled “**A STUDY ON CHALLENGES FACED IN INVENTORY MANAGEMENT AT ORCHID PHARMA PRIVATE LTD**” under my supervision from SEPTEMBER 2023 to NOVEMBER 2023.

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I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

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NANDITHA.N



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ABSTRACT

This study examined the challenges faced in inventory management at **ORCHID PHARMA PRIVATE LTD** as the case study. The study was guided by the following research objectives. To study the challenges faced in inventory management at orchid pharma private ltd. To Examine the problems faced in pharma industry. To identify the various factors influencing the inventory management. To analyze the relationship between manufacturers and their suppliers. To suggest some measures to improve the inventory management and enhance overall performance. Using a sample of 105 respondents, a case study design, involving the use of both qualitative and quantitative methods of data collection was employed to assess the challenges faced in inventory management of an organization. The findings revealed that there is a positive relationship between manufacturer and supplier. The study's findings shed light on the pivotal significance of addressing these inventory management challenges and their potential to fortify the company's operational efficiency and profitability. The study concludes by underscoring the critical role of inventory management within Orchid Pharma and highlights the imperative need for proactive measures to surmount these challenges effectively. It suggests a proactive approach to optimize inventory management, thereby contributing to the company's financial stability and operational excellence.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION:

In today's globalized and highly competitive business environment, effective inventory management is important to any organization's success and sustainability, particularly in the pharmaceutical sector. Orchid Pharma Private Limited, a well-known pharmaceutical company, is no exception. Inventory management is critical for guaranteeing timely and cost-effective manufacturing, a seamless supply chain, and satisfying customer needs while eliminating waste and lowering operational expenses. This study focuses on shedding light on the inventory management difficulties faced by Orchid Pharma Private Limited and gives insights into potential solutions to improve its inventory management processes. By finding these issues, the firm will be able to improve its operational efficiency, competitiveness, and capacity to offer high-quality pharmaceutical goods. This research study investigates the complexities of inventory management in the pharmaceutical industry and aims to give practical insights for Orchid Pharma Private Limited and other companies aiming for excellence in their inventory management processes.

1.2. COMPANY PROFILE



In 1992, Orchid obtained a certificate for commencement of business and became a public company the following year. It began producing commercially in 1995 and received the Good manufacturing practice certification.

In 1999, it became the largest producer of oral and sterile cephalosporin and was ranked among the top five producers of cephalosporin APIs. That same year, the formulation division began operations. The early 2000s, the company established offices in the United States and Russia, then signed an agreement to produce oral cephalosporin for the U.S. market in the mid-2000s.

The company had a joint venture with Bexel allowing it to complete its phase 1(a), (b) and phase 2(a) clinical trials for the anti-diabetic molecule BLX-1002 and get patent clearance in the U.S. After obtaining the patent, the company made an agreement with pharmaceutical companies in Canada to help produce oral drugs and veterinarian injectable before expanding its market into Europe.

In 2008 and 2009, the company received approval to enter the Canadian and Australian markets and established a wholly owned subsidiary in Japan.

It also has one API manufacturing site in China. Orchid has a workforce of over 4,000 employees, with 700 working at Aurangabad plant in Maharashtra.

1.3. PRODUCT PROFILE

Orchid's main products are active pharmaceutical ingredients, including cephalosporins (oral and injectable), carbapenems and penicillin. The other main production is domestic formulations for cardio, anti-diabetic, neuropsychiatry, and critical care applications.

It has three research campuses, three formulations manufacturing sites, and two API manufacturing sites in India.

Active Pharmaceutical Ingredients (APIs) cephalosporin, also known as bulk drugs or drug substances, are the primary components in pharmaceutical drugs that produce the intended therapeutic effect.

APIs can be derived from various sources, including plants, animals, minerals, and chemical synthesis. Most modern pharmaceuticals are synthesized through chemical processes to ensure purity and consistency.



Products:

- ❖ API's (Active Pharmaceutical Ingredients)
- ❖ Oral Active Pharmaceutical Ingredients
- ❖ Sterile Active Pharmaceutical Ingredients
- ❖ Oral Formulations (Tablets & Capsules)
- ❖ Par enteral Formulation (Sterile Injections)



1.4. STATEMENT OF THE PROBLEM

Inventory management is an essential duty for companies operating in highly regulated and competitive industries like the pharmaceutical industry. Orchid Pharma Private Limited, a major participant in the pharmaceutical business, is dealing with a slew of inventory management issues. These difficulties affect not just the company's operating efficiency, but also its competitiveness, financial performance, and capacity to satisfy the industry's high standards. Understanding the precise nature and effect of these difficulties is critical not only for Orchid Pharma Private Limited but also for the entire pharmaceutical sector. By addressing these concerns, the firm may improve its inventory management processes, save operating costs, strengthen its supply chain resilience, and ultimately assure the timely delivery of high-quality pharmaceutical goods to the market. Furthermore, the study's findings may provide useful insights for other pharmaceutical businesses looking to improve their inventory management processes in the face of comparable issues. It seeks to look deeply into the inventory management challenges faced by Orchid Pharma Private Limited and provide actionable recommendations to improve its inventory management practices, ultimately contributing to a broader understanding of efficient inventory management in the pharmaceutical industry.

1.5 NEED FOR STUDY

- Analyze and identify specific challenges faced by Orchid Pharma Pvt Ltd in managing their inventory.
- Assess the impact of inventory management on customer satisfaction, considering factors such as product availability, timely delivery, and product quality.
- Thus, it is very important to know how the orchid pharma utilizes its inventory to fulfill its objectives.

1.6. OBJECTIVES OF THE STUDY:

This project is designed to identify the challenges faced by inventory management in at orchid pharma private ltd.

1.6.1 Primary objective:

- To study the challenges faced in inventory management at orchid pharma private ltd.

1.6.2 Secondary objectives:

- To Examine the problems faced in pharma industry.
- To identify the various factors influencing the inventory management.
- To analyze the relationship between manufacturers and their suppliers.
- To suggest some measures to improve the inventory management and enhance overall performance.

1.7. SCOPE & SIGNIFICANCE OF THE STUDY

- This study focuses on examining the challenges faced by inventory management in an organization.
- This study is conducted to Identifying the inventory management difficulties at Orchid Pharma Private Limited is essential for improving operational efficiency.
- Through good inventory management, the company will be in a better position to compete in the global pharmaceutical market.
- This research study is conducted at orchid pharma private ltd at Chennai.

1.8 LIMITATIONS

- The findings and conclusions drawn are from samples taken from the employees.
- Sample size of the study is only 105.
- Findings may not be universally applicable to other pharmaceutical organizations due to differences in size, structure.

CHAPTER 2

REVIEW OF LITERATURE

- Hsu, C.-H., & Li, S. (2023). Inventory management with two demand classes and carbon emissions. *Omega*, 102, 102450. This study proposes a model for inventory management that considers both demand classes and carbon emissions, and provides a solution to the resulting optimization problem.
- Gupta, A. (Year: 2022) "Sustainable Inventory Practices in Pharma: Challenges and Opportunities." Explores the challenges and opportunities in implementing environmentally sustainable inventory practices in the pharmaceutical sector.
- Nag, M. (Year: 2022) "Inventory Management in Biopharmaceuticals: Unique Challenges in Drug Development." Highlights the challenges specific to biopharmaceuticals, including long development timelines and batch-to-batch variability, and their impact on inventory control.
- Patel, M. (Year: 2022) "Inventory Management in the Era of Telemedicine and E-Pharmacies: Challenges and Adaptations." Discusses the impact of telemedicine and e-pharmacies on pharmaceutical inventory management and how the industry is adapting.
- Wong, M. (Year: 2021) "Demand Forecasting Challenges in Pharmaceutical Inventory Management." Discusses the difficulties in accurately forecasting demand for pharmaceutical products and their implications for inventory management.
- Lee, S. (Year: 2021) "The Role of Big Data Analytics in Pharmaceutical Inventory Management: Challenges and Benefits." Explores the challenges and potential benefits of using big data analytics for optimizing pharmaceutical inventory control.

