Impact of Covid-19 on sales, Availability, Pricing of Sanitizers and Nutraceuticals

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfilment for the award

of the degree of Master of Business Administration (MBA)

in

Pharmaceutical Management

by

NAGARURU RUPASREE

Under the Supervision and Guidance of

Dr. Saurab Kumar Banerjee

Dean Associate professor

School of pharmaceutical Management

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **Impact of Covid-19 on Sales, Availability, Pricing of Sanitizers and Nutraceuticals** 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Nagaruru Rupasree
23-06-2022

CERTIFICATE

This is to certify that dissertation titled **Impact of Covid-19 on sales, Availability, Pricing of Sanitizers and Nutraceuticals** is a record of the research work undertaken by Nagaruru Rupasree 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 his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide	School Dean
IIHMR University,	IIHMR University,
Jaipur	
Date	Date

ABSTRACT –

Sanitizers and nutraceuticals were considered to be upscale, luxury goods that were intended for hygiene and prevention. Due to their exorbitant price and general ignorance of their existence and function, they were used by a very small fraction of the population. But once the COVID hit us hard, individuals began to become more aware of it and learn how to use, why it is so important to use, and other useful information about these two components. These truths came to the light when covid is newly emerge and more mutated virus that history has ever seen and which have no remedy to cure it. Scientists and medical professionals then all started to investigate and trying different therapy modalities. for safeguarding lives. But, finding the cure and introducing prevention action like vaccines to the market took so long. During those times all the population knew one thing, that prevention is better when there is no cure. At that time, individuals start putting a higher value on maintaining a healthy diet and began using supplements to strengthen their immunity and combat the covid infection. Scientists are now investigating the differences between those who use sanitizers and vitamins and those who do not. With the established reality consumers started buying the additional sanitizers and vitamins. scarcity caused by a rapid increase in demand. To cover the demand gap, other industries entered the market. for safeguarding lives. However, finding a cure and introducing preventative measures like vaccines to the market took so long. during. The market's gradual pre-COVID growth accelerated as soon as awareness and demand emerged, changing the market's fundamentals. Changes in consumer behaviour are the primary cause of the market's transformation. Pharmacy responses were gathered in order to capture the end market view and understand the customer's point of view and behaviour. A survey of 74 individuals was conducted for this purpose. 103 pharmacies had contributed to understand the market outlook and offered comments for additional insight and to reach conclusion of sanitizer and Nutraceutical industry changes. By comparing the process is carried, secondary research and primary market research have been conducted. Due to the covid, demand has surged in both the local and international markets. Because of a lack of supply, most pharmacies were unable to handle the shortfall, which resulted in a spike in demand before products were prepared and manufactured to meet the need. There was very few resources to match up with the demand that was emerging in market. caused a shortage, which offered numerous small businesses a chance to enter the market.

Companies that were market leaders in FMCG, alcohol, and sugar manufacturing entered the market during this time. Around 152 new sanitising enterprises have entered the domestic market during

this time. By the end of March, these brand-new businesses had seized the majority of the market. In Indonesia there was the record of enterprises which was charging extra price in online markets to make the cash in demand situation. Along with Nutraceutical demand has been boosted, this was observed with the help of consumer and pharmacist answers. Nutraceutical market dynamics also evolved at tremendous rate. During this time, demand and new company entries are noted. This is how the covid impacted on the market for sanitizers and nutraceuticals has been seen.

Key words – Covid-19, pre covid, during covid, demand, shortage, new companies, sanitizers, nutraceuticals, new entries, market share, domestic market, global market, price changes, observation, growth.

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It gives me immense pleasure to acknowledge and thank all those who have given consistent guidance, advice and encouragement.

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ABBREVATIONS –

CAGR -Compound annual growth rate

DNA -Deoxyribonucleic acid

RNA -Ribonucleic acid

INR -Indian rupees

USD -United states Doller

UK -United kingdom

US- united states of America

VMS – Vitamin minerals supplements

Q - Question

1.Introduction –

"Prevention is better than cure," as the proverb states. It turned out to be taking this saying seriously when it comes to covid. Since there was no vaccination or viable medicine at that time to treat the deadliest disease, thousands and millions of people suffered every day across the globe.

The coronavirus was assumed to be transmitted through touch with hands in the initial periods. This raised awareness regarding the significance of ensuring good hand hygiene. A person touches their face 23 times each day on average. Therefore, the likelihood of contracting an infection is great. This influenced people's perceptions of this infection's prevention. Since then, people has become more aware of the importance of hygiene, and these sanitizers have replaced handwashing. This change is lifestyle changed the whole industry [1].

At that point, it became apparent that taking measures and boosting immunity are easier options until a treatment is available. Prevention and avoid becoming positive became everyone's top focus.

Prior to the pandemic, sanitizers and nutraceuticals were considered luxury products. When prevention entered the scene, this once-luxury item became a need. [1].

Every element of life and every industry in the world were altered by the covid 19 pandemic. In terms of industry, it did not skip a beat.

Sanitizer industry and nutraceuticals are such industries where we can see the huge growth in multiple folds. When it comes to sanitizers there was 14% CAGR industry grew from 2014-2019[1]. Global hand sanitizer market size was valued at USD 6.02billion in 2021 and CAGR of 6.8% from 2022 to 2030[2].

When it comes to vitamin and minerals market it has grown exponentially with worth USD 22.14 bn in 2022. And market expected to grow annually by 3.11% CAGR from 2022-2025[3].

One sector that has undergone significant upheaval is the sanitizer industry. which has quickly gone from treating premium products as luxury goods to treating them like commodities. The priority of the product shifted as demand and supply fluctuated [1]. which product life cycle modifications during the previous two years have been the quickest. When it comes to sanitizer demand, the market underwent a transition

beginning with the introduction of numerous enterprises from various industries. [4]. The pandemic altered the entire dynamics of sanitizers; as a small industry entered the market, premium players lost their monopoly. According to customer behavior, industry trends, and governmental laws and restrictions, premium enterprises lost their exclusivity and had to reduce their prices. [6]. As demand changes the premium product changed into the commodity. In this past 2 years the market became commodity from premium product [5].

It's critical to assess the impact of basic nutritional components such vitamins, minerals, and omega 3 fatty acids on immunity because covid-19 dysregulates the immune system to attack the host. The immune-boosting effects of vitamins, minerals, and omega-3 fatty acids change the way that cells function and their structural fitness, which will aid in the fight against viruses and increase immunity. [7].

Given that India is an upper-middle income nation with substantial out-of-pocket healthcare costs. People were encouraged to lead healthy lifestyles when the worst sickness had no known cure. in order to boost immunity to viral defense. Doctors and scientists advised people with and without chronic diseases and began prescribing vitamins and minerals. Scientific research has shown that those who consume vitamins and minerals recover faster and with better results.

One common element that was lacking in the majority of the Covid 19 was vitamin D, which researchers discovered when examining the relationship between Covid and nutraceuticals. Even clinical trials revealed that vitamin D deficiency plays a significant role in the occurrence of COVID 19. These findings and studies fed the rising demand for supplements. [9].

Covid acted as a catalyst in the nutraceutical sector in global market. That led to tremendous growth in India also [8].

The global nutraceuticals market size was valued at USD 352.92 billion in 2021 and expected to grow at CAGR of 9.3% from 2021 to 2028. at this rate estimated growth is USD 658.11 billion [10]. Among which Asia pacific accounted for revenue share of 30% in 2021[11].

