

**“INVESTIGATING THE SUPPLY CHAIN OF
NUTRACEUTICALS WORLD”**

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By

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2023

CERTIFICATE

This is to certify that the dissertation titled A Study “**Investigating the supply chain of Nutraceuticals World**” and submitted by Prince Rana, Enrolment No. 0328 under the supervision of Dr Surya Prakash for an award of MBA in Pharmaceutical Management at the University carried out during the period from 1st April 2023 to 30th June 2023 embodies my original work and has not shaped the idea for the award of any degree, fellowship, titles during this or the other institute or another similar establishment of upper learning.

PRINCE RANA

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Signature

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DECLARATION BY THE STUDENT

I hereby declare that this dissertation titled “**Investigating the supply chain of Nutraceuticals World**” is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in this text.

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DECLARATION BY THE FACULTY GUIDE

This is to certify that the dissertation titled “**Investigating the supply chain of Nutraceuticals World**”, Uttar Pradesh” is a record of the research work undertaken by **Prince Rana** in partial fulfilment of the requirements for the award of the degree of MBA – Pharmaceutical Management from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

Date: 26-05-2023

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ABSTRACT

Most stockists are familiar with the Nutraceuticals supply chain. There are fewer stockists, or more precisely, fewer stockists who are both new to the market and educated about the supply chain. The majority of Nutraceuticals items are carried by 48% of the stockists, according to a survey I conducted of them. It turns out that between 30 and 40 Nutraceuticals items are carried by stockists if you calculate the number.

In contrast to fewer stockists who placed monthly purchases, the bulk of stockists placed weekly orders for Nutraceuticals.

Due of convenience, stockists are likely to call or place their purchases online. Additionally, at the end of the month, medical representatives placed orders.

After placing their order, the manufacturing facility delivered the Nutraceuticals items to them within one or two days. If there were any problems, such a delay in the arrival of the cheque or a shipment problem, it can take a week.

62% of stockists experience delivery problems, including transportation, product shortages, insufficient funds for checks, or unpaid invoices. Other problems include things missing or that are damaged.

Product deliveries coming too late are likely to be the cause of 39% of troubles; even if they are on time, the item may still be damaged or missing, as 15% of stockists occasionally discover. The responsibility for the product's quality rests with the manufacturer or firm. 38% of business owners rely on their production or quality assurance procedures. Most businesses have internal systems for ensuring quality. Stockists have received notifications of product expirations or near expirations, however these notifications are rare. The majority of stockists have their own inventory management system, but only a small percentage of them do not use a particular inventory management method.

KEYWORDS- NUTRACEUTICALS, SUPPLY CHAIN, RAW MATERIALS, MANUFACTURING, PACKAGING, DISTRIBUTION

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The journey to becoming a wise and accountable skilled doesn't compendious to schoolroom learning. The experience that I gained while working with Kepler Healthcare Pvt. Ltd, during my internship period, acquainted me with the practical aspect of the course & implementation of the theory in the real field. Any compliments require the effort of many people and this work is no different. My sincere thanks to all for taking us ahead on this journey.

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CHAPTER-1 INTRODUCTION

The nourishing elements known as Nutraceuticals are biologically active and have the potential to preserve maximum health and benefits. They are a mix of nutrition and medications. These goods are crucial for the continued advancement of therapeutics as well as the maintenance of human health care. In addition to their medicinal effects and safety profile, nutritional supplements have gained prominence for their nutritional advantages.

The use of Nutraceuticals for services like illness prevention and promotion is expanding rapidly. In this review, many medication and Nutraceuticals interactions have also been described with numerous examples.

The last section of the review mentioned several patents on Nutraceuticals for use in treating various ailments and in agricultural uses, which supports the fact that the market for these products is expanding exponentially. Nutraceuticals have been utilized as a support therapy for the prevention and treatment of many diseases, such as to lessen the negative effects of cancer chemotherapy and radiotherapy, in addition to being used for nourishment.

The difficulties inherent in the formulation development of Nutraceuticals are often overcome using a variety of innovative Nano formulation techniques. Prior knowledge of various drug interactions may be useful in reducing the negative effects of Nutraceuticals products. Several Nutraceuticals supplements and micronized dietary products with enhanced health advantages are produced as a result of nanotechnology.

The most recent significant results (clinical trials) on Nutraceuticals that demonstrate the therapeutic effects of Nutraceuticals' bioactive compounds on a variety of ailments are also reviewed in this review article.

Nutraceuticals are products with health advantages above and beyond basic nutrition that are obtained from food sources.

Nutraceuticals include things like functional foods, dietary supplements, and therapeutic foods. Nutraceuticals' supply chain management entails the organization, sourcing, production, and distribution of these goods to clients.

Each Nutraceuticals product's success depends on efficient supply chain management. Nutraceuticals companies can develop a strong brand and reputation by making sure that quality control, ingredient sourcing, manufacturing, packaging and labelling, distribution, and regulatory compliance are all managed successfully.

They can also offer their customers products that are high-quality, safe, and effective.

Nutraceuticals, according to Transparency Market Research, are products that offer nutritional advantages in addition to the essential nutritional content found in food. Vitamin and herbal supplements, as well as foods and beverages with added vitamins and/or other supplements, can all be termed Nutraceuticals. Because of alterations in lifestyle and increased expenses of conventional healthcare solutions, the market is expanding. According to Transparency Market Research, the global market for Nutraceuticals was valued at \$165.62 billion in 2014 and is expected to rise at a CAGR of 7.3% to about \$280 billion by 2021.

Similar to medicines, different countries have different regulatory standards for Nutraceuticals. However, there are fewer restrictions on government regulation of Nutraceuticals in the United States. Currently, producers must adhere to FDA good manufacturing practices and create safe Nutraceuticals, but they are not required to obtain FDA approval in order to market their goods or register them with the organization. The market has thus become the subject of political scrutiny.

Demands for the FDA to create particular manufacturing and supply chain management guidelines have also been sparked by problems with the supply chains for Nutraceuticals. Nutraceuticals enterprises should take the lead in supply chain improvements to guarantee the safety and integrity of products up until such supply chain regulations are created.

CHAPTER-2 REVIEW LITERATURE

Lipi Das et al, 2011: 'Nutrition' and 'pharmaceutical' are combined to form the term 'Nutraceuticals. Nutraceuticals, broadly speaking, are foods or components of foods that significantly alter and sustain the normal physiological function necessary to keep healthy humans alive. The present demographic and health trends are the main drivers of the global Nutraceuticals market's expansion. Dietary fibre, prebiotics, probiotics, polyunsaturated fatty acids, antioxidants, and other diverse kinds of herbal/natural foods are some of the food products used as Nutraceuticals. Some of the biggest health issues of the century, including obesity, cardiovascular disease, cancer, osteoporosis, arthritis, diabetes, and cholesterol, are fought off with the aid of these Nutraceuticals.

Sourya Dutta et al, 2017: Prices, quality, quantity, and consistent supply are the four most important factors in the supply chain of any commodity, but especially in the food industry. Maintaining manufacturing costs, storage costs, shipping costs, and other related costs as low as possible is vital to maximising the return on investment when the product is sold on the market. The cost of manufacturing and the accompanying pricing must be kept low because there are numerous extra costs and considerations that must be made before the finished product can be sold on the market. Research and development, along with quality assurance and packaging, must be stretched out over the product's lifecycle for a company to recoup expenses and ultimately earn a profit. To ensure that the right amount of product is delivered to the appropriate population at the appropriate time, it is essential to maintain the proper level of inventory. Controlling and managing inventory adds to the difficulty of the problem. It is normally crucial to have several vendors offering the same raw material in order to have a backup plan in case one vendor is unable to deliver raw materials on time. It also provides the advantage of price negotiating and regulates prices. It is essential to conduct a complete credit check and quality due diligence on the suppliers to make sure the vendor has the ability to offer high-quality products at all times. In addition to the steps or processes of the supply chain, the concepts are explained.