- Achanga et al. (2021): In their study, they examined the relationships between inventory management practices and firm performance in the UK manufacturing sector. This study may provide insights applicable to chemical manufacturing.
- Worley et al. (2021): This study explores the impact of inventory management practices on supply chain performance in the chemical industry. It delves into specific practices and their effects.
- H., Zhang, Y., & Liu, Y. (2022). Inventory management with lost sales and product substitution: A review. *European Journal of Operational Research*, 282(1), 1-18. This review article provides an overview of the literature on inventory management with lost sales and product substitution, and summarizes the main approaches and results.
- Budiharjo & Hadikurniawati (2020) used historical data to process data to be processed further. Both studies have similarities with the previous reference, which using the forecasting method in their research. This research aims to forecast future order demand which can be used to manage the inventory. This method is also believed to be an indicator to measure success in selling and offering the products that the companies researched.
- Candra (2019) conducted research about inventory problems resulting in overstocks on some goods and shortage of stock in other goods. They used the method which is done by doing forecasts calculations. The purpose of their research is to find available inventory space and to determine the maximum usable inventory.
- Another research from Nisa (2019) studied hospitals that had problems with expired drugs. Data processing requires several data such as demands, order cost, and storage cost in this study. She uses analyses of the ABC, EOQ, and ROP methods for data processing. This research aims to identify and analyze drug grouping based on the

ABC method, the optimum amount of drug ordering using the EOQ method, and the time of reordering medicine using the ROP method.

- Edwin Sitienei and Florence Memba (2015) Conducted a study on Effect of Inventory Management on profitability of Cement Manufacturing Companies in Kenya. The study concluded that Gross profit margin is negatively correlated with the inventory conversion period, Increase in sales, which denotes the firm size enriches the firm's inventory levels, which pushes profits upwards due to optimal inventory levels. It is also noted that firms inventory systems must maintain an appropriate inventory levels to enhance profitability and reduce the inventory costs associated with holding excessive stock in warehouses.
- Hari R. Swami (2015) in his research work materials management in public undertakings evaluates the performance of materials management in the central public undertakings in Rajasthan Viz., Instrumentation Limited, Kota Unit, HMT, Ajmer Unit, Hindustan Zinc Limited, Debari Unit, Hindustan Copper Limited, Khetri Unit and Sambhar salts limited. The study covers various aspects of materials management in these enterprises.
- Suresh Krishna (2015) advocates the need for professionalism in materials management to achieve the organizational goals.
- Ben-Daya Mand Duffuaa.S.O (2015):The relationship & interaction between maintenance production and Quality have been discussed one approach for linking and modeling the relationship between maintenance & Quality so that they can be jointly optimized. It is being on the idea that maintenance affects the failure pattern of the equipment and that should be modeled using the concept imperfect maintenance.
- Prem Virat (2015) highlights the importance of increasing materials productivity in Indian industries.

- Srinivas Rao Kasisomayajula (2014) An analytical study was conducted on "Inventory Management in Commercial Vehicle Industry In India". A sample of five companies was selected for study. The study concluded that all the units in the commercial vehicle industry have significant relationship between Inventory and Sales.
- According to Prasad (2014) the important areas in material function which have a direct and importance bearing on the productivity are purchasing, transportation, materials landing and disposal of obsolete surplus and waste products.
- Lal (2014) emphasises the need for proper planning and good inventory management systems in achieving organizational goals.
- Gunasekaran A Marri H.B, Yusuf.Y(2014): Conceptual model has been developed to provide frame work for the decision concerning the implementation of ABC system, ABC system trace more exactly of the real costs of the products than any other volume based cost systems. Therefore, more accurate overhead cost allocations lead to fewest distortions. However, a trade-off should occur between the economic benefits of an ABC and the costs of implementing it. The management should adopt an activity based management system and achieving their primary target, which is making profit.
- Panigrahi (2013) Undertook an in-depth study of inventory management practices followed by Indian cement companies and its effect on working capital efficiency. The study also investigated the relationship between profitability and inventory conversion days. The study, using a sample of the top five cement companies of India over a period of 10 years from 2001 to 2010, concluded that a considerable inverse linear relationship existed between inventory conversion period and profitability.
- Lwili et al (2013) A survey conducted on all the eight (8) sugar manufacturing firms in Kenya established that there is generally positive correlation between each of inventory management

practices. Specific performance indicators were proved to depend on the level of inventory management practices. They established that Return on Equity had a strong correlation with lean inventory system and strategic supplier partnerships. As such, they concluded that the performance of sugar firms could therefore be stated as being a function of their inventory management practices.

- Sahari, Tinggi and Kadri (2012) Empirically analysed the relationship between inventory management and firm performance along with capital intensity. For the purpose they took a sample of 82 construction firms in Malaysia for the period 2006–2010. Using the regression and correlation analysis methods, they deduced that inventory management is positively correlated with firm performance. In addition, the results indicate that there is a positive link between inventory management and capital intensity.
- Nyabwanga and Ojera (2012) They Highlighted the association between inventory management practices and business performance of smallscale enterprises (SSEs), in Kisii Municipality, Kisii County, Kenya. They used a cross- sectional survey study based on a small sample size of 79 SSEs.
- The study inferred that inventory comprised the maximum portion of working capital, and improper management of working capital was one of the major reasons of SSE failures. The empirical results disclosed that a positive significant relationship existed between business performance and inventory management practices with inventory budgeting having the maximum influence on business performance ensued by shelf-space management. The study suggested that by following effective inventory management practices business performance can be enhanced.
- Soni (2012) Made an in depth study of practices followed in regard to inventory management in the engineering goods industry in Punjab. The analysis used a sample of 11 companies for a period five years, that is, 2004–2009 and was done using panel data set.

The adequate and timely flow of inventory determines the success of an industry. She concluded that size of inventory enhanced marginally over the period as compared to a hike in current assets and net working capital. Inventories constituted half of the working capital which was due to overstocking of inventory as a result of low inventory turnover especially for finished goods and raw materials. Rise in sales and favourable market conditions lead to a rise in inventory levels. It was also inferred that sales increased more as compared to inventory.

- Peter Hines and Nick Rich (2012): This paper has outlined a new typology & decision making, process for the mapping of the value stream or supply chain. This general chose the most appropriate methods for the particular industry, people and type of problem that exist.
- Alperto De Toni, Guido Nassim Beni, Btefano Tonclia (2012): It is a method for evaluating performance and for productive resource management. The soundness of the results depends on the reliability production in contexts where competitive drive from cost, time & Quality performance, performances that are heterogenic and not easily estimated.

CHAPTER 3

RESEARCH METHODOLOGY

METHODOLOGY:

Research methodology is mainly needed for the purpose of framing the research process and the designs and tools that are to be used for the project purpose. Research methodology helps to find the impact of inventory management on profitability.

3.1. RESEARCH DESIGN:

Descriptive Research Design

- Descriptive research design is a hypothesis-based method that defines the primary subject matter of the research and tries to analyze it using different assumptions and techniques. This type of research design uses data collection techniques like natural observation, case studies and surveys to derive results. Descriptive data is used to collect basic information about variables in a dataset and to find relationship between variables.
- Qualitative data includes respondents' opinion and ideas. It is also applied in order to describe current conditions or to investigate relationships.

3.2. SOURCES OF DATA:

Data collection is the term used to describe a process of preparing and collecting data.

- ☐ Primary Data – Questionnaire given to 105 respondents
- ☐ Secondary Data - Websites and online journals, Published reports & Review of literature from published articles.

3.3. STRUCTURE OF QUESTIONNAIRE:

Questionnaire was divided into two sections. First part was designed to know the general information about respondents and the second part contains some questions to know about the relationship between inventory management and profitability and some more questions are added to find the factors affecting profitability and complications faced in managing the inventory.

3.4. SAMPLE SIZE:

Number of the sampling size selected from population is called the size of the sample. Sample of 105 responses were obtained from the population.

3.5. SAMPLING TECHNIQUE:

Convenience sampling method

A convenience sample is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach. Convenience sampling is used because it is quick, inexpensive, and convenient. Convenience samples are useful for certain purposes, and they require very little planning.

3.6. PERIOD OF STUDY:

The Study was conducted for the period of three months from October to December.

3.7. TOOLS FOR ANALYSIS:

3.7.1 Percentage analysis

Research questions are always answered with a descriptive statistic: generally, either percentage or mean. Percentage is appropriate when it is important to know how many of the participants gave a particular answer. Generally, percentage is reported when the responses have discrete categories.

3.7.2 Chi- Square

A **chi-squared test** (symbolically represented as χ^2) is basically a data analysis on the basis of observations of a random set of variables. Usually, it is a comparison of two statistical data sets. This test was introduced by **Karl Pearson** in 1900 for categorical data analysis and distribution. So it was mentioned as **Pearson's chi-squared test**.