2.Review of literature –

Sanitizer's –

Antiseptic products like hand sanitizers eliminate pathogens from the hands. When water and handwashing soap are not available, they are advised for use. Both alcohol- and non-alcohol-based sanitizers are available. They come in foam, gel, spray, and liquid form. [12,13]

WHO Declared the pandemic COVID-19 also known as the Severe acute respiratory syndrome coronavirus 2, which have the high transmittable rate, prophylaxis is better way to reduce the transmission? That's when the sanitization and handwash comes into. These are the most effective way to reduce the transmission [12].

Relation between Virus and Sanitizer –

Viruses are the infectious agent which are Made of DNA or RNA, further classified as Enveloped and unenveloped. And it contains a host cell, where propagation of virus take place. N-Propanol is the common compound in virucides which have the capacity to affect the decoupling and protein synthesis.

To damage to be happen there must be above 60% alcohol is needed and below 90% alcohol. Which have the potency to damage the virus. Along with more than 1% of water is needed to make the more virucidal.

This alcohol damage the metabolic pathway and integrity of the virus leads loss of transmissibility between hosts [12].

Alcohol based Vs NON-alcohol sanitizer –

The market of alcohol based sanitizers is having high market share. Compare to alcohol free.in last few weeks of 2019 this theory of alcohol sanitizers became more poplar led to demand of alcohol-based sanitizers. Which holds 64% market share with USD 828.07 million market [14].

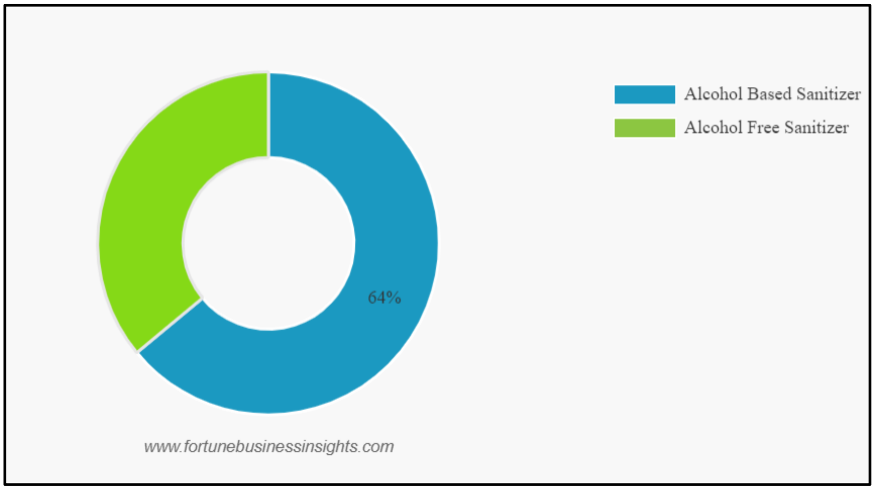

Fig 1 – Market share of Alcohol based and alcohol-free sanitizers

Demand –

There was tremendous demand for sanitizers globally, which led to shortage of the sanitizers.

People started buying the sanitizers at higher rate, due to high surge people started buying sanitizers beyond necessary in many areas. Which lead to more shortage and unavailable for many people.

Year on year sales growth in UK was over 259%, in Italy 1800%. month on month sales from December 2019 to January 2020 was 1380%.

India sanitizer market grown 1000 times. Priorly per year production was 10 Lack liters, it skyrocketed to 30 lack liters production per day [15]. India market value as of 2020 was INR 8.89 Bn. Expected to reach INR 17.97 Bn with 12.94% CAGR rate [16].

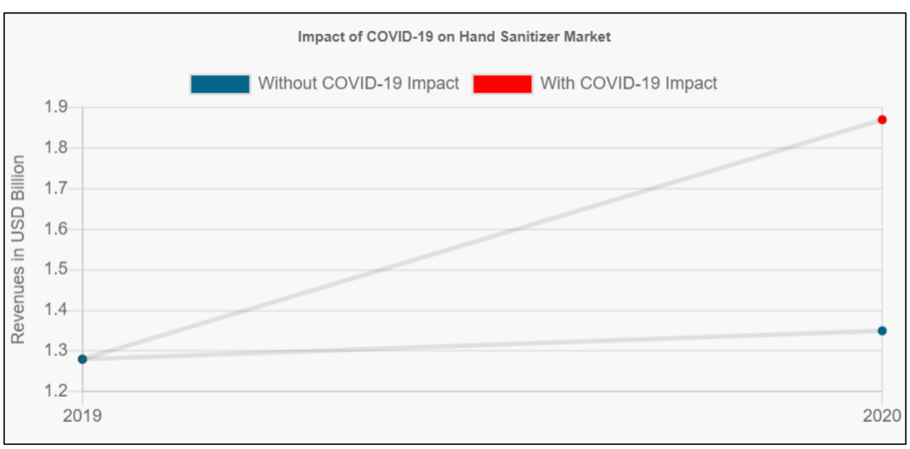

Fig 2 Demand of sanitizers with and without covid 19 [14]

Due to the high demand and availability problems, people started to panic buy, due to this same reason some areas in UK and US started limiting the sanitizer purchase. One person can buy only 2 sanitizers per purchase, came into the light [14].

British drug stores, a walgreens chains, announced that, they started implementing of 2 sanitizers per purchase across 2,465 stores [17].

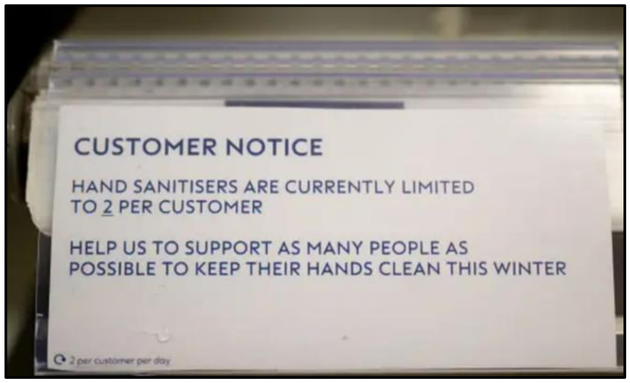

Fig 3- customer notice for sanitizer purchase

Demand and Price -

This market used to be oligopoly market very few players used to produce the sanitizers, and they enjoyed the exclusive prices until covid hit. First few weeks there was high demand and low supply, led to high prices of sanitizers. In US on average in store prices got 53% high from march to November (year to year) reports[18].

In Indonesia also there is the same pattern has been observed. where the data is collected from February 26 to March 4, during which on March 2, there was highest sales has been recorded. In which well known sanitizer companies surged high price in e platforms like Bukalapak, Tokopedia. Which was 81.12% higher than normal price. From 1613 transactions, they collected Rp 159, 560,430. On this range one bottle of sanitizer got sold around 25,000 to 155,000 [19].

Fig4- sanitizer price rise cause of high demand and low availability in Indonesia

In some areas, they are selling sanitizers at high price in online platforms like eBay, Amazon. In UK hand gel called Defendol is 3.49 Pound in stores and sold around 109.99 pound on Amazon [20].