Mudhi AiAli et al, 2021: Nutraceuticals are vital dietary ingredients that have medicinal and nutritional effects. These foods' health advantages come from their active components, which include dietary fibre, collagen hydrolysate, and carotenoids. Nutraceuticals have been demonstrated to positively influence cardiovascular and immunological health, as well as to contribute to the prevention of infections and cancer. Nutraceuticals can be categorised into numerous varieties based on their nature and mode of action. This review will look at different Nutraceuticals classes and their possible therapeutic effects, such as anti-cancer, antioxidant, anti-inflammatory, and anti-lipid activity in disease. Along with present developments and the promise of Nutraceuticals for the future, this article will also examine the many methods in which these products function, their uses, and consumer safety.

Abhijit Barman et al, 2021: The COVID viral epidemic has ushered in a new era on the planet, even as we work out the ramifications in many aspects of our daily life. The food industry and food supply chain are no exception. The closure of food manufacturing facilities, restrictions on demand, and financial limitations have all had an impact on business operations and the supply of various food products, as shown in the food supply chain.

Theofilos Mastos et, al 2022: The phrase "Nutraceuticals" combines the words "nutrition" and "pharmaceutical." In general, meals and food components that significantly modify and maintain the regular physiological processes required to maintain healthy human life are referred to as Nutraceuticals. The current changes in demography and health are what are propelling the worldwide Nutraceuticals market's growth. Some of the food products used as Nutraceuticals include dietary fibre, prebiotics, probiotics, polyunsaturated fatty acids, antioxidants, and various herbal/natural foods. These Nutraceuticals help combat some of the largest health problems of the century, such as obesity, cardiovascular disease, cancer, osteoporosis, arthritis, diabetes, and cholesterol.

CHAPTER-3 METHODOLOGY

1. To study the supply chain of Nutraceuticals in tier cities as well as globally with a wide variety of products.

Products that are produced from food sources and provide additional health advantages above and beyond their fundamental nutritional value are referred to as Nutraceuticals. These goods might include everything from medications to personal care items to functional foods, beverages, and nutritional supplements.

The supply chain for Nutraceuticals in tier cities:

Tier cities have a complicated and wide-ranging supply chain for Nutraceuticals. The supply chain can be divided generally into three stages:

Raw material procurement: The majority of natural ingredients used to make Nutraceuticals are fruits, plants, and herbs. Different vendors and producers, many of whom are situated in rural areas, are used to supply raw materials. The procurement process entails choosing the correct kind and amount of raw materials, haggling over rates, and making sure the finished goods comply with legal standards.

Manufacturing: The manufacturing facilities are where the raw materials are processed and turned into finished goods after being transported there. There are several steps in the manufacturing process, including extraction, purification, blending, encapsulation, and packing.

Distribution and retail: Once the finished goods are prepared, they are shipped to different outlets for distribution, including wholesalers, brick-and-mortar stores, and online marketplaces. Nutraceuticals are often offered for sale in tier cities through pharmacies, health food stores, and internet marketplaces. Supply chain partners, logistics, and inventory management are all part of the distribution process.

The supply chain for Nutraceuticals globally:

The worldwide supply chain for Nutraceuticals is also intricate and comprises some parties and stages. By 2028, the need for natural and organic goods will help the global market for Nutraceuticals grow to \$658.11 billion, led by rising consumer awareness of these products.

The following phases make up the worldwide supply chain for Nutraceuticals:

Raw material procurement: The global supply chain for Nutraceuticals likewise entails sourcing raw materials from numerous vendors and growers situated in various parts of the world, much as the supply chain in tier cities. Managing quality, quantity, pricing, and regulatory compliance are all part of the procurement process.

Manufacturing: Manufacturing facilities for Nutraceuticals can be found throughout the world, with some nations specializing in particular product groups. For instance, the US is well-known for its dietary supplement sector, whereas Japan is renowned for its expertise in functional foods. There are several steps in the manufacturing process, including extraction, purification, blending, encapsulation, and packing.

Distribution and retail: Through a variety of channels, including wholesalers, retailers, and online marketplaces, Nutraceuticals are sold all over the world. Managing inventories, logistics, and supply chain partners across many global regions is an element of the distribution process.

In general, the supply chain for Nutraceuticals is intricate and encompasses numerous local and international stages and parties. Managing risks in the supply chain, as well as quality, safety, and regulatory compliance, are the main problems facing the Nutraceuticals sector.

2. The study of the challenges in Nutraceuticals and opportunities or Regulations- Challenges in Nutraceuticals:

Quality control: Making sure the items are both high-quality and safe is one of the industry's biggest difficulties. This is because many of the ingredients used in Nutraceuticals are derived from natural sources, and their composition and quality might differ based on several variables like climate, soil, and harvesting techniques.

Regulatory compliance: Adhering to the many rules and specifications established by various regulatory organizations presents another problem for the Nutraceuticals sector. The laws might differ from one nation to the next, and navigating them can be difficult and time-consuming.

Supply chain management: In the Nutraceuticals sector, managing the supply chain can be difficult because it entails obtaining raw materials from several vendors, assuring their quality, and controlling transportation and distribution. In the case of multinational supply networks, this can be extremely difficult.

Consumer education: In the Nutraceuticals sector, managing the supply chain can be difficult because it entails obtaining raw materials from several vendors, assuring their quality, and controlling transportation and distribution. In the case of multinational supply networks, this can be extremely difficult.

Opportunities in Nutraceuticals:

Growing demand: The market for Nutraceuticals is expanding with consumers' interest in natural and organic products and increased health consciousness.

Innovation: The Nutraceuticals industry offers significant potential for innovation since it is constantly working to create new ingredients, formulations, and delivery methods to meet changing consumer expectations.

Personalization: The Nutraceuticals industry can make use of data analytics and technology to offer customised products and services that are customised to the particular needs of various clients.

Regulations in Nutraceuticals:

Labelling requirements: The contents, dosage, and warnings of Nutraceuticals products must all be truthfully and accurately disclosed on the label.

Good manufacturing practices: Manufacturers of Nutraceuticals must follow good manufacturing practices (GMPs) in order to preserve the quality and security of their products.

Regulatory approval: Depending on the country and the product kind, regulatory approval for Nutraceuticals products could be required before they can be marketed.

Adverse event reporting: Manufacturers of Nutraceuticals must alert regulatory agencies to any negative events related to their goods.

The Nutraceuticals industry also confronts challenges in the areas of quality assurance, legal compliance, supply chain management, and consumer education, despite the fact that it offers many opportunities for growth and innovation. Following laws and regulations is crucial for ensuring the safety and efficacy of Nutraceuticals products as well as maintaining consumer confidence in the industry.

RESEARCH STUDY

1. What is the Indian market's perception, use, and supply chain's awareness of Nutraceuticals?

The market for Nutraceuticals is rapidly growing in India due to rising consumer interest in health and well-being as well as the benefits of natural and organic products. The market for Nutraceuticals in India is projected to grow at a CAGR of 21% and reach \$18.5 billion by 2025.

Nutraceuticals' Perception and Awareness in India:

There is an expanding understanding and perception of Nutraceuticals in India as consumers' concerns about their health and fitness develop. Natural and organic products are in high demand among Indian consumers, and Nutraceuticals are a wonderful fit for this market. Additionally, customers are learning more about the benefits of Nutraceuticals, such as improved immunity, digestive health, and weight management.

Nutraceuticals use in India:

Although it is growing swiftly, India's use of Nutraceuticals is still relatively low compared to other countries. Dietary supplements, functional foods, and beverages are the main ways that Nutraceuticals are consumed. The most popular Nutraceuticals categories in India include probiotics, herbal supplements, and vitamins and minerals.

Supply Chain of Nutraceuticals in India:

In India, the supply chain for Nutraceuticals is intricate and involves numerous parties. The following phases can be used to segment the supply chain:

Raw material procurement: Farmers, herbal extractors, and food component providers are some of the sources of the raw ingredients used in Nutraceuticals. Often, multiple regions of the nation are used to get the raw materials, and the procurement process includes quality control, price negotiations, and assuring regulatory compliance.

Manufacturing: Manufacturing facilities for Nutraceuticals may be found around the nation, and the production process includes several steps such as extraction, purification, blending, encapsulation, and packaging.