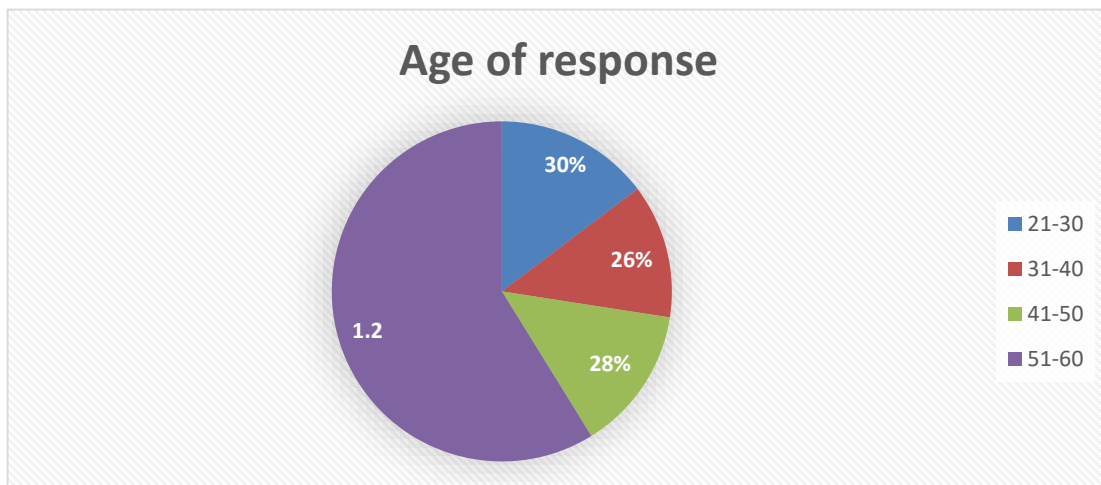
CHAPTER 4 DATA ANALYSIS AND INTERPRETATION

4.1. PERCENTAGE ANALYSIS

Table 4.1.1: Age of respondents

AGE	NO.OF.RESPONDENTS	PERCENTAGE
21-30	31	30
31-40	27	26
41-50	30	28
51-60	17	16
TOTAL	105	100

Chart 4.1.1: Chart represents Age of the respondents



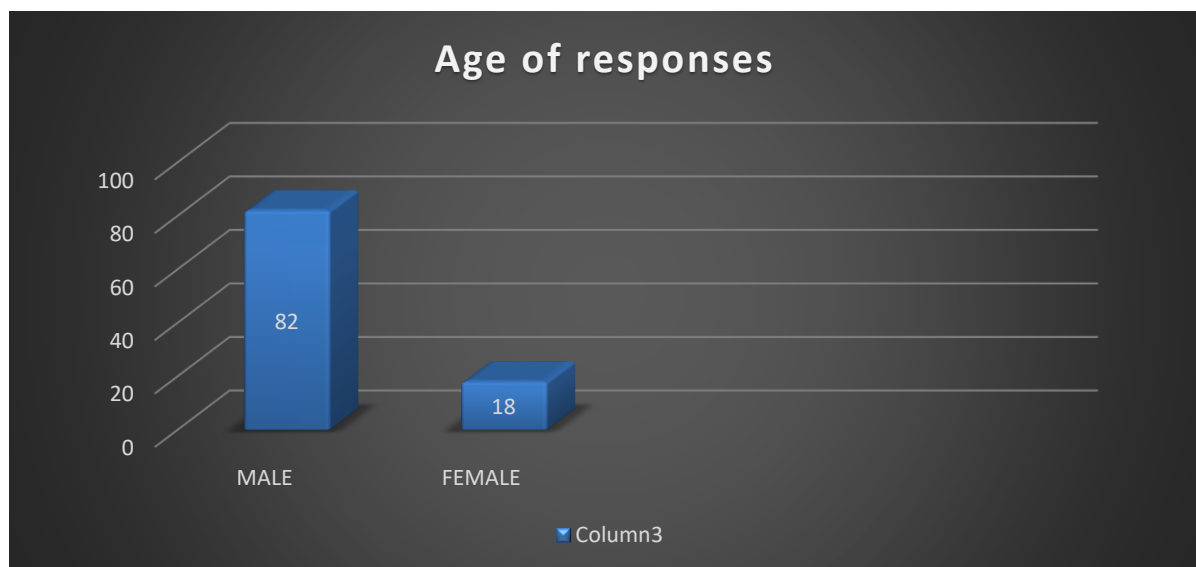
INTERPRETATION:

From the above table it is interpreted that the number of respondents between 21-30 age are 30%, between 31-40 age of respondents are 26 %, between 41-50 age of respondents are 28%, between 51-60 age of respondents are 16%.

Table 4.1.2: Gender of respondents

GENDER	NO.OF RESPONDENTS	PERCENTAGE
MALE	86	82
FEMALE	19	18
TOTAL	105	100

CHART 4.1.2. Chart represents gender of respondents



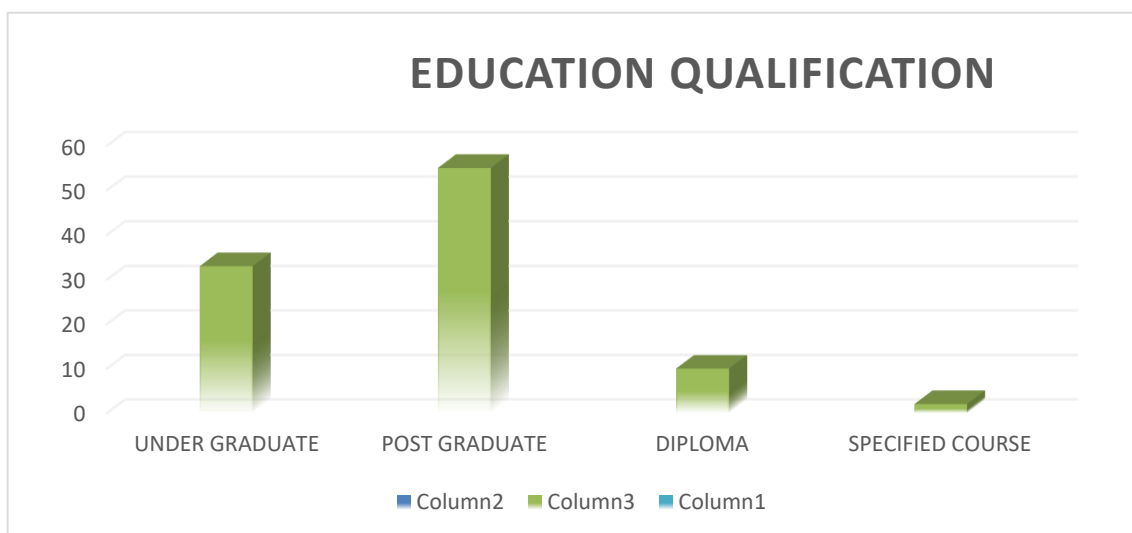
INTERPRETATION:

From the above table it is interpreted that the number of male respondents is 82% and female respondent is 18%.

Table 4.1.3: Education qualification

PARTICULARS	NO.OF.RESPONDENTS	PERCENTAGE
UNDER GRADUATE	35	33
POST GRADUATE	58	55
DIPLOMA	10	10
SPECIFIED COURSE	2	2
TOTAL	105	100

CHART 4.1.3. Chart represents education qualification



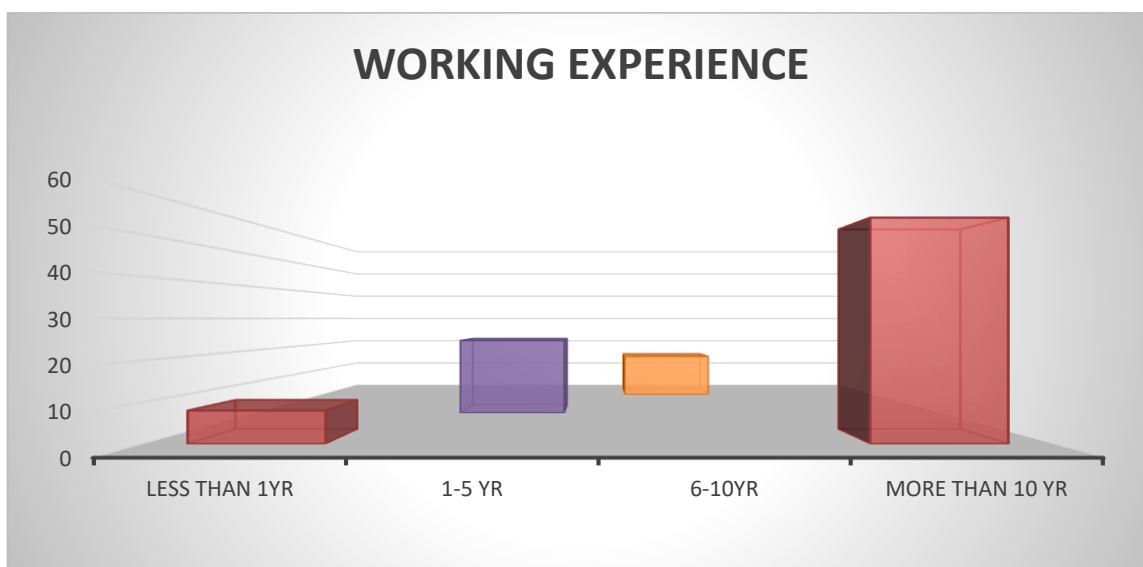
INTERPRETATION:

From the above table it is interpreted that 33% respondents are undergraduate, 55% are post graduate, 10% are diploma, 2% are completed specified course.