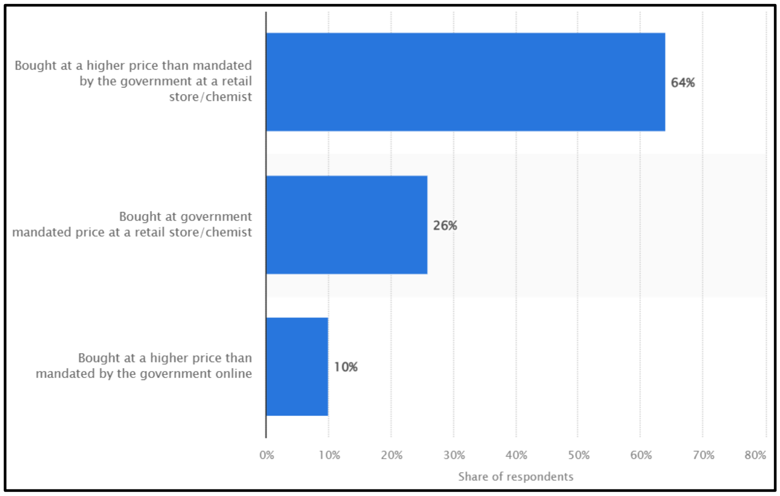

Fig 5 -This explains the customer behavior and market trends in India [24].

Sanitizer price regulations – India -

Due to the same reason, the ministry of consumer affairs, food and public distribution issued cap on sanitizers should not me more than 200INR for 100ml [21]. So that it will be available to everyone. With that sight they bought down the announced the price cap.

With this Godrej's sanitizer got down from 75Rs to 25Rs for 50ml pack. ITC has reduced the price of 55 ml from 77 Rs to 27 Rs [21]. Lifebuoy slashed the price of sanitizer and handwashes by 15%. Along with that many companies started agreeing with government norms and started production accordingly [22]

India Market dynamics change –

India sanitizer market was ruled by few companies. They used to be in oligopoly market and used to have their business in their own way. And they enjoyed the exclusivity of it till sanitizers treated as a luxury product.

Top leaders of this industry in pre covid era was , Dettol from Reckitt Benckiser India,Lifebouy from Hindusthan Uniliver ltd. And Pure hands by Himalaya Drug company[14,23].

As Covid emerged the whole dynamics changed into something, they never thought about.

Demand increased, shortage of product, Regulations came down, less barriers to enter into market, small businesses and different industry people entered into the picture.

Companies which used to be leaders in FMCG also jumped into the market to grab the opportunity. ITC, Dabur, Marico Ltd, Emami Ltd, Patanjali, cavinkare, Jyothy Laboratories are some companies [22,23].

Wipro launched the Hygienix sanitizer. and Asian paints also launched under the brand name of Viroprotek.

Some liquor companies also entered the sanitizer market,companies like Diageo, John distilleries, Johny walker, Radico Khaitan[14,22,23].

Skin care company Nivea also launched a product in the market [14]

Sugar companies like Dalmia Bharat Sugars & industries setup a sanitizer factory with four sugar mills [15].

Nearly 152 companies entered the sanitizer market. Priorly the top 3 companies enjoyed the exclusivity. These new entries changed the game entirely. In starting of the March 2020, they hold the 61%market share and 46% value. These 3 top companies fell from 81% in January, February to 39% in march[23].

This is how new entries changed the whole business dynamics of sanitizer market in India [23].

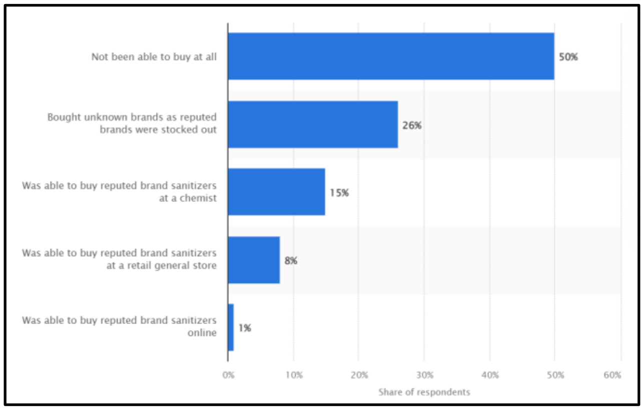

Fig 6 -Early January to march, customer survey about the brands and buying behavior in India [25]

Growth of Market -

The market share of sanitizers globally was USD 2,511.9 million in 2019, as sanitizer dynamics changed rapidly due to the pandemic. Estimated global sanitizer market is USD 14,512.7 millions in 2027. At a CAGR 24.7% growth of Which is showing clearcut result of change in customer behavior and giving importance to hygiene [26].

India sanitizer market has grown exponentially and, it was valued as INR 8.89 Bn in 2020 is estimated to grow to INR17.97 bn at the CAGR rate of 12.94% by the year 2026 [27]

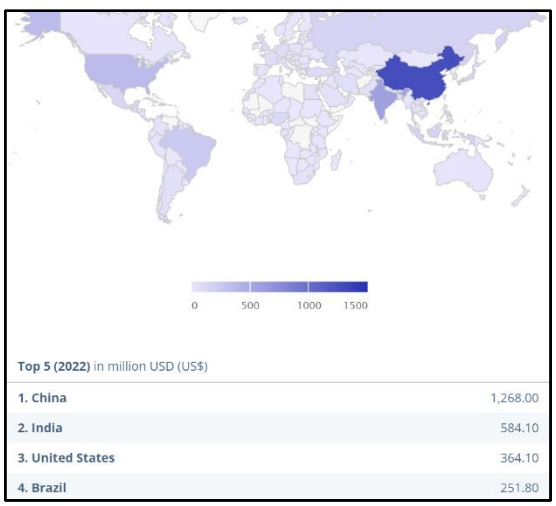

Fig 7-Sequence of highest Revenue generator in sanitizer market [28]

Nutraceuticals -

Nutraceuticals are medical food, which has extracted from the food and which have curing property to the diseases and boost up the immunity. These nutraceuticals works in micro level in our body, to cure the problem from root cause [29].

The term nutraceuticals was coined by Stephen de Felice in 1989. He is the founder and chairman of foundation for innovation in medicine. He quoted as food or parts of food that provide medical or health benefits, including the prevention and treatment of disease [29].

Growth –

In united states there was only 5% of growth in nutraceuticals compare to 2018 in 2019. Which was before pre covid. there was 44% of hike in sales when the first wave of pandemic hit. According to some reports there is record of 51.2% hie in multivitamin segment in march 2020, in which this period alone sold almost 120 million units of vitamins. In United states there is hike of 63% and in France 40-60% hike [30].

Global nutraceutical market size as of 2021 was USD 454.55 billion. And expected to grow at the CAGR of 9.0% in next decade 2021-2030 [31].

Nutraceuticals Market Report Scope

Report Attribute	Details
Market size value in 2022	USD 493.06 billion
Revenue forecast in 2030	USD 991.09 billion
Growth Rate	CAGR of 9.0% from 2021 to 2030
Base year for estimation	2021
Historical data	2017 - 2020
Forecast period	2021 - 2030
Quantitative units	Revenue in USD million/billion and CAGR from 2021 to 2030
Report coverage	Revenue forecast, company ranking, competitive landscape, growth factors, and trends
Segments covered	Product, region
Regional scope	North America; Europe; Asia Pacific; Central & South America; Middle East & Africa

Fig 8 Forecasting of nutraceuticals globally [31].

India’s Market of nutraceuticals is growing exponentially, from USD $4 Billion in 2017 to expected grow to USD $18 Billion [32].

As of 2020 India market valued around USD $3924.44 millions and expected to grow USD 10,198 million. Year on year growth of 22% is expected from 2020 [33]. The main growth is happening in middle- and lower-class people. As preventive care is getting more easy way than curative.