Distribution and retail: Pharmaceuticals, health food stores, and internet marketplaces are just a few of the outlets via which Nutraceuticals are sold. Supply chain partners, logistics, and inventory management are all part of the distribution process.

Challenges in Nutraceuticals Supply Chain in India:

Quality control: The Nutraceuticals sector in India faces a challenge in maintaining consistent quality along the supply chain because the quality of raw materials might vary based on several variables such as soil quality, climate, and growing circumstances.

Regulatory compliance: Depending on the product category and the intended application, different regulatory regulations and standards may apply to the Nutraceuticals business in India. For businesses that operate in numerous states, compliance with these requirements can be particularly challenging and time-consuming.

Supply chain management: Numerous parties are involved in the supply chain for the Nutraceuticals sector in India, including producers, distributors, retailers, and suppliers of raw materials. Managing the supply chain can be difficult when dealing with complicated and perishable components, supply chain hazards, and logistics.

In general, the Indian Nutraceuticals market is expanding quickly due to rising consumer awareness of and desire for natural and organic products. Although the industry faces difficulties with supply chain management, regulatory compliance, and quality control, there are also chances for expansion and innovation.

2. Storage conditions on the Nutraceuticals Product and its implementation at retail and wholesale stores.

For Nutraceuticals products to remain effective and of high quality, proper storage conditions are essential. Some broad rules apply to the majority of products, however, the storage conditions for Nutraceuticals depend on the specific product and its constituents.

Conditions for Nutraceuticals Product Storage:

Temperature: Nutraceuticals products should be kept in the refrigerator between a temperature range of 15°C and 30°C (59°F and 86°F) to retain their efficacy and stability. Extreme temperatures have the ability to damage items and lessen their efficacy.

Humidity: Products intended for Nutraceuticals should be stored in a dry environment with humidity levels under 60%. An excessive amount of moisture can cause a product to deteriorate or degrade.

Light: Nutraceuticals products should be protected from light since exposure to light can induce product oxidation and degradation. The best storage environments for products are dim, opaque rooms or containers.

Air and Oxygen: To prevent exposure to oxygen, which can cause product oxidation and deterioration, products used in Nutraceuticals should be maintained in sealed containers. The containers must be carefully closed following each use.

Implementation of Storage Conditions at Retail and Wholesale Stores:

The storage of Nutraceuticals products in retail and wholesale settings is crucial for preserving their quality and efficacy. Some best practices that can be used at the retail and wholesale levels include the ones listed below:

Proper storage facilities: Stores should have specialized storage spaces that adhere to the ideal levels of humidity, temperature, and lighting. The storage spaces must be pest-free, dry, and spotless.

Inventory management: To guarantee that products are not kept past their expiration dates, stores should routinely check their inventory. Products that have expired ought to be taken off the shelves and disposed of properly.

Training for employees: Store employees need to receive training on handling and storing Nutraceuticals items properly. They ought to be aware of the significance of maintaining ideal storage conditions and the symptoms of product deterioration.

Labelling: Expiration dates and storage recommendations should be included on product labels. Customers and staff should be able to see this information without difficulty.

Quality control: To make sure that the goods in their inventory fulfil the requirements for potency and purity, retailers should only engage with reliable suppliers and do routine quality checks on their inventory.

Overall, maintaining the integrity and effectiveness of Nutraceuticals products depends on suitable storage conditions. Retail and wholesale businesses can be crucial in putting these requirements into practice and guaranteeing that customers have access to high-quality goods.

3. Key performance indicators in supply chain management of Nutraceuticals Products.

Key performance indicators (KPIs) are crucial measures for assessing the efficiency and performance of supply chain management in the production of Nutraceuticals. The supply chain management of Nutraceuticals goods can be measured using some of the KPIs listed below:

Inventory Management: Stock-out rate, carrying cost, and inventory turnover are KPIs for inventory management. The inventory turnover ratio calculates how frequently inventory is sold and replaced over a specified period. The cost of maintaining inventory, including storage, insurance, and obsolescence, is measured by the carrying cost. The percentage of time that inventory is not accessible to clients is measured by the stock-out rate.

Types of Inventory:

1. **Purchase Inventory-** The warehouse receives the purchase and delivery of raw materials or components.
2. **Storing Inventory-** Inventory is kept until it is required. After being transformed into completed goods at production facilities, raw materials are brought back to storage areas to wait for shipping.
3. **Profiting from Inventory-** The quantity of goods available for purchase is limited. Orders are filled by pulling finished goods. Customers receive product shipments.

Supplier Performance: Lead time, defect rate, and on-time delivery are KPIs for supplier performance. The percentage of orders that are delivered on time, or earlier, is known as on-time delivery. The lead time measures how long it takes to fill an order and deliver it. The defect rate calculates the proportion of suppliers' flawed deliveries.

An approach to evaluating the effectiveness of the supply chain system is referred to as a supply chain performance measure. Measures of supply chain performance can be broadly divided into two categories:

Qualitative metrics, like customer satisfaction and product quality, are examples.

Order-to-delivery lead times, supply chain reaction times, flexibility, resource usage, and delivery performance are a few examples of quantitative measures.

Customer Service: Order cycle time, order accuracy, and customer satisfaction are KPIs for customer service. The length of time it takes to complete an order from receipt to delivery to the consumer is called the order cycle time.

There are Different Aspects to Enhance Supply chain management-

1. **Train customer service reps:** The ability to recognize issues and create solutions must be taught to customer service representatives (CSRs). In order to best serve the client, they must also be skilled in selling and knowledgeable about the services offered by the business. CSRs with strong sales skills are often better at identifying customer pain points and offering pertinent internal solutions. The easiest way to guarantee a uniform experience from customer service agents is to have a corporate manual for educating all employees.
2. **Integrate Customer service with order entry systems:** In today's extremely competitive industry, order fulfilment is sometimes a source of conflict between firms and customers. Customer satisfaction may change as a result of Internet orders being delivered slowly. The integration of the order entry and delivery systems makes it easier for customer support professionals to help clients find out where their cargo is in the delivery chain. As a result, customer satisfaction typically increases.
3. **Create cohesive Experiences across the subsidiaries:** Today's enterprises are widely dispersed over several states, countries, and even continents, with branches and subsidiaries. UK subsidiaries may have different quality standards and experiences than US subsidiaries in several industries. Customers' experiences might change if they visit another nation. Customer service and supply chain dynamics need to be quite comparable, if not identical, between multiple locations and subsidiaries. Teaching the team the necessary skills and corporate values is the greatest way to guarantee a cohesive experience.
4. **Make Customer Service and supply chain Adaptable:** In the current climate with a complex supply chain, providing excellent customer service is incredibly challenging. One of the best methods to deal with this issue is to tailor the supply chain to customer needs from the time of purchase until the product is delivered to the customer's door. This could entail unique transportation arrangements for clients that require specific packaging or price. Customer service may collaborate with individuals in charge of packaging and shipping the items to make sure that customers' needs and expectations are met.

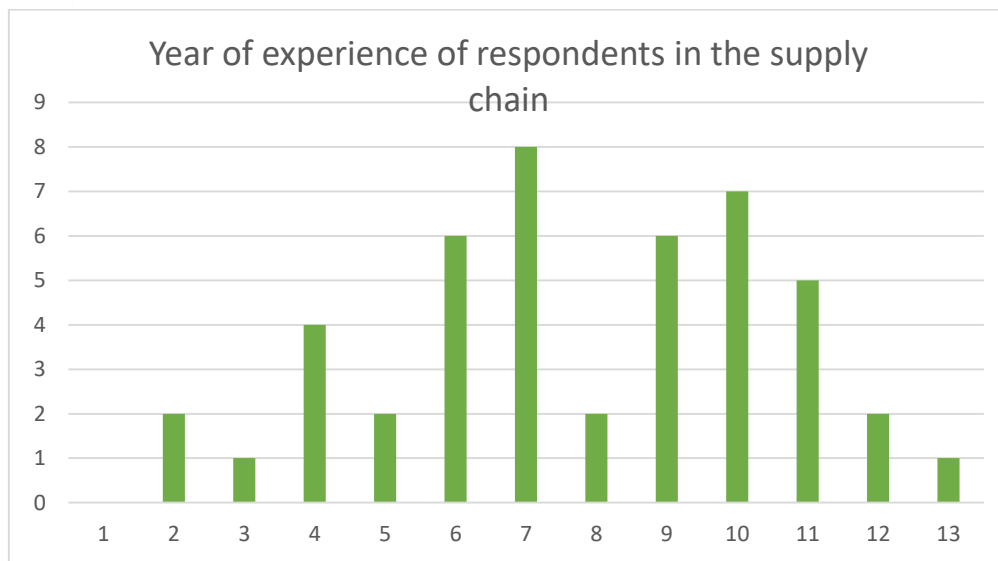
5. **Make it easy to contact customer service:** To improve customer happiness, there must be a variety of ways to contact the company. The company must provide a range of alternatives for clients to easily contact customer support because not everyone feels comfortable utilizing email or making a phone call. They might include social media, website chat, mobile devices, and phones. Therefore, regardless of the preferred method of communication, any clients who must get in touch with customer service, sales, accounting, or any other department will discover that doing so is quick and simple. The customer support representative needs to be trained on how to offer excellent service to clients on every channel in order to reassure customers that their requests are being satisfied throughout the entire supply chain.