Table 4.1.4 years of working experience

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
LESS THAN 1YEAR	8	8
1-5 YEAR	24	23
6-10 YEAR	16	15
MORE THAN 10 YEAR	57	54
TOTAL	105	100

CHART 4.1.4 Chart represents working experience



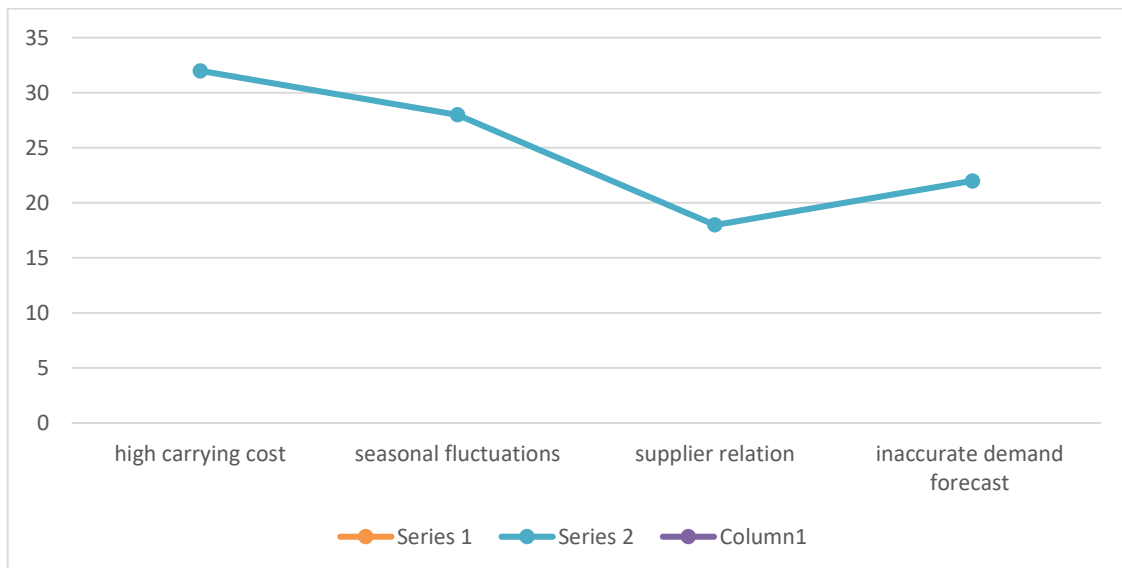
INTERPRETATION:

From the above table it is interpreted that 8% of employees were working for less than 1year,23% were working for 1-5 year,15% were working for 6-10 year,54% were working for more than 10 years.

Table 4.1.5 Facing challenges in managing inventory in your company.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
HIGH CARRYING COST	34	32
SEASONAL FLUCTUATIONS	28	28
SUPPLIER RELATED ISSUES	19	18
INACCURATE DEMAND FORECASTING	23	22
TOTAL	105	100

Chart 4.1.5 chart represents facing challenges in managing inventory.



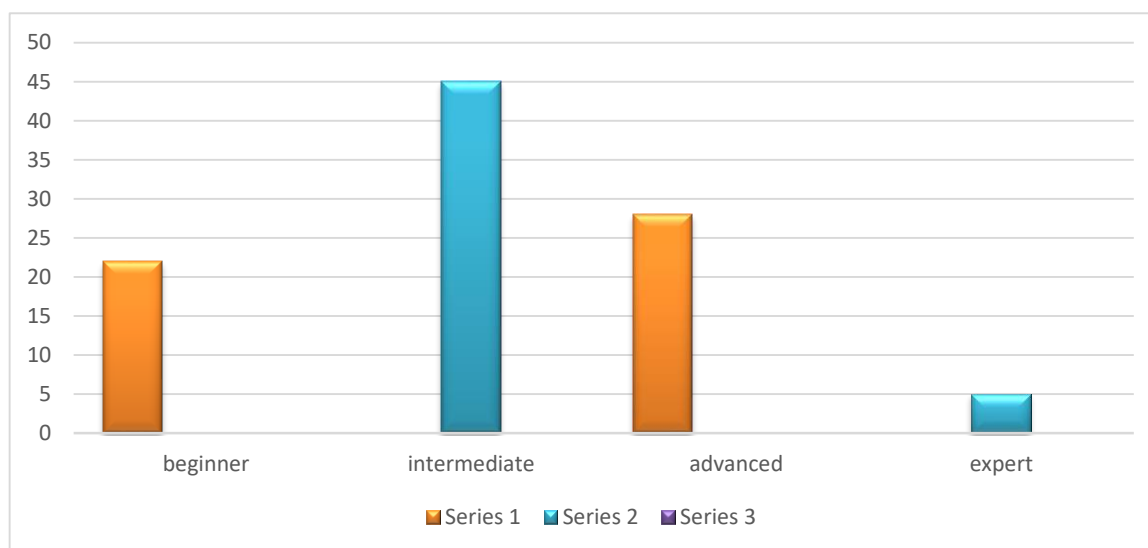
INTERPRETATION:

From the above table it is interpreted that 32% of employees facing challenges in high carrying cost, 28% of employees facing challenges in seasonal fluctuations, 18% of employees facing challenges in supplier related issues, 22% of employees facing challenges in inaccurate demand forecasting.

Table 4.1.6 Familiarity with inventory management concepts

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
BEGINNER	24	22
INTERMEDIATE	47	45
ADVANCED	29	28
EXPERT	5	5
TOTAL	105	100

Chart 4.1.6 Chart represents familiarity with inventory management concepts.



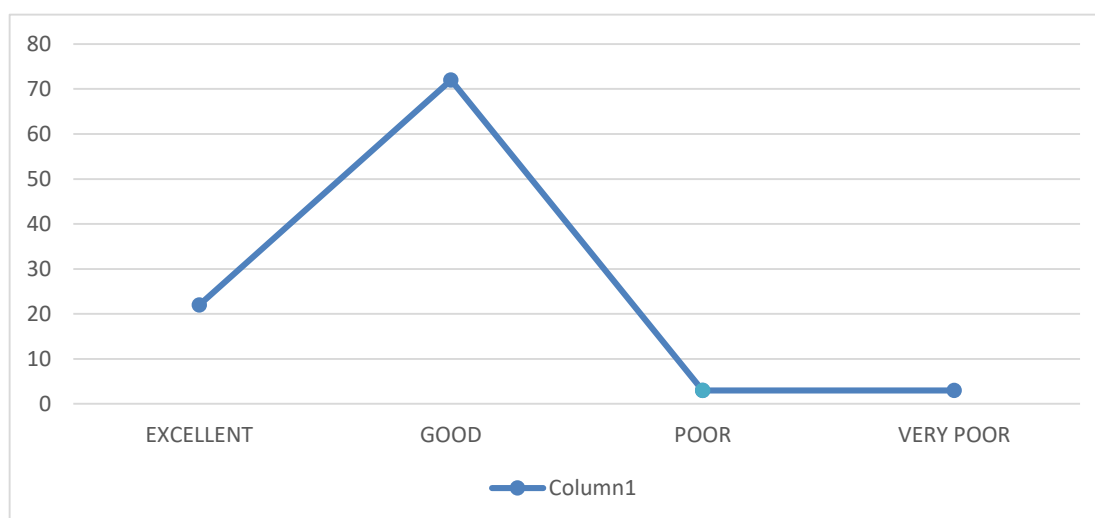
INTERPRETATION:

From the above table it is interpreted that 22% of employees were familiar with inventory management concepts, 45% of employees were intermediate, 28% were advanced, 5% were expert in inventory management concept.

Table 4.1.7. company's ability to resolve issues or disputes with suppliers in a timely manner.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
EXCELLENT	23	22
GOOD	76	72
POOR	3	3
VERY POOR	3	3
TOTAL	105	100

Chart 4.1.7 chart represents company's ability to resolve issues or disputes with suppliers in a timely manner.