Demand –

Demand for the supplements has increased exponentially, in multifold in past 2-3 years as of 2019. This is mainly cause of more awareness on health and immunity, change in customer behavior, priority change, government schemes and support, changing in treatment protocols, above all these have proven result for preventive treatment for covid-19. These things are leading to increase the demand of nutraceuticals [35].

The demand for the product grown at the rate of 20-140% per week [36].

In India there is huge growth in this segment is happening, Reasons are government started focusing on improvement of national status, and implementing schemes to improve the nutrition through the mid-day meal is one among them. Along with several measures have been taken in India like integrated child development services program, national health mission [34].

Reasons for growth of Indian nutraceuticals -

Government schemes and interest towards the eradication of malnutrition.

VMS (Vitamins, minerals, supplements) launch in India has increased. India is launching one in five launches of Asia. Along with consumer behavior is shifting towards preventive and healthy habits.

The herbal segment has started to grow at the rate of CAGR 20% from 2015-2023.as India has the highest amount of heritage, when it comes to plants and ayurvedic. This is another reason for huge growth of nutraceuticals. Abundancy of resources to make the nutraceuticals is the reason for the growth in India.

India is global pharma powerhouse due to ability of high-quality production at low cost, with that we can understand the capacity of India manufacturing units.

This generation thought process has been changed towards, healthy life style and food consumption models.

Entry of new companies into the market.

Consumer behavior and changes in market dynamics -

There are 10-15% of nutraceuticals monthly spend has been increased [36].

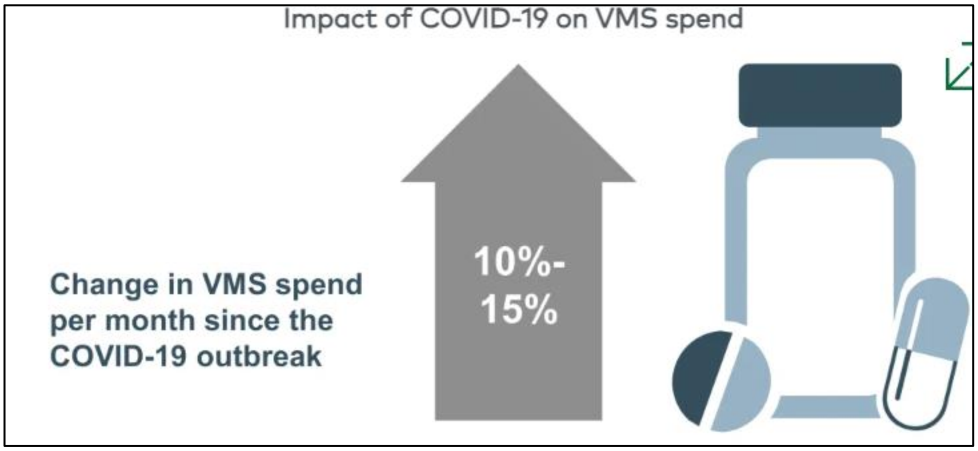

Fig 9 Change in behavior of spending on VMS

Nearly 20% of people started buying nutraceutical product, there are the people who had never bought them in pre covid time.

New customers entered the market and old customers started stocking it up, more than necessity. Which led to huge shortage.

This led to shortage of Raw materials and hike in the prices.

GNG medical stated to the pharma companies not to hike the price of the medicines in the crucial period of time [39]

In January 2020 the demand was 1-2 lack strips to 5-6 lakh stripes.

Compared to another products Vitamin D, Vitamin C, Elderberry and echinacea has been increased since march 2020 at the rate of 3X-16X [36]

Suppliers also reported there is 20% more pull on demand [36]

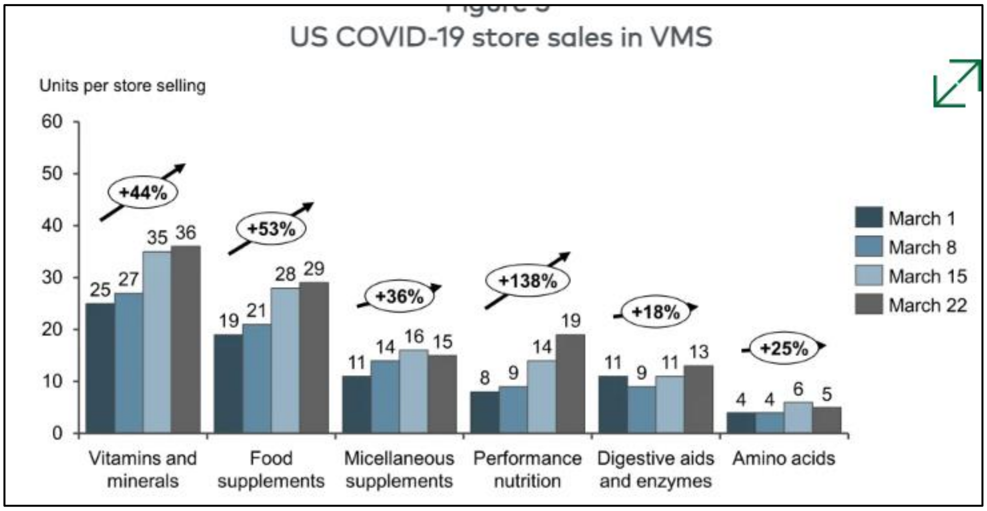

Fig 10 Comparative sales change of vitamins and minerals with other products [36]

Sales change company wise and segment wise –

Vitamin C –

Vitamin c supplement growth was 100% compared to 2019. In 2020 Indians customer bought 185 cores of pills.in which 171 crores of simple vitamin c and remaining was combination of other vitamins along with it [37]. Abbott healthcare, Limcee and Koya pharma were the top selling brands of it.

Zincovit tablets was sold around 54 cores in 2020, there is 93% spike in sales compare to 2019. This brand became highest selling medicine in the year 2020.

There was total 500 cores tablets has been bought my consumers in whole.

Other brands loke Pfizer, Becosules Z has shown 50% of the growt [37]..

Vitamin D-

When it comes to covid positive patients, there is one common observation was Deficiency of vitamin D, this led to significant research of relationship between them. Led to doctors and physicians started prescribing the vitamin D more led to high demand of it [30].

Top brands of it are Alkem laboratories, Upsire and Cadila’s calcirol [37]

This market has grown from USD$ 2020.30 million to USD $ 3925.67 million by the end of 2025. With growth rate of 11.07% CAGR.

Price change of vitamin D, comparing it with 2013 to 2020 [38]

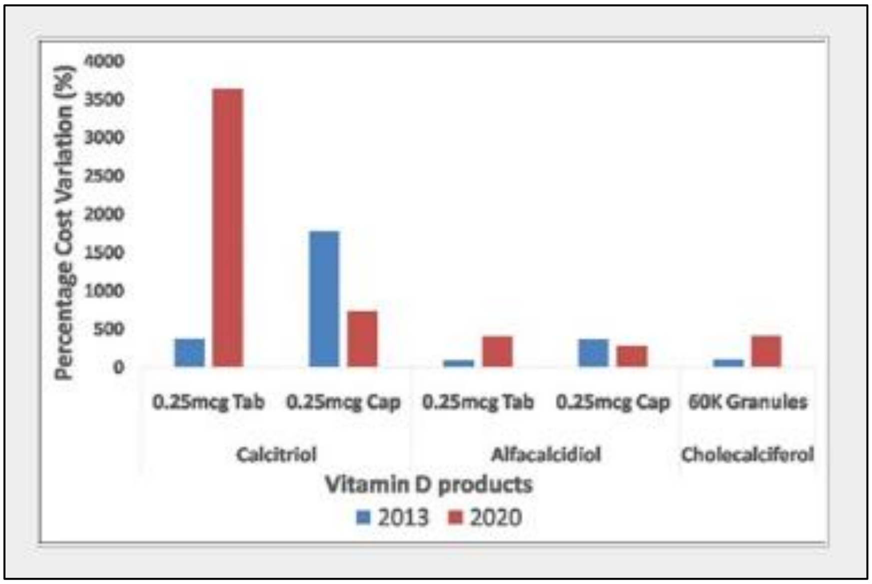

Fig 11 – Price changes in vitamin D, 2013 over 2020

3.Methodology –

The Study was about “Nutraceutical and sanitizer market Dynamic changes due to the Covid -19” The key research background was to evaluate the How covid has changed the market dynamics, The reason for market change is mainly cause of Behavior change of a customer, which is root cause of market dynamics change in the Sanitizer mad Nutraceutical segment. Understanding the effect of behavior change on the market by survey of pharmacist.