Cost Management: Cost of products sold, transportation expenses, and overall logistics costs are KPIs for cost management. The overall cost of making and distributing the product is tracked by the cost of goods sold. Costs associated with the delivery and transporting of the product are referred to as transportation costs. The overall cost of all logistics-related activities, such as handling, storage, and transportation, is measured by total logistics expenses.

Quality Control: Defect rate, compliance rate, and product recall rate are KPIs for quality control. The percentage of manufactured defective goods is measured by the defect rate. The percentage of products that adhere to legal requirements is measured by the compliance rate. The product recall rate measures the percentage of items that are recalled due to safety or quality issues.

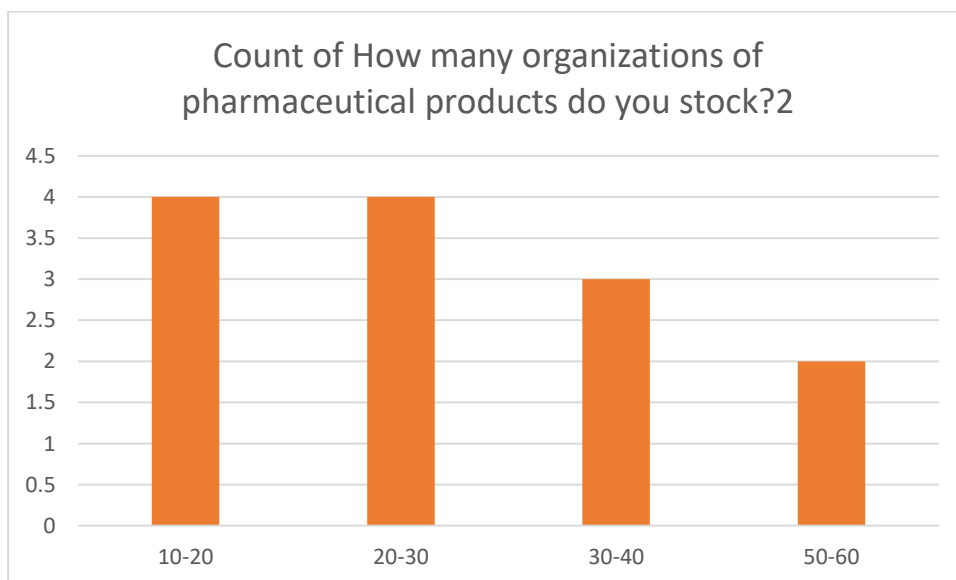
In general, KPIs are crucial for assessing the efficiency and performance of supply chain management in the context of Nutraceuticals products. Companies can use these data to pinpoint areas where their supply chains need to be optimized to better serve their customers and boost profitability.

Chapter-4 RESULT



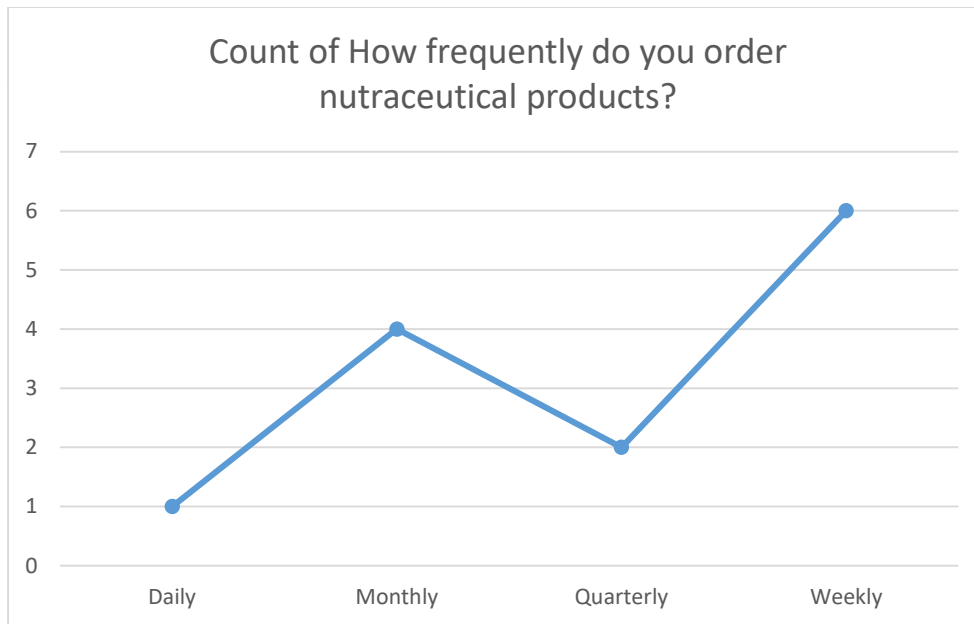
Graph 1-Year of experience in the supply chain?

Most of the stockists have experience in the supply chain of Nutraceuticals. There are less number of stockists or we can say those who are new in the market having less experience in the supply chain.



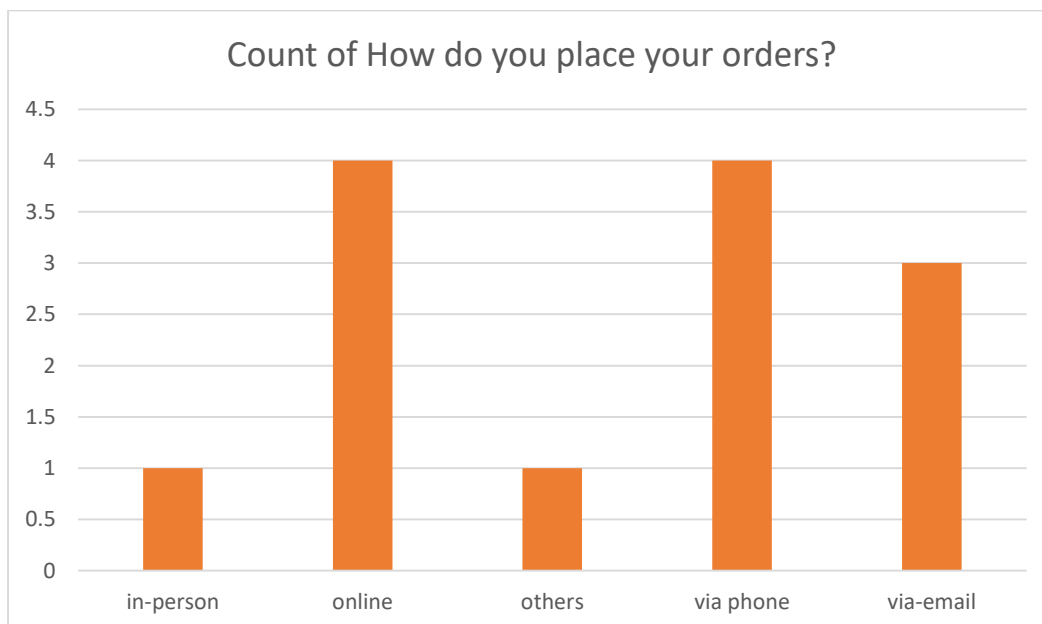
Graph-2 How many organizations of pharmaceutical products do you stock?