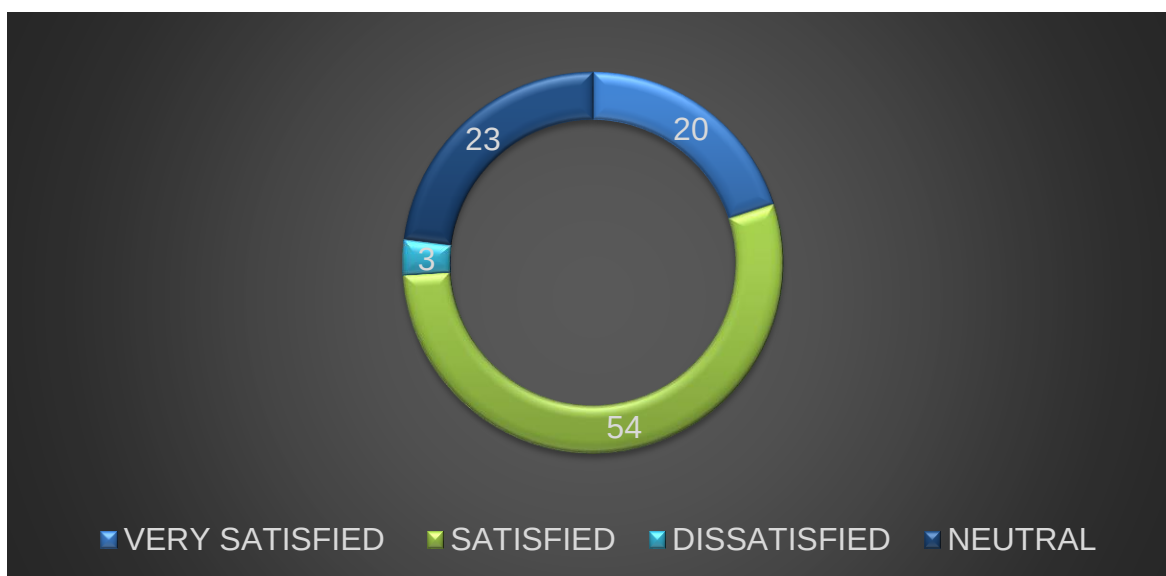
INTERPRETATION:

From the above table it is interpreted that 22% of respondents reported that excellent by resolving issues, 72% of respondents reported as good, 3% of respondents reported as poor, 3% of respondents reported as very poor

Table 4.1.8 current inventory management practices in your organization.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
VERY SATISFIED	21	20
SATISFIED	57	54
NEUTRAL	24	23
DISSATISFIED	3	3
TOTAL	105	100

Chart 4.1.8 current inventory management practices in your organization.



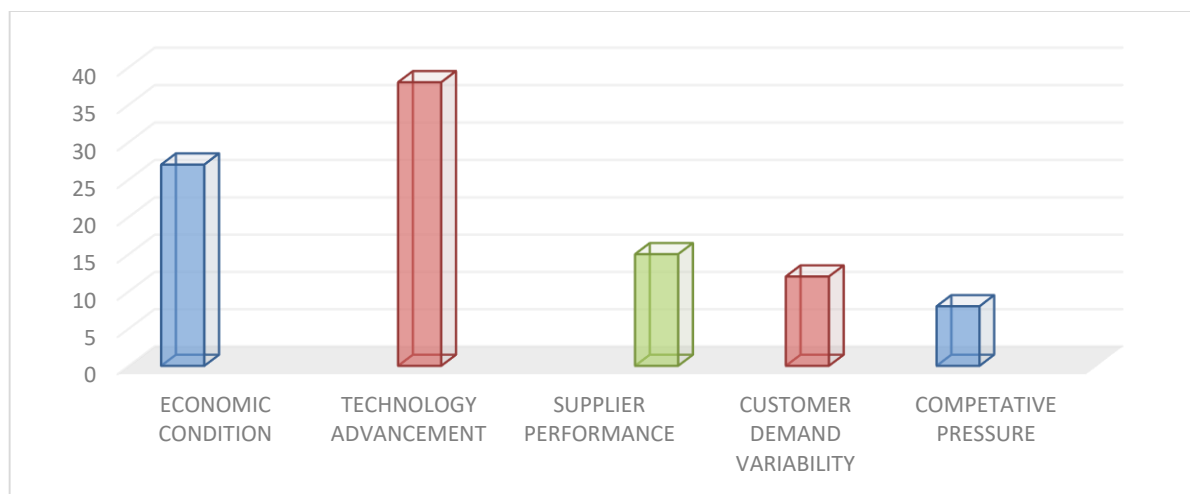
INTERPRETATION:

From the above table it is interpreted that 20% of employees were very satisfied in current inventory management practices, 54% of employees were satisfied, 23% of employees were neutral, 3% of employees were dissatisfied.

Table 4.1.9. the most significant influence on inventory management in your organization.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
ECONOMIC CONDITION	28	27
TECHNOLOGY ADVANCEMENT	40	38
SUPPLIER PERFORMANCE	16	15
CUSTOMER DEMAND VARIABILITY	13	12
COMPETATIVE PRESSURES	8	8
TOTAL	105	100

Chart 4.1.9 the most significant influence on inventory management in your organization.



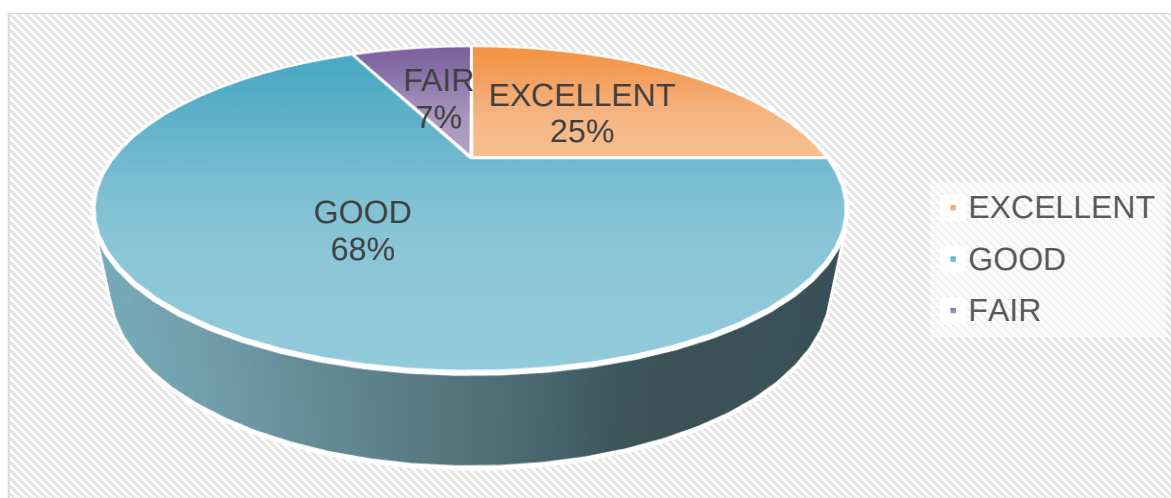
INTERPRETATION:

From the above table it is interpreted that 27% of employees reported that economic condition is the most significant influence on inventory management. 38% of employees reported that technology advanced, 15% of employees reported that supplier performance, 12% of employees reported that customer demand variability, 8% of employees reported that competitive pressures are the most significant influence on inventory management.