- **Study population** – Pharmacist and General population
- **Sample size** – 74 general population, 103 Pharmacies
- **Inclusion criteria** -Pharmacists who have the idea of products and business.
- **Sampling method** – Non probability, Simple random, snow balling sampling methods.
- **Study Area** – General population – Pan India, Pharmacist – Andhra pradesh
- **Duration of the study** –3 months
- **Research procedure** – Quantitative research
- **Study design** – Exploratory cross sectional research.
- **Data collection** – Mix of primary and secondary data research.
- **Study instrument** – Questionnaire
- **Data collection tool –** Microsoft forms
- **Administration of questionnaires** – Questionnaire was administrated via whatsapp to the general public and direct and indirect recording of responses for the pharmacist.
- **Method of analysis** – Study was analyzed using MS Excel using sample and cross tabulations.
- **Ethical consideration** – The study was approved by IIHMR university. The respondents were informed about the objectives and that the participation in the study is voluntary and that they can discontinue from the study at any point of time. the preamble also ensured that no questions will seek their direct personal identification, confidentiality about the identity of respondent and data will be maintained

4.Results –

Pharmacist - 103

General Population – 74

Q1. Demand of sanitizers before covid

Options	percentage	Response no.
Very low	65	67
low	20	21
rarely	8	8
sometimes	7	7
to		103