I had done a survey on the stockist and found that the stockists contain a range of 20-30 of the Nutraceuticals products and. if calculate the no. there are stockists who stock 30-40 range of Nutraceuticals products



Graph-3 How frequently do you order pharmaceutical products?

Most of the stockists placed the Nutraceuticals order on weekly bases and less number of stockists placed their orders on monthly bases.



Graph-4 How do you place your order?

Stockists are likely to place their orders on online basis or via phone because it is quite convenient for them also medical representative placed their orders at the end of the month



Graph-5 How long does it take for you to receive your order after placing it?

When they placed their order to the manufacturing unit of Nutraceuticals products they received their order in 1 or 2 days and if there were any issues like cheque delay, or transportation then it will may take one week



Graph-6 Have you ever experienced any issues with the delivery of your orders?

62% are stockist who faces issues while delivering issues like transportation, unavailability of products or checks or previous bill. Some other issues are like the item is damaged or item is missing etc.

COUNT OF IF YOU HAVE EXPERIENCED ISSUES, WHAT WERE THEY?

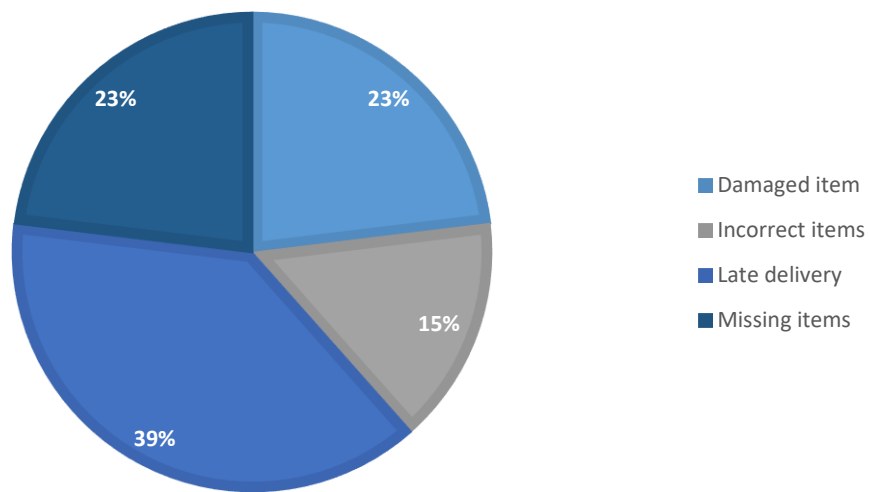


Chart-7 if you have any experience issues, what were they?

39% of issues are likely too late delivery of the product and if they received the item is missing and sometimes 15% of stockists found that they have received incorrect items

COUNT OF HOW DO YOU ENSURE THE QUALITY OF THE NUTRACEUTICAL PRODUCTS YOU RECEIVE?

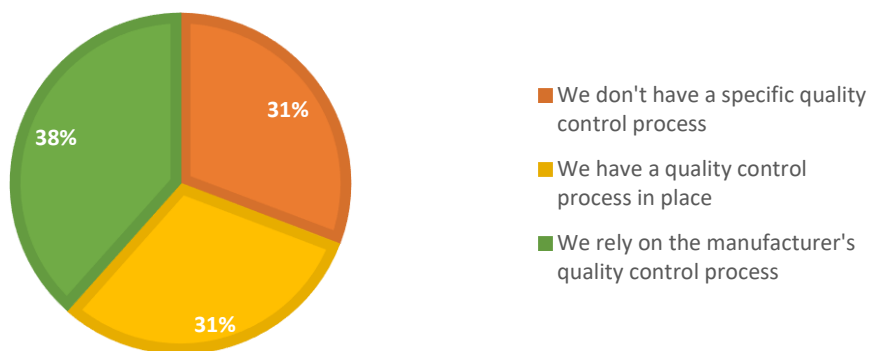
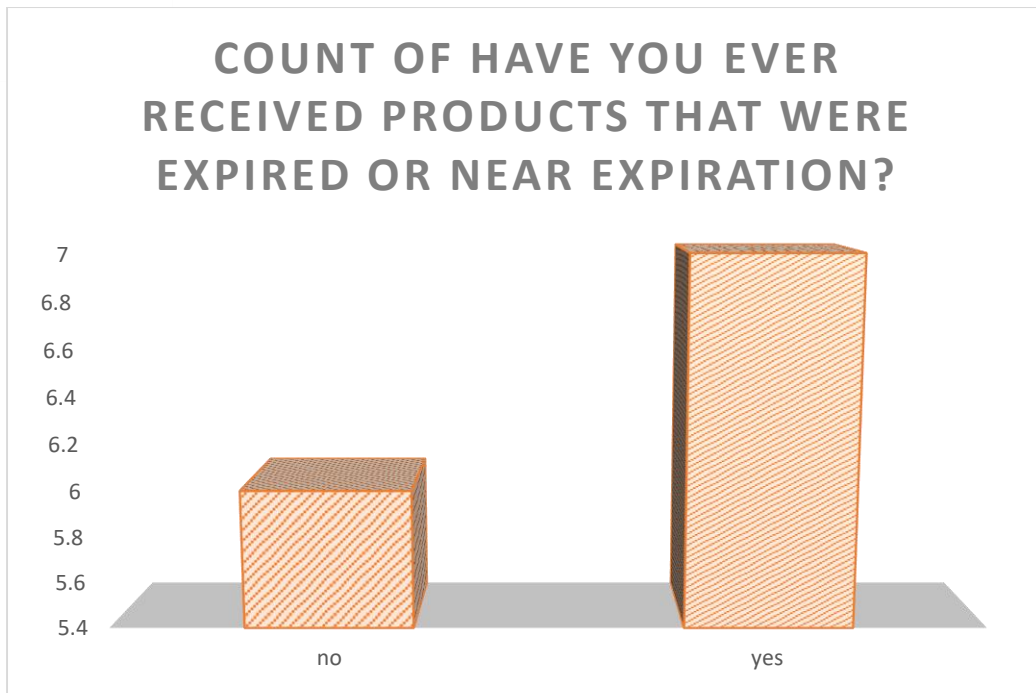


Chart-8 How do you ensure the quality of the Nutraceuticals products you receive?

The quality of products relies on the company or the manufacturers. 38% of stockists rely on manufacturing or their quality control process. Most of the companies have their quality process in their own place



Graph-9 Have you ever received products that were expired or near expiration?

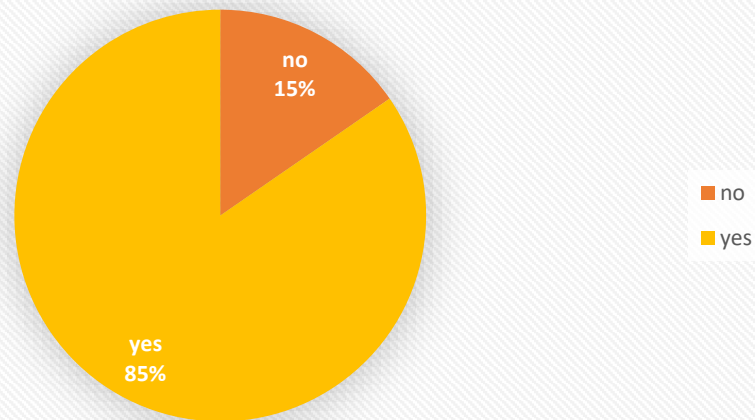
Yes, stockists received product expiry or nearby expiry but it is happening in few cases



Graph-10 How do you manage your inventory of Nutraceuticals products?

Most of the stockists have their own inventory management system but few are those they are not having any specific inventory management process.