Table 4.1.10 the performance of your pharmaceutical suppliers in terms of on-time deliveries and quality.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
EXCELLENT	27	25
GOOD	71	68
FAIR	7	7
TOTAL	105	100

Chart 4.1.10 chart represents the performance of your pharmaceutical suppliers in terms of on-time deliveries and quality



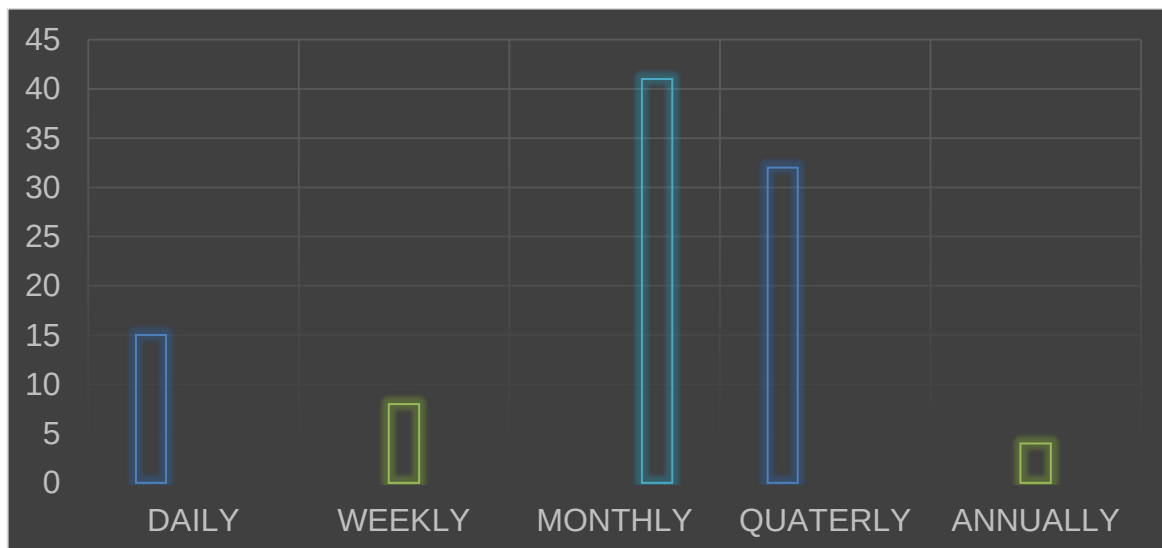
INTERPRETATION:

From the above table it is interpreted that 25% of employees reported that the performance of your pharmaceutical suppliers in terms of on-time deliveries and quality is excellent, 68% of employees reported as good, 7% of employees reported as fair .

Table 4.1.11 your organization conduct physical inventory counts.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
DAILY	16	15
WEEKLY	8	8
MONTHLY	43	41
QUATERLY	34	32
ANNUALLY	4	4
TOTAL	105	100

Chart 4.1.11 chart represents your organization conduct physical inventory counts



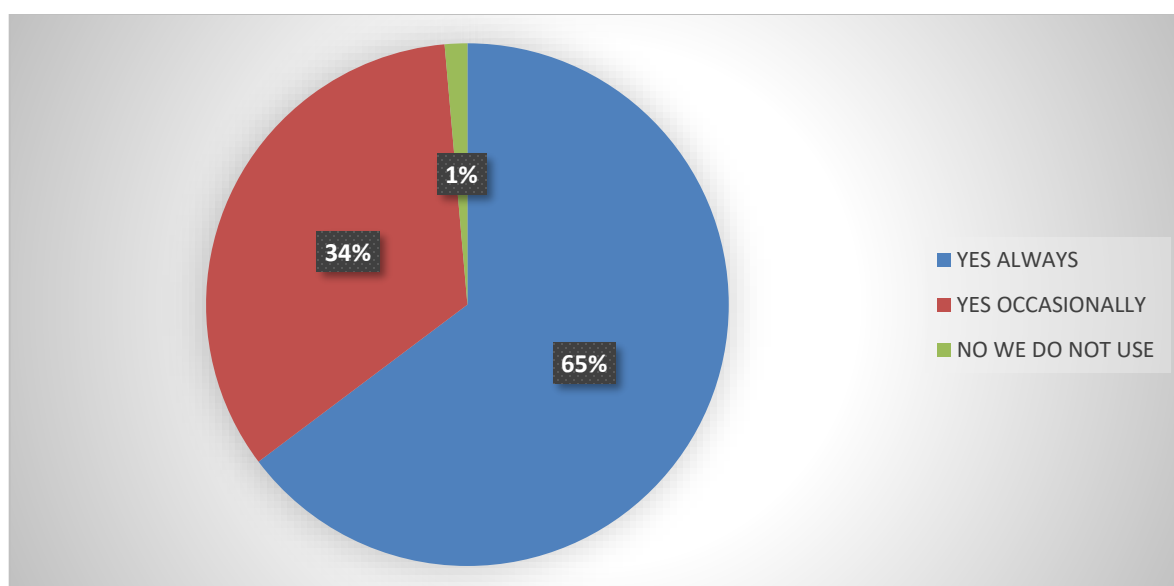
INTERPRETATION:

From the above table it is interpreted that 15% of employees reported that they conduct physical inventory counts daily, 8% of employees reported as weekly, 41% of employees reported as monthly, 32% of employees reported as quarterly, 4% of employees reported as annually.

Table 4.1.12 utilize safety stock in your inventory management

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES,ALWAYS	68	65
YES,OCCASSIONALLY	36	34
NO WE DO NOT USE SAFETY STOCK	1	1
TOTAL	105	100

Chart 4.1.12 utilize safety stock in your inventory management



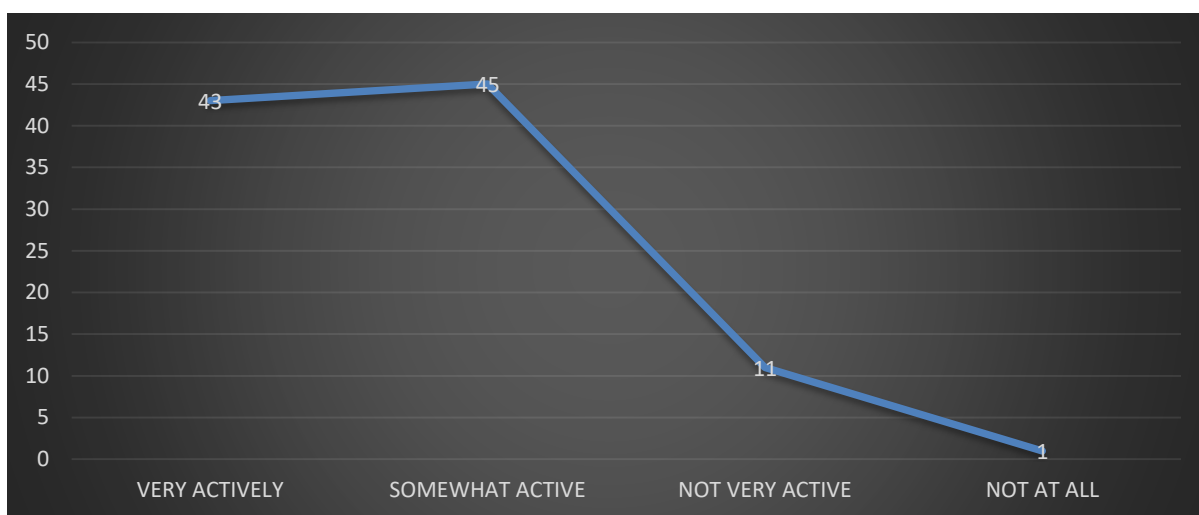
INTERPRETATION:

From the above table it is interpreted that 65% of employees reported that they always utilize the safety stock ,34% of employees reported that they utilize safety stock occasionally,1% of employee reported that do not use safety stock.

Table 4.1.13 pharmaceutical companies adopting technology and automation in inventory management.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
VERY ACTIVELY	45	43
SOMEWHAT ACTIVELY	47	45
NOT VERY ACTIVELY	12	11
NOT AT ALL	1	1
TOTAL	105	100

Chart 4.1.13 chart represents pharmaceutical companies adopting technology and automation in inventory management.



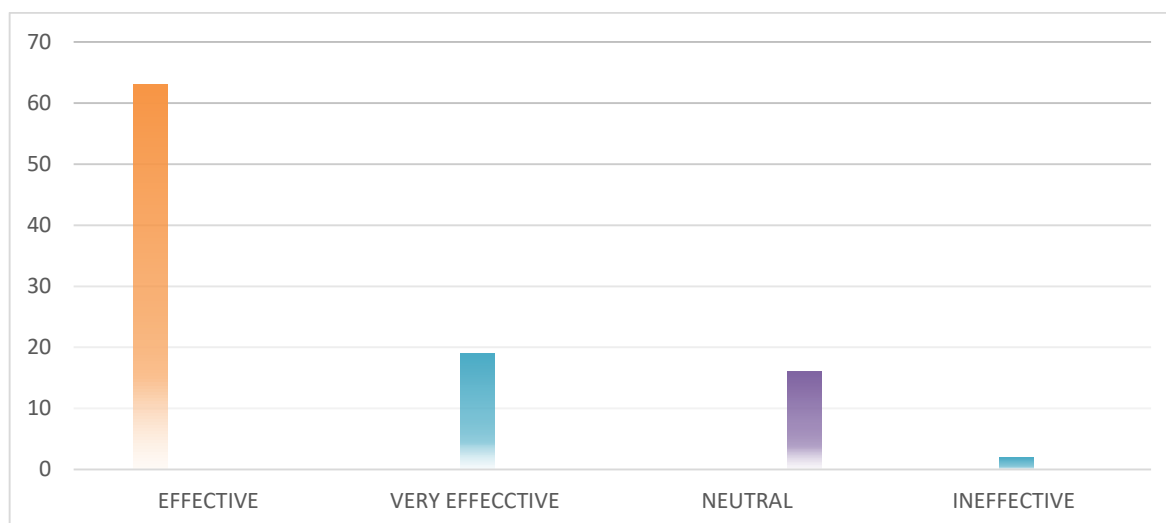
INTERPRETATION:

From the above table it is interpreted that 43% of employees were companies adopting technology and automation very actively, 45% of employees reported that somewhat actively, 11% of employees reported not very actively, 1% of employee reported that not at all adopting technology.