Table 1 Demand of sanitizers pre covid

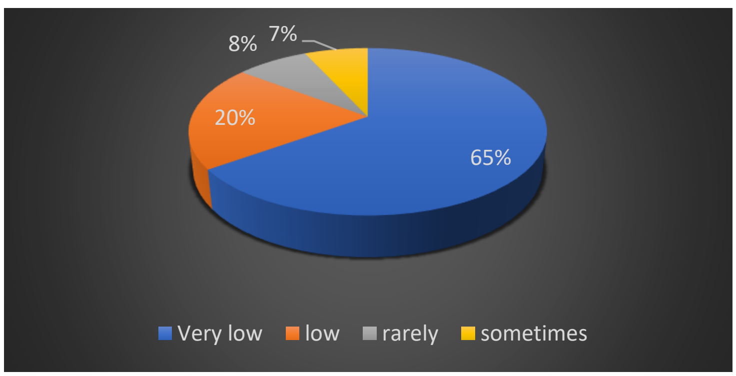

Fig 12 Pre-covid need for sanitizers

Q2 Demand of sanitizers During covid

Options	percentage	Respondent no.
Extremely high	77.7	80
High	22.3	23
Total		103

Table 2 Demand of sanitizers during Covid

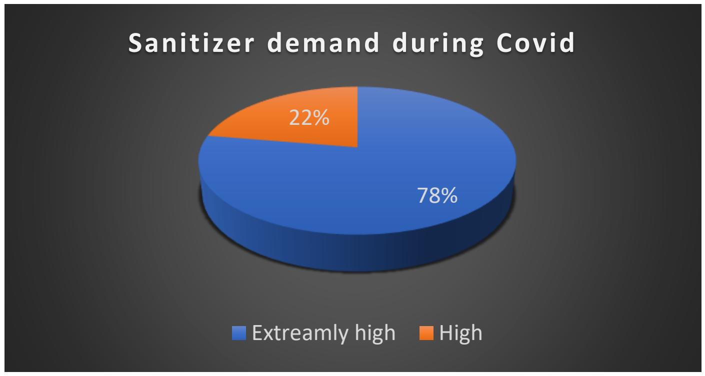

Fig 13 – Sanitizer demand during Covid

Q3. Pharmacist is dealing with a shortage and stockout issue

Options	percentage	Respondent no.
Yes	75.7	78
no	24.3	25
Total		103

Table 3 Pharmacist is dealing with a shortage and stockout issue

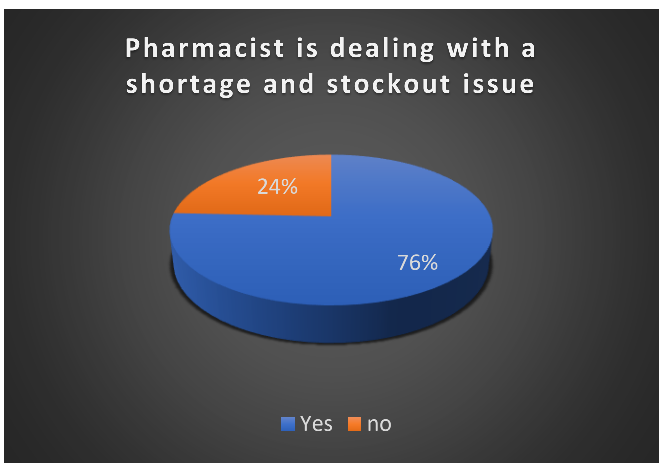

Fig 14 Pharmacist is dealing with a shortage and stockout issue

Q4. Pharmacist's observation of price changes

Options	percentage	Respondent no.
Yes	100	103
no	0	0
Total		103

Table 4 Pharmacist's observation of price changes

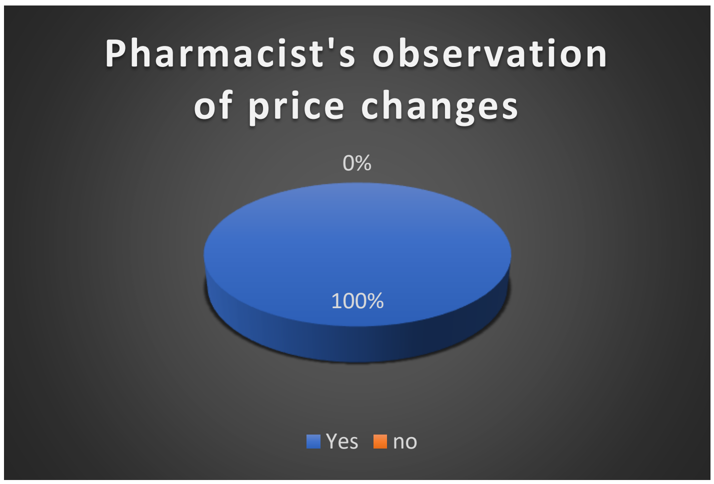

Fig 15 Pharmacist's observation of price changes

Q5. No. of pharmacist who introduced new brands of sanitizers

Options	Percentage	Respondent no.
Yes	85.4	88
no	14.6	15
Total		103

Table 5 – Pharmacist who introduced new brands of sanitizers

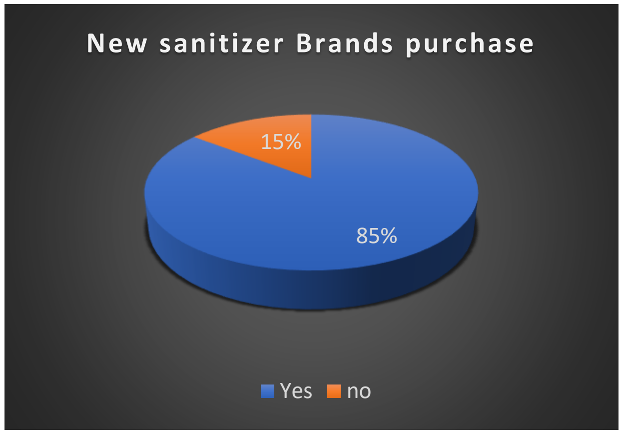

Fig 16 New brand purchase by pharmacies

Q6. number of pharmacists that introduced new sanitizer brands

Options	percentage	Respondent no.
Yes	100	103
no	0	0
Total		103

Table 6 number of pharmacists that introduced new sanitizer brands

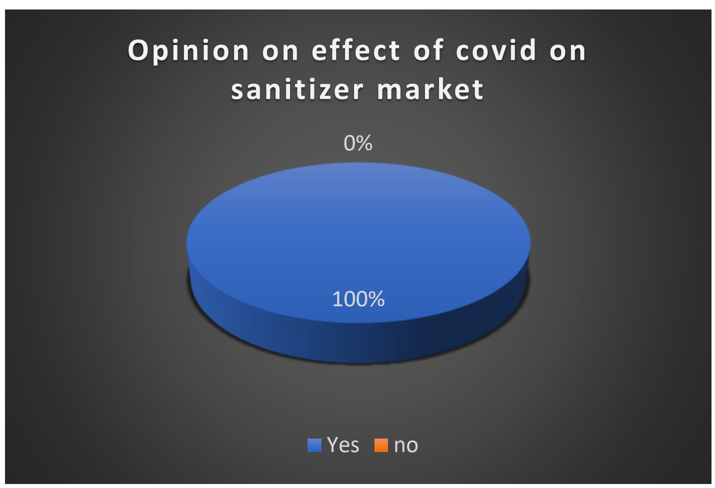

Fig 17 **Opinion on effect of covid on sanitizer market**

Nutraceuticals –

Q1. Change in sales pattern of Nutraceuticals before Covid

Options	Percentage	Respondent no.
Normal	74.8	77
low	9.7	10
moderate	9.7	10
High	5.8	6
total		103

Table 7 sales trends in the pre-covid market for nutraceuticals

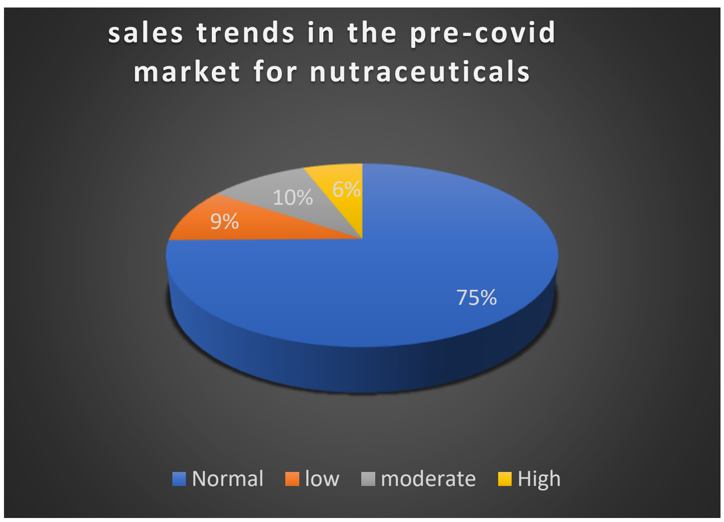

Fig 18 sales trends in the pre-covid market for nutraceuticals

Q2. Is there is a Change of sales pattern during covid in Nutraceuticals

Options	percentage	Respondent no.
Yes	100	103
no	0	0
Total		103

Table 8 Nutraceutical sales trends during the course of Covid

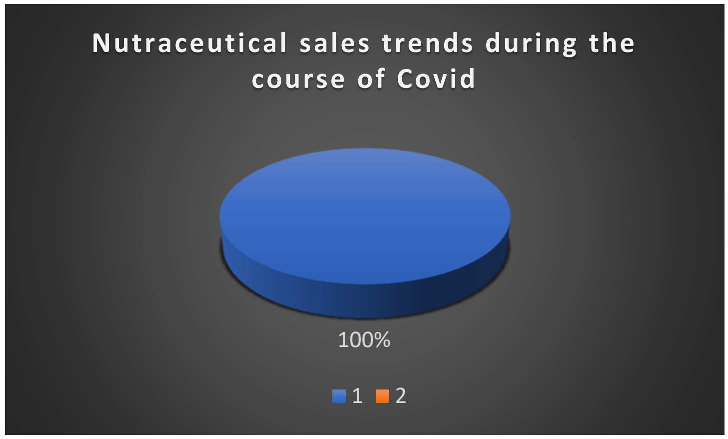

Fig 19 Nutraceutical sales trends during the course of Covid

Q3. Shortage of vitamins

Options	Percentage	Respondent no.
yes	50.5	52
no	34.0	35
maybe	15.5	16
total		103

Table 9 Lack of Nutraceuticals During Covid

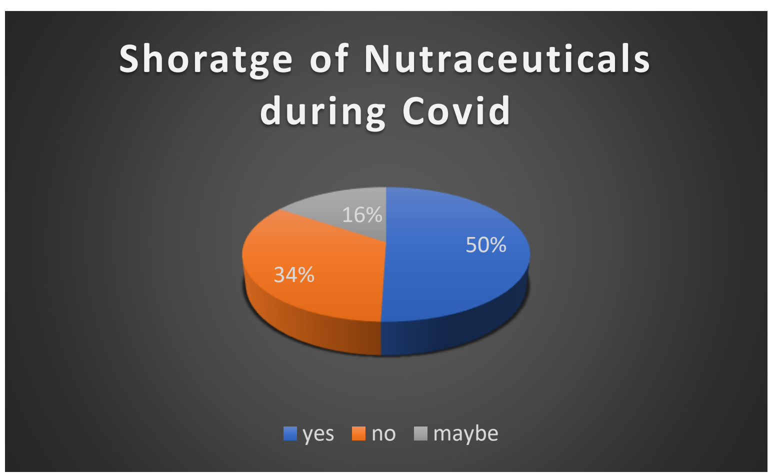

Fig 20 -Shortage of Nutraceuticals during covid

General population –

Q1. Pre covid sanitizer usage

Response	count	Percentage
yes	53	71.6
no	21	28.4
total	74	

Table 10 Sanitizer purchase patterns before the Covid

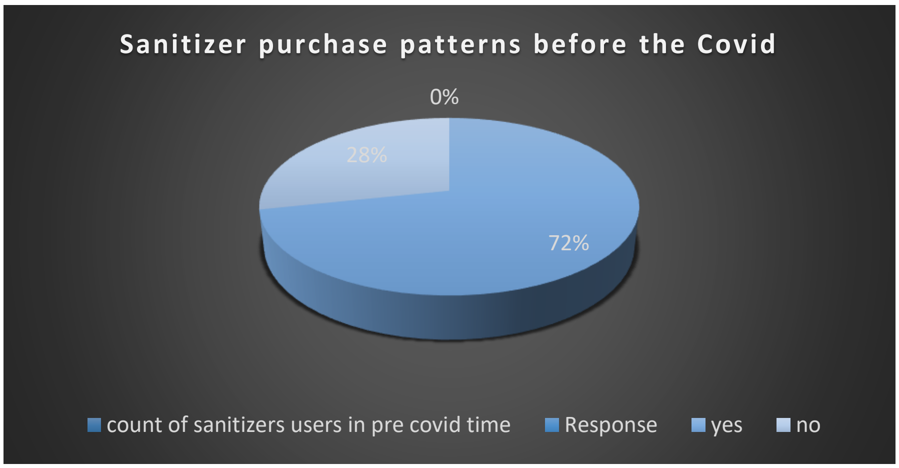

Fig 21 Pre covid sanitizer usage

Q2. Purchase frequency of hand sanitizers during pre-covid

Response	count	Percentage
Rarely	34	45.9
1	23	31.1
2	11	14.9
3	3	4.1
4	3	4.1
Total	74	