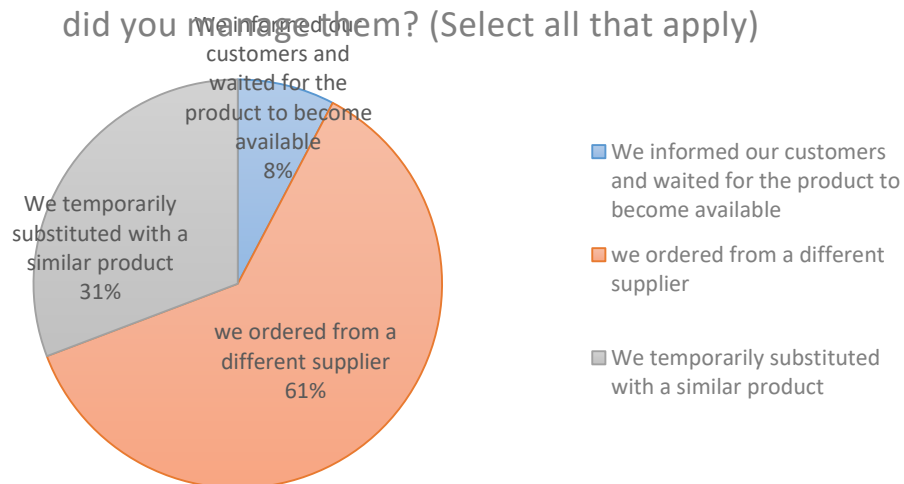
Count of Have you ever experienced stock-outs of nutraceutical products?



Graph-11 Have you ever experienced stock-outs of Nutraceuticals Products?

85% of stockists received the Nutraceuticals product out of stock because it is high in demand and liquidate easily market.

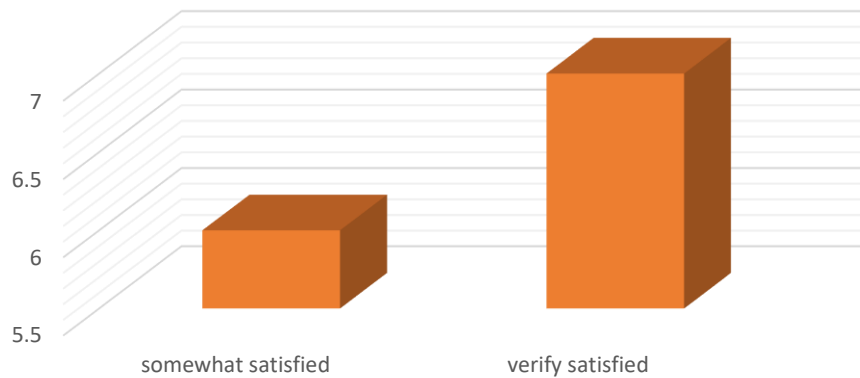
Count of If you have experienced stock outs, how did you manage them? (Select all that apply)



Graph-12 if you have experienced stock-outs, how did you manage them?

If the stocks are not available they informed the customer and wait for the product to become available or they order the product from a different supplier. Some of the stockists make temporarily substitute the product

Count of Overall, how satisfied are you with the supply chain management of nutraceutical products?



Graph-13 How satisfied are you with the supply chain management of Nutraceuticals products?

Supply chains of Nutraceuticals products are quite satisfied because they face minor issues for the same

Count of How do you handle returns or exchanges of nutraceutical products?

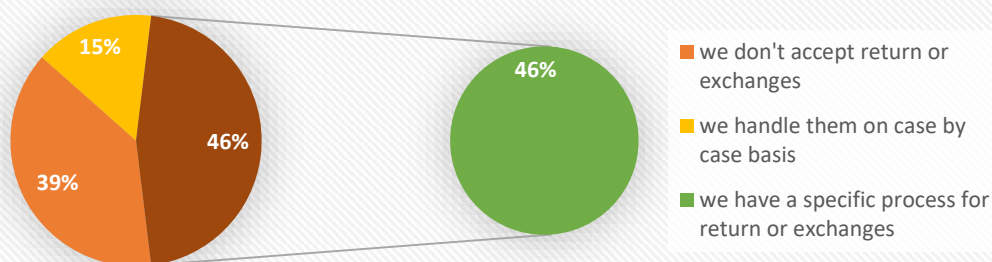
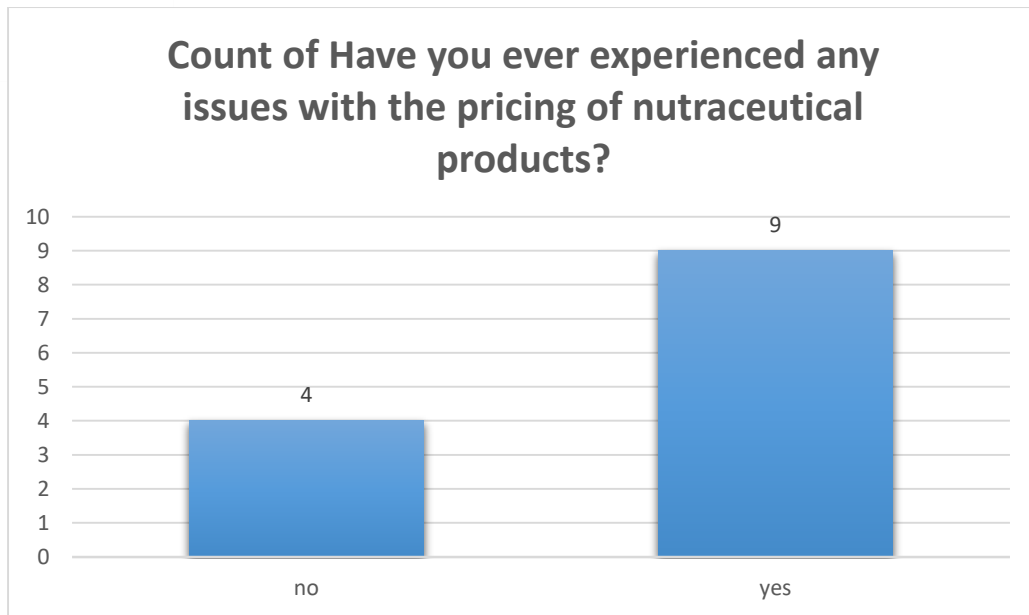


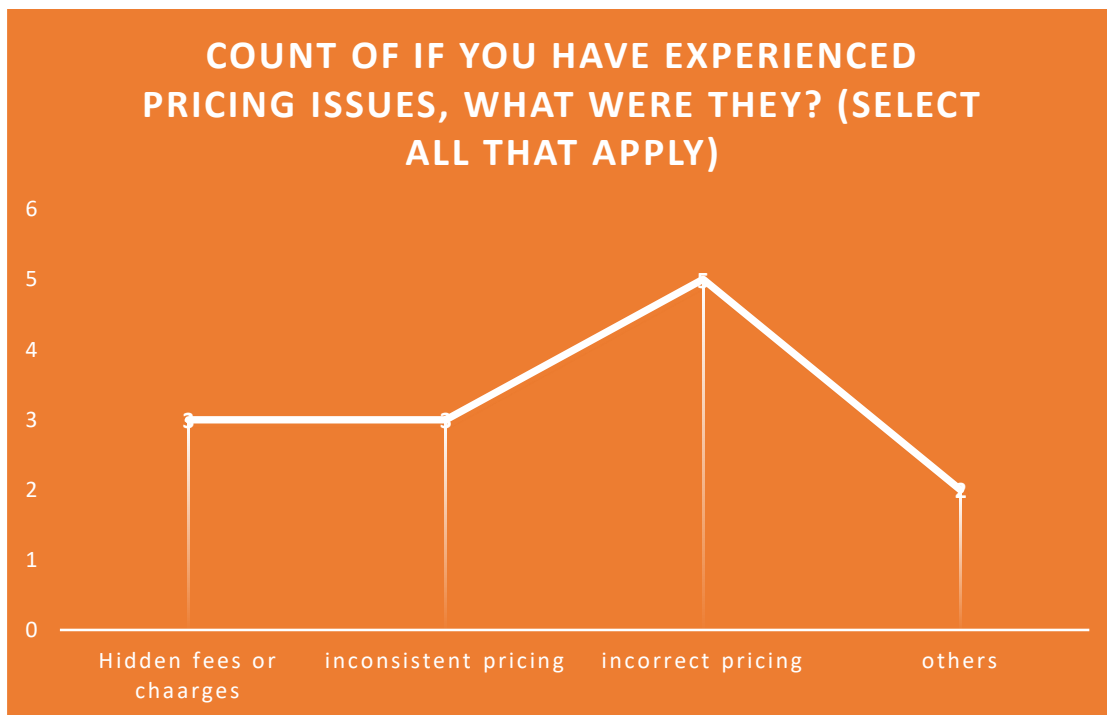
Chart-14 How do you handle returns or exchanges of Nutraceuticals products?