Table 4.1.14 The effectiveness of your inventory management software and warehouse management.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
VERY EFFECTIVE	20	19
EFFECTIVE	66	63
NEUTRAL	17	16
INEFFECTIVE	2	2
TOTAL	105	100

Chart 4.1.14 the effectiveness of your inventory management software and warehouse management



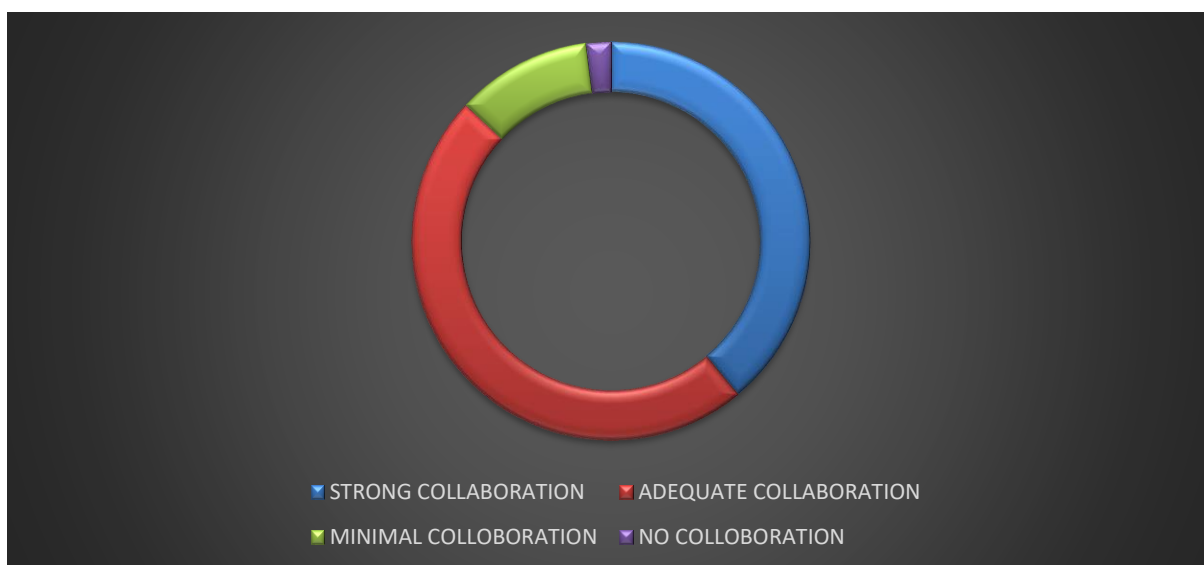
INTERPRETATION:

From the above table it is interpreted that 19% of employees reported that very effective in their inventory management software and warehouse management. 63% employees reported as effective, 16% of employees were reported as neutral, 2% of employees reported as ineffective.

Table4.1.15 assess your relationships with suppliers in terms of inventory management.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
STRONG COLLABORATION	41	39
ADEQUATE COLLABORATION	50	48
MINIMAL COLLABORATION	12	11
NO COLLABORATION	2	2
TOTAL	105	100

Chart4.1.15 assess your relationships with suppliers in terms of inventory management.



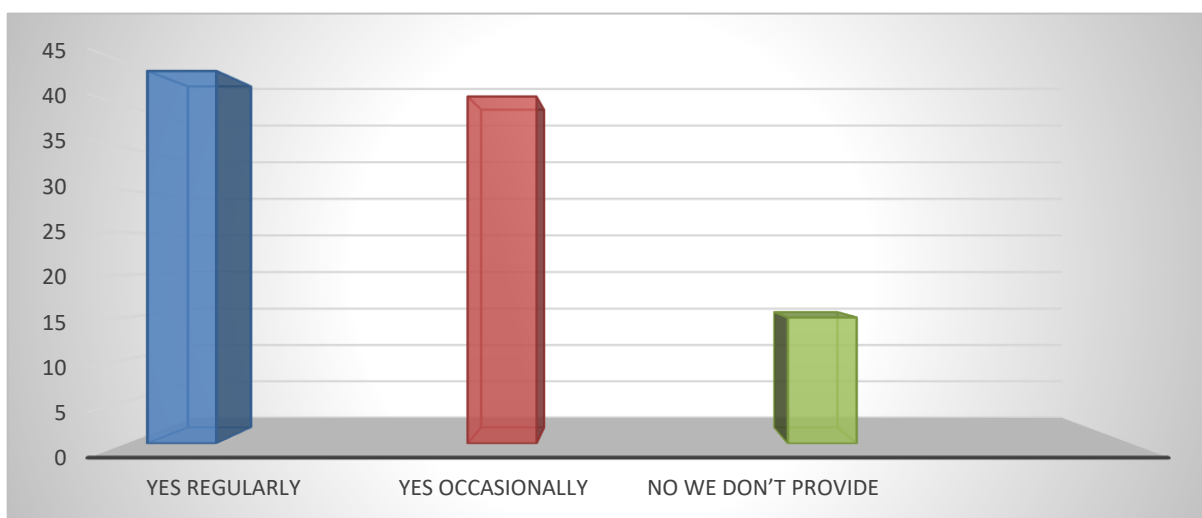
INTERPRETATION:

From the above table it is interpreted as 39% of employees reported as there is a strong collaboration between suppliers, 48% of employees reported as adequate collaboration, 11% of employees reported as minimal collaboration, 2% of employees reported as no collaboration between suppliers.

Table 4.1.16 provide training or educational programs for employees in your organization for inventory management.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES,REGULARLY	46	44
YES,OCCASIONALLY	43	41
NO WE DO NOT PROVIDE TRAINING	16	15
TOTAL	105	100

Chart 4.1.16 provide training or educational programs for employees in your organization for inventory management.



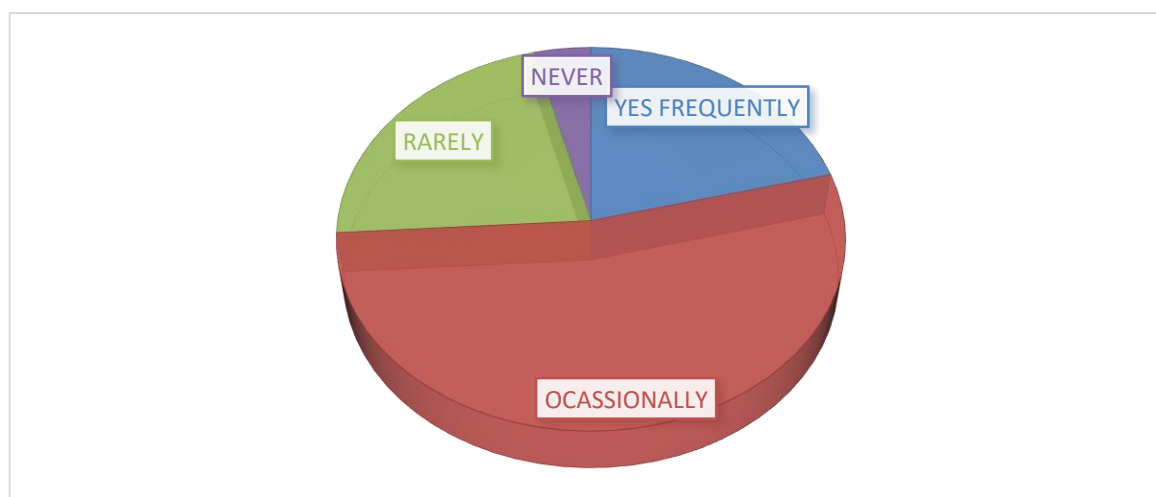
INTERPRETATION:

From the above table it is interpreted that 44% of employees reported that they regularly provide training or educational programs for employees ,41% of employees reported as occasionally,15% employee reported as they do not provide training or program.