Table 11 Purchase frequency of hand sanitizers during pre-covid

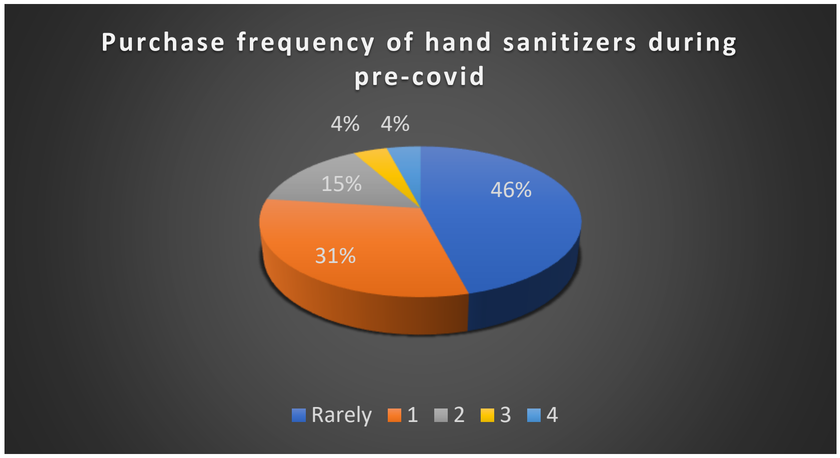

Fig 22 Purchase frequency of hand sanitizers during pre-covid

Q3. The frequency of sanitizer purchases during Covid

Response	count	percentage
1	23	31.1
2	22	29.7
3	18	24.3
4	3	4.1
>4	8	10.8
total	74	

Table 12 – The frequency of sanitizer purchases during Covid

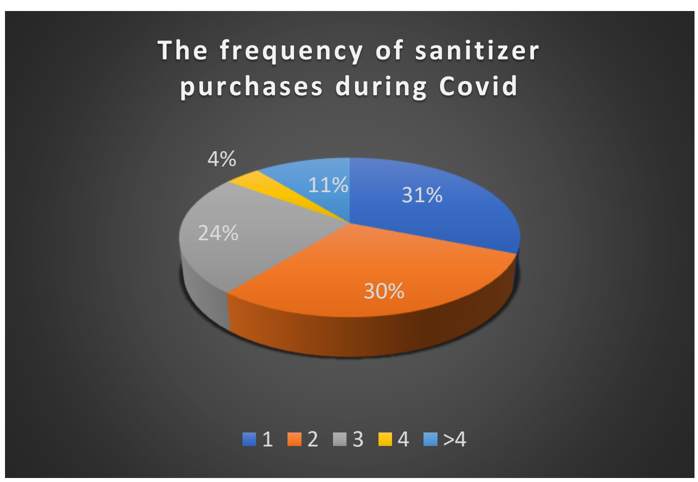

Fig 23- The frequency of sanitizer purchases during Covid

Q4. public observation of newly launched brands

Response	count	Percentage
yes	66	89.2
no	2	2.7
maybe	6	8.1
total	74	

Table 13 public observation of newly launched brands

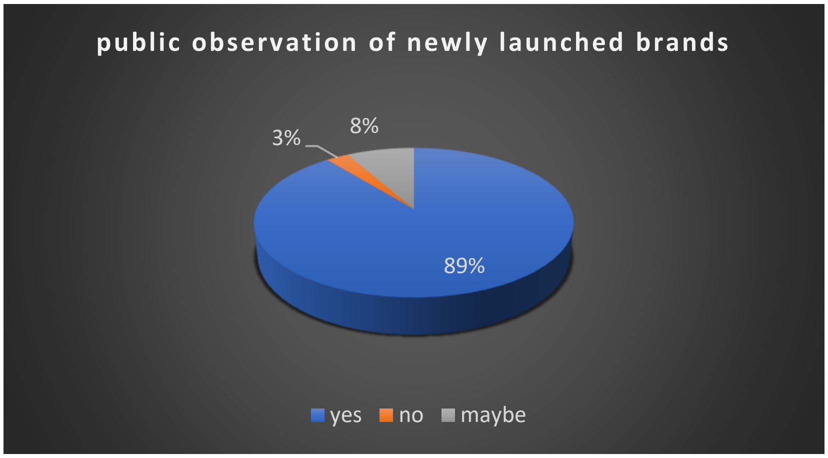

Fig 24 public observation of newly launched brands

Q5. Observation of a rise in sanitizer prices

Response	count	Percentage
• Yes	54	73.0
• Maybe	9	12.2
• Never observed	7	9.5
• No	4	5.4
Grand Total	**74**	