If the product is damaged or near expiry they have a specific process of return or exchanges and they handle those cases very smoothly but in most of the cases.



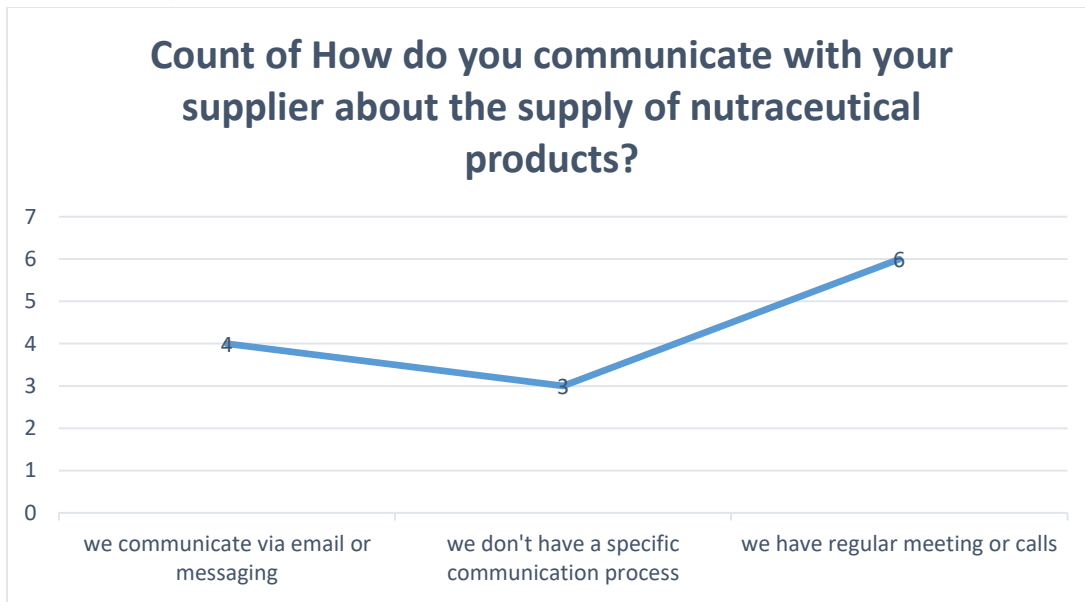
Graph-15 Have you ever experienced any issues with the pricing of Nutraceuticals products?

So, there are issues in pricing because most of the company do not provide better scheme or any quotation rate for the Nutraceuticals products



Graph-16 If you have experienced pricing issues, what were they?

Major issues of Nutraceuticals products in which stockists face issues are incorrect pricing or changes in prices



Graph-17 How do you communicate with your supplier about the supply chain of Nutraceuticals products?

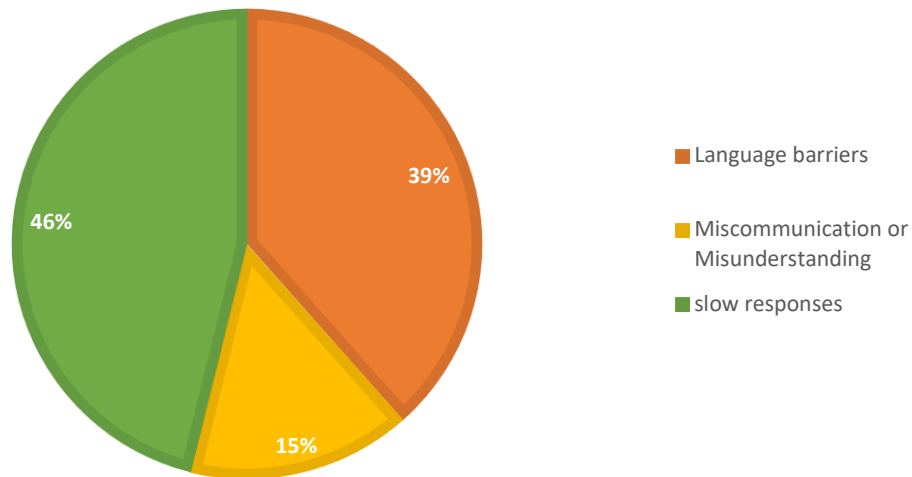
They have regular meeting calls for the supply of Nutraceuticals products or they communicate via email or phone or agent.



Graph-18 Have you ever faced any challenges in the communication process with your supplier?

Challenges they face while communicating face the unavailability of employees who are going to take orders or going to dispatch the items

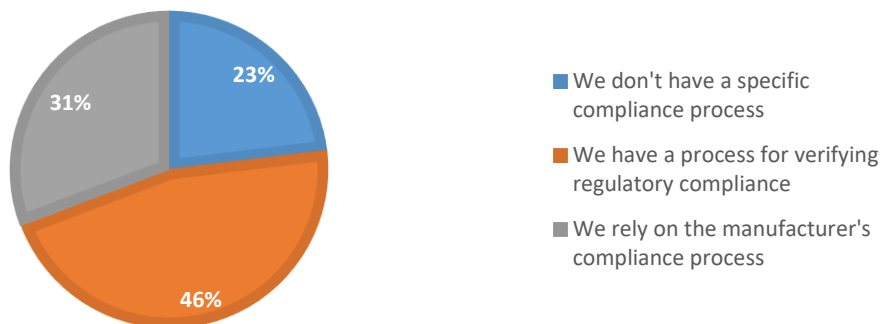
COUNT OF IF YOU HAVE FACED CHALLENGES, WHAT WERE THEY?



Graph-19 If you faced challenges, what were they?

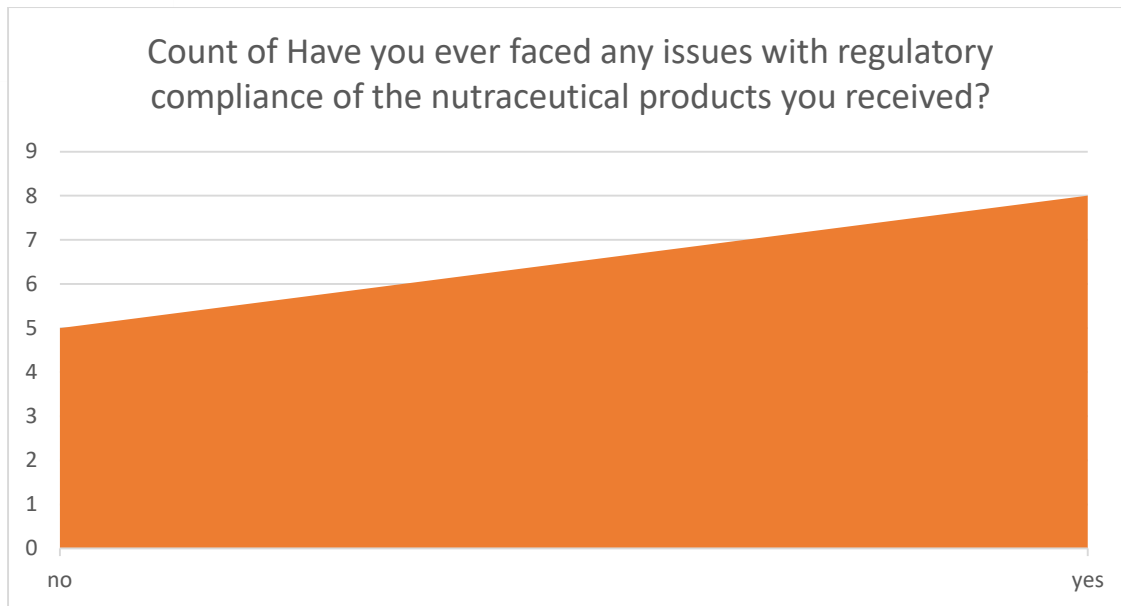
Language barriers and misunderstandings between the supplier and stockist are the kinds of challenges while placing the order

COUNT OF HOW DO YOU ENSURE THAT THE NUTRACEUTICAL PRODUCTS YOU RECEIVE MEET REGULATORY REQUIREMENTS?