Table 4.1.17 experience your supply chain disruptions that affected your inventory management.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
YES, FREQUENTLY	22	21
YES,OCCASIONALLY	56	53
RARELY	23	22
NEVER	4	4
TOTAL	105	100

Chart 4.1.17 chart represents experience your supply chain disruptions that affected your inventory management.



INTERPRETATION:

From the table it is interpreted that 21% of employees reported that frequently affecting the supply chain disruptions, 53% of employees reported as occasionally, 22% of employees reported as rarely, 4% of employees reported as rarely.

Table 4.1.18 additional measures or improvements to enhance inventory management practices within your organization.

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
SAFETY STOCK OPTIMIZE	24	23
REGULAR AUDIT	60	57
ENHANCE TRAINING PROGRAME	14	13
SUPPLIER COLLABORATION	7	7
TOTAL	105	100

Chart 4.1.18 additional measures or improvements to enhance inventory management practices within your organization.



INTERPRETATION:

From the above table it is interpreted that 23% of employees suggest that safety stock optimize for additional measures, 57% of employees suggest that regular audit, 13% of employees suggest that enhance training programe, 7% of employee suggest that supplier collaboration as additional measures.

STATISTICAL ANALYSIS

4.2 Chi-Square

Null Hypothesis (H0): There is no significant difference between year of experienced employees and challenges faced in inventory management.

Alternative Hypothesis (H1): There is significant difference between year of experienced employees and challenges faced in inventory management.

Table 4.2.1. Difference between year of experienced employees and challenges faced in inventory management.

	Cases					
	valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Experience* Challenges in inventory management	105	100.0%	0	0.0%	105	100.0%

Chi-Square Tests

	Value	df	Asymptotic . Sig (2-sided)
Pearson chi-square	152.567	108	.003
Likelihood Ratio	129.308	108	.079
N of valid cases	105		

a. 27 cells (69.5%) have expected count less than 5. The minimum expected count is 0.1.

INTERPRETATION:

The result in the above table shows that there is significant association between the employee's experience and challenges faced in inventory management as $p = 0.003$ which is less than 0.05. The null hypothesis is rejected. **This finding supports the hypothesis and so there is significant association between the employee's experience and challenges faced in inventory management.**

4.2.1. ANALYSING USING CHI-SQUARE

Null Hypothesis (H0): There is no significant association between educational qualification and the perceived factors influencing in inventory management.

Alternative Hypothesis (H1): There is a significant association between educational qualification and the perceived factors influencing in inventory management.

Table 4.3.1 significant association between educational qualification and perceived factors influencing in inventory management

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
EDUCATIONAL QUALIFICATION: * factor influencing	105	100.0%	0	0.0%	105	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	75.747 ^a	56	.041
Likelihood Ratio	74.942	56	.046
N of Valid Cases	105		

a. 68 cells (94.4%) have expected count less than 5. The minimum expected count is .01.

INTERPRETATION:

The result in the above table shows that there is a significant association between the education qualification and factors influencing in inventory management as $p = 0.041$ which is less than 0.05. The null hypothesis is rejected. **This finding supports the hypothesis and so there is a significant association between the education qualification and factor influencing in inventory management.**

CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1. FINDINGS OF THE STUDY

- Majority 30% of the respondents age between 21-30.
- Majority 82% of the respondents are Male.
- Majority 55% of respondents completed post-graduation.
- Majority 54% of respondents were working for more than 10 years.
- Majority 32% of the respondents facing challenges in high carrying cost.
- Majority 45% of the respondents were intermediate in their inventory management concepts.
- Majority 72% of the respondents can able to resolve the issues or disputes in timely manner.
- Majority 54% of the respondents at current inventory management practices in your organization.
- Majority 38% of the respondents reported that technology advancement is the most significant influence on inventory management.
- Majority 68% of the respondents reported that the performance of your pharmaceutical supplier in terms of on-time delivery and quality.
- Majority 41% of the respondents reported that they conduct physical inventory counts monthly.
- Majority 65% of the respondents reported that they always utilize the safety stock.
- Majority 45% of the respondents reported that they somewhat actively adopting technologies and automation in inventory management.
- Majority 63% of the respondents reported that inventory management software and warehouse management is effective.
- Majority 48% of the respondents they have an adequate collaboration with

suppliers.

- Majority of 44% of the respondents reported that they regularly provide training and educational program.
- Majority 53% of the respondents reported that they experience supply chain disruptions occasionally.
- Majority 57% of the respondents reported that regular audit can enhance the inventory management practices in organization.

5.2. SUGGESTIONS

- Give advanced training sessions to keep them up to date on the newest inventory management trends and technologies. This allows them to leverage their experience while also implementing new methods.
- Look into potential for closer collaboration, such as joint planning, demand prediction sharing, and forming mutually advantageous partnerships to promote a smoother supply chain.
- Make sure that your inventory management strategy takes consideration of the specific needs of managing medications in order to avoid complications such as expired stock and regulatory penalties.
- Regularly review and update your inventory policies to adapt the changes. This proactive approach can enhance the responsiveness of your inventory management system.

5.3.CONCLUSION:

From the study it is clear that Orchid Pharma Private Limited has the potential to handle its inventory management issues strategically. The corporation adapt its improvement initiatives, focusing on improving supplier collaboration, investing in technology, and delivering tailored training programs. The ultimate aim is not only to improve Orchid Pharma Private Limited's inventory management procedures, lower operational costs, and strengthen its supply chain resilience, but also to contribute to a greater knowledge of effective inventory management in the pharmaceutical business. Addressing the issues can improve operational efficiency and also contributes to a safer and more stable work environment. By implementing the recommended actions, the company can not only enhance its own operations but also pave the way for advancements in industry practices, thereby contributing to the overall efficiency and competitiveness of the pharmaceutical sector.

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ANNEXURE QUESTIONNAIRE
A STUDY ON CHALLENGES FACED IN INVENTORY
MANAGEMENT AT ORCHID PHARMA PRIVATE LIMITED.

1) NAME:

2) AGE:

a) 21 – 30 b) 31 – 40 c) 41 – 50 d) 51 – 60.

3) GENDER:

a) Male b) Female

4) EDUCATIONAL QUALIFICATION:

a) Diploma b) Under graduate c) Post graduate d) Specified course.

5) Years of Experience in the Chemical Manufacturing Industry:

- a) Less than 1 year
- b) 1-5 years
- c) 6-10 years
- d) More than 10 years

6) What challenges you face in inventory management in your company?

- a) High carrying costs
- b) Inaccurate demand forecasting
- c) Seasonal demand fluctuations
- d) Supplier-related issues
- e) Excess or obsolete inventory.

7) How would you rate your familiarity with inventory management concepts?

- a) Beginner
- b) Intermediate
- c) Advanced
- d) Expert.

8) How would you rate your company's ability to resolve issues or disputes with suppliers in a timely manner?

- a) Very Poor b) Poor c) Fair d) Good e) Excellent

9) How satisfied are you with the current inventory management practices in your organization?

- a) Very satisfied
- b) Satisfied
- c) Neutral
- d) Dissatisfied
- e) Very dissatisfied.

10) Which factors do you believe the most significant influence on inventory management in your organization?

- a) Economic conditions
- b) Technological advancements
- c) Supplier performance
- d) Customer demand variability
- e) Competitive pressures.

11) How frequently does your organization conduct physical inventory counts?

- a) Daily
- b) Weekly
- c) Monthly
- d) Quarterly
- e) Annually.

12) Do you utilize safety stock in your inventory management?

- a) Yes, always
- b) Yes, occasionally
- c) No, we do not use safety stock.

13) How actively are pharmaceutical companies adopting technology and automation in inventory management?

- a) Very actively
- b) Somewhat actively
- c) Not very actively
- d) Not at all

14) please rate the effectiveness of your inventory management software and warehouse management?

- a) Very effective
- b) Effective
- c) Neutral
- d) Ineffective.

15) How do you assess your relationships with suppliers in terms of inventory management?

- a) Strong collaboration and communication

- b) Adequate collaboration, but room for improvement
- c) Minimal collaboration
- d) No collaboration.

16) Does your organization provide training or educational programs for employees involved in inventory management?

- a) Yes, regularly
- b) Yes, occasionally
- c) No, we do not provide training.

17) Have you experienced supply chain disruptions that affected your inventory management?

- a) Yes, frequently
- b) Occasionally
- c) Rarely
- d) No, never

18) How accurate are your demand forecasts?

- a) Highly accurate
- b) Moderately accurate
- c) Somewhat accurate
- d) Not accurate.

19) What additional measures or improvements do you believe would enhance inventory management practices within your organization?

- a) Enhanced training programs
- b) Improve supplier collaboration
- c) Safety stock optimization
- d) Regular audit.