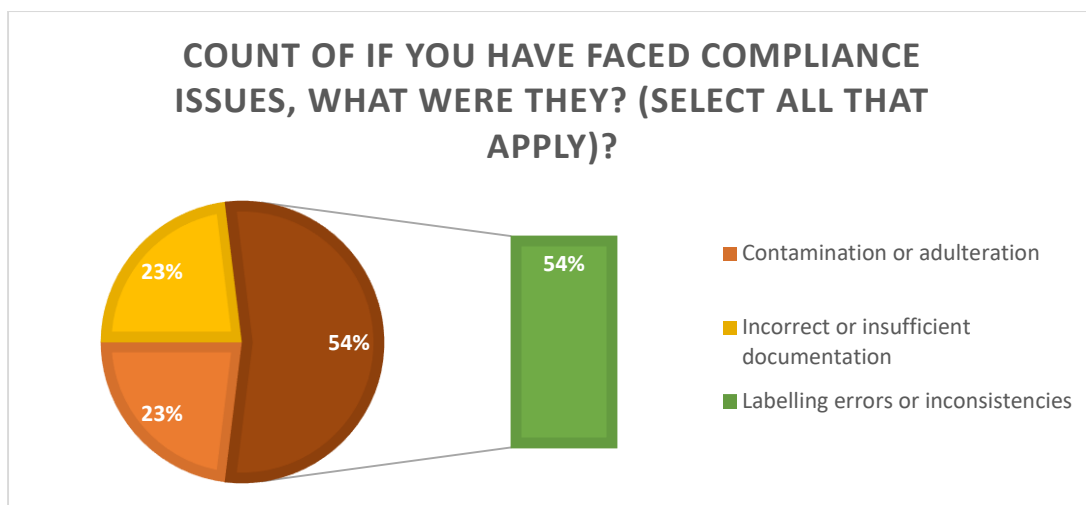
Graph-20 How do you ensure that the Nutraceuticals products you receive meet regulatory environments?

46% are the stockist who ensure the regulatory requirement of Nutraceuticals products relies on the manufacturer compliance process and they have their own process for regulatory compliance



Graph-21 Have you ever faced any issues with regulatory compliance of Nutraceuticals Products?

Sometimes they faced issues in regulatory compliance with the products they have received



Graph-22 If you faced any compliance issues what were they?

54 % of compliance issues are labelling errors and inconsistency in Nutraceuticals products also the incorrect or insufficient documentation

CHAPTER-5 DISCUSSION

The majority of stockists have knowledge of the Nutraceuticals supply chain. There are fewer stockists, or more precisely, those who are new to the market and have less supply chain expertise. I conducted a stockist survey and discovered that 48% of the stockists carry the majority of Nutraceuticals items, and if you calculate the number, there are stockists who carry a range of 30 to 40 Nutraceuticals products.

The majority of stockists ordered Nutraceuticals on a weekly basis, while fewer stockists ordered on a monthly basis.

As it is rather handy for them, stockists are likely to place their orders online or over the phone. At the end of the month, medical representatives also placed orders. When they placed their order with the production facility for Nutraceuticals items, they received it in one or two days. If there were any problems, such as a delay in the delivery of the cheque or a problem with the shipping, it might take a week.

62% of stockists have delivery problems such as transportation, product shortages, insufficient funds for checks, or unpaid bills. Other problems include things like damaged or missing items.

39% of problems are probably due to product deliveries being too late, and if they do arrive, the item may be missing or inaccurate, as discovered by 15% of stockists on occasion. The business or the producers are responsible for the products' quality. 38% of retailers rely on production or their quality assurance procedures. The majority of businesses have their own quality control procedures. Yes, stockists have been informed of product expirations or impending expirations, although this is rare. Few stockists do not use a specific inventory management procedure, but the majority of them do have their own inventory management system.

Because of its strong demand and easy market liquidation, 85% of stockists reported that the Nutraceuticals product was out of stock.

If the product is out of stock, the consumer is notified and either waits for it to become available or orders it from a new provider. Some retailers temporarily replace the product with another. Because they only encounter small problems with the same, supply chains for Nutraceuticals products are quite satisfied. They have a special protocol for returns or exchanges if the goods

are damaged or almost expired, and they handle those cases extremely smoothly, but this is not always the case.

Because most companies do not offer a better plan or any quotation rate for nutritional products, there are problems with pricing. Price adjustments or inaccurate pricing are the two main problems stockists have with Nutraceuticals items.

For the supply of Nutraceuticals products, they hold regular conference calls or communicate by phone, email, or agent. The difficulties they encounter when communicating are caused by the absence of staff who will accept orders or send the merchandise.

The difficulties encountered when placing the order include misunderstandings between the stockist and the supplier due to language issues.

46% of stockists make sure that the manufacturer's procedure for regulatory compliance and their own process for regulatory compliance are both dependent on the regulatory requirements of Nutraceuticals products. They occasionally had problems with the products they got complying with regulatory requirements. Labelling mistakes and consistency problems in Nutraceuticals goods, along with inadequate or erroneous paperwork, account for 54% of compliance problems.

CHAPTER-6 CONCLUSION

The majority of stockists are familiar with the supply chain for Nutraceuticals. There are fewer stockists, or more specifically, fewer stockists who are knowledgeable about the supply chain and are new to the market. I conducted a stockist survey and found that 48% of the stockists carry the bulk of Nutraceuticals products. If you compute the number, you will find that there are stockists who carry somewhere between 30 and 40 Nutraceutical products.

The majority of stockists placed weekly orders for Nutraceuticals, whereas fewer stockists placed monthly orders.

Stockists are likely to place their orders online or over the phone because it is convenient for them. Medical representatives also placed orders at the conclusion of the month.

They received their order for Nutraceuticals products from the manufacturing plant one or two days after placing their order. It might take a week if there were any issues, such as a holdup in the delivery of the cheque or a shipping issue.

Delivery issues like transportation, product shortages, a lack of funds for checks, or unpaid payments affect 62% of stockists. Items that are damaged or missing are examples of other issues.

39% of issues are presumably the result of product deliveries arriving too late; even if they do, the item might be incorrect or absent, as 15% of stockists occasionally find out. The producers or the company are in charge of the quality of the goods. 38% of merchants depend on their production or quality control processes. Most companies have their own quality assurance processes. Yes, although infrequently, stockists have been alerted of product expirations or impending expirations. Most stockists have their own inventory management system, but only a small number of them do not utilise a specialised inventory management technique.

85% of stockists stated that the Nutraceuticals product was out of stock due to the product's high demand and straightforward market liquidation. 85% of stockists stated that the Nutraceuticals product was out of stock due to the product's high demand and straightforward market liquidation.

The customer is informed if the product is out of stock and can then choose between waiting for it to restock or ordering it from another supplier. Some sellers switch out the goods for a

while with others. Supply chains for Nutraceuticals items are quite satisfied because they only have minor issues with the same. However, this is not always the case. They have a unique system for returns or exchanges if the goods are damaged or almost expired, and they handle those cases incredibly smoothly. There are issues with pricing because the majority of businesses do not provide a better plan or any sort of quotation rate for nutritional products. The two main issues stockists face with Nutraceuticals products are price modifications or erroneous pricing.

They regularly have conference calls or communicate via phone, email, or agents regarding the delivery of Nutraceuticals items. The lack of personnel who will receive orders or send the goods is the reason for their communication problems.

Misunderstandings caused by language barriers between the stockist and the supplier are one of the challenges encountered when placing the order. 46% of stockists make sure that their own regulatory compliance procedures and the manufacturer's procedures are both based on the legal requirements for Nutraceuticals items. On occasion, they experienced issues with the products they received meeting legal criteria. 54% of compliance issues are caused by insufficient or inaccurate paperwork, labelling errors, and consistency issues with Nutraceuticals products.

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