Table 14 Observation of a rise in sanitizer prices

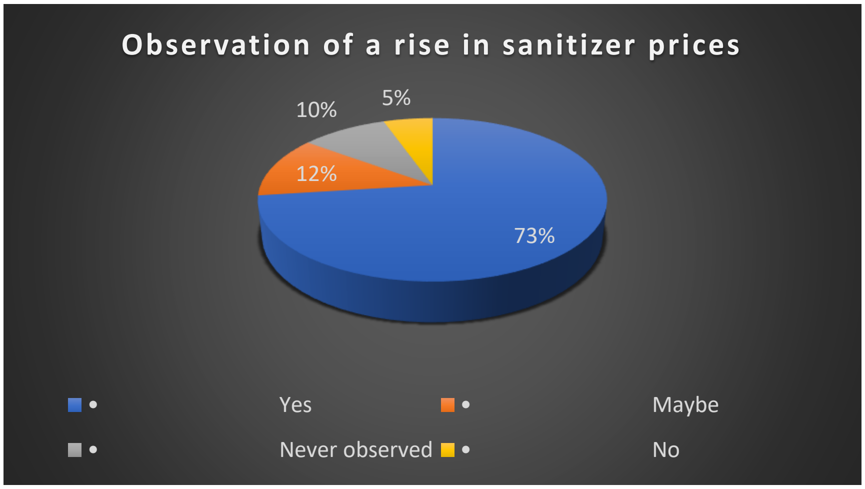

Fig 25 Observation of a rise in sanitizer prices

Q6. Observation on Vitamin price change

Response	Count	percentage
YES	42	56.8
NO	32	43.2
Grand Total	74	

Table 15 – Change in price of Nutraceuticals observa

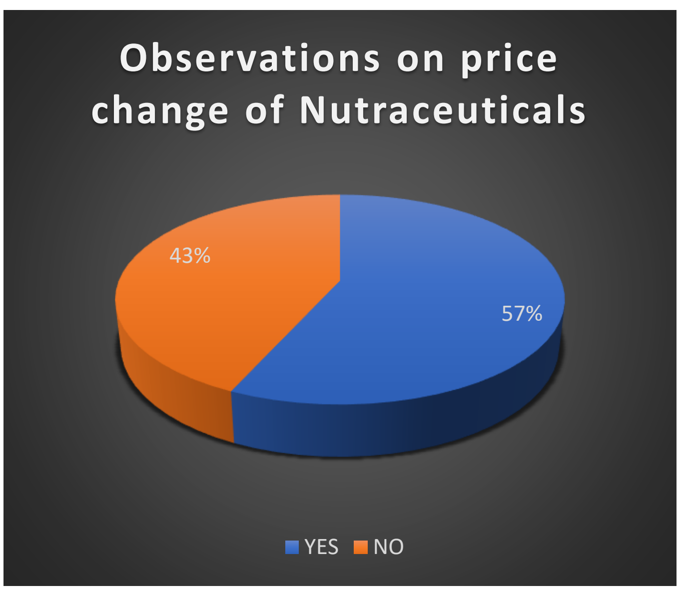

Fig 26 Observation on Nutraceuticals price change

Q6. Sanitizer shortage problems

Response	Count	Percentage
No	43	58.1
Yes	31	41.9
Grand Total	74	

Table 16 Affected public of the sanitizer shortage

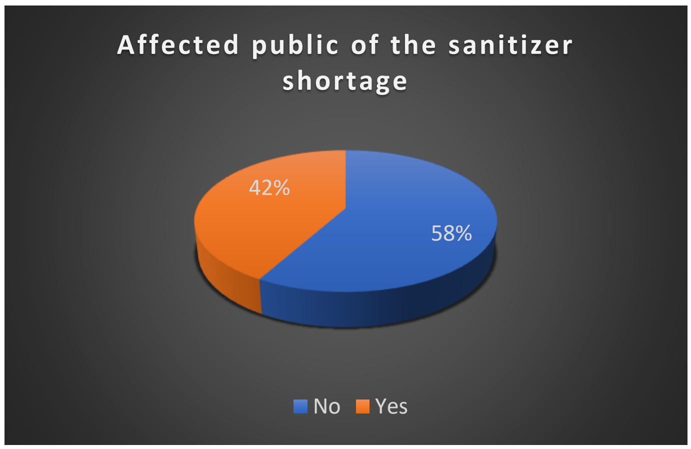

Fig 27 Affected public of the sanitizer shortage

Q7. Nutraceuticals shortage

Response	count	percentage
No	43	58.1
Yes	31	41.9
Grand Total	74	

Table 17 Affected public of the Nutraceuticals Shortage

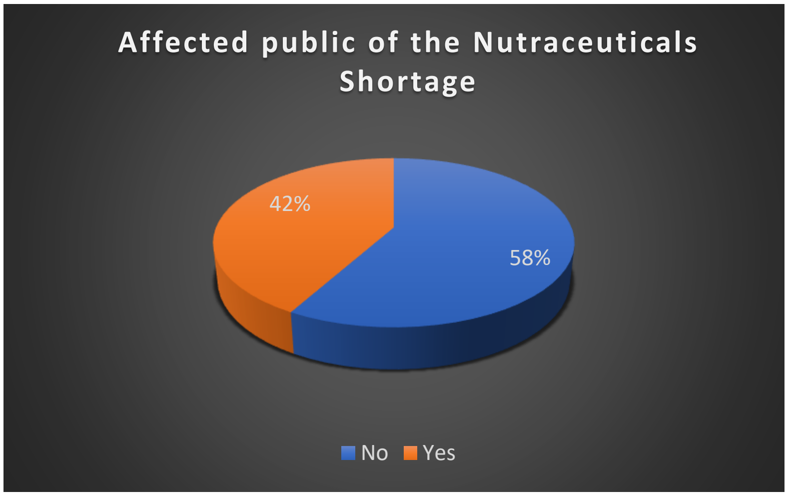

Fig 28 Nutraceuticals shortage

5.Discussion -

The study had 103 pharmacist respondents and 74 general population respondents. This study is pan India in terms of general population and Andhra Pradesh Pharmacists in terms of pharmacy.

Based on pharmacist comments, there are obvious changes between before and during covid demand. Prior to the COVID, the majority of pharmacists barely ever kept hand sanitizers on hand in the pharmacy due to poor demand and awareness. Along with that, we can comprehend the general population's changing behaviour because, in the pre-covid era, 46 percent of participants rarely used hand sanitizers, whereas 31 percent bought one every month.

When there is a covid, there is an extremely high and obvious demand in the drugstore. Additionally, there has been a change in how people behave. Over 10.8% percent of consumers purchased more than four hand sanitizers in a month, while about 24.3 percent purchased three.

With this, we can conclude that there has been a significant shift in people's behaviour, and the impact of COVID has had a significant impact on the dynamics of the sanitizers industry.

Shortage- A shortage and stockout issue was experienced by 75.7 percent of pharmacists when high demand caused a product shortage on the market. In times of strong demand, almost 58.1% of the population experienced problems with supply and scarcity.

And the high-end and Apollo pharmacies that have managed their supplies well from the start and ordered the sanitizers before the shortfall occurred are the ones that have not experienced a shortage. The central distribution system is something that Apollo Pharmacy has and has kept up with.

Price change – When asked about the price rise, every pharmacist said they had noticed a significant decrease compared to pre- and post-covid periods. They argued that, when it comes to market leaders, prices have fallen like anything else. It also came down as a result of government regulations.

In General population around 85.5% of respondents observe the price change, compare to pre covid.

New brands – around 86% people bought new sanitizer brands during the covid. And they said mostly those are local and new companies due to unavailability of the old brands.

89% of general population observed the new companies in the market.

Opinion of pharmacist on covid 19 related to sanitizers- 100% of the pharmacist have responded that covid has played the huge role in the change of the market dynamics in sanitizers.

Nutraceuticals –

Sales pattern –

As the nutraceuticals industry has expanded, nearly all pharmacists have replied about changes in the sales patterns of these products.

During the covid peak times, about 58 percent of the general public had encountered challenges with supply and shortage.

During the covid peak hours, almost 52% of pharmacists experienced shortage issues.

Strength of the study –

There are numerous research and publications that demonstrate how the market dynamics for sanitizers and nutraceuticals have changed. Regarding expansion, demand, scarcity, and every facet of a market-related paradigm change. Which describes how a shift in consumer behaviour and a rise in the awareness of preventative measures caused the market.

To better comprehend the trends in these areas, the respondents include both pharmacists and members of the general public.

Limitation of the study –

Size of the sample is limited.

6.Conclusion –

As the virus spread through one person's life, it touched every industry, leaving nothing behind. Nutraceuticals are no different from sanitizers in this regard.

People began looking for strategies to avoid contracting the sickness because there was no cure at the time and prevention was now preferred to treatment. At that point, preventive measures took precedence and sanitizers gained attention. According to study, hand sanitizers with 60 to 90 percent alcohol can prevent the spread of germs through touch. Due to their significant potential for prevention, alcohol sanitizers have become more accepted. Market dynamics then started to change.

The Indian government at that time provided the go-ahead for numerous companies to create sanitizers, which is the cause for the introduction of many new enterprises into the market. Starting with a change in population habit, increased demand led to shortages and high prices in some places. The government also altered the situation by permitting several firms to produce sanitizers. Government cap of 200ml should not exceed 100INR at the same time led to price reduction.

The entire dynamics of the market for sanitizers were altered. Around 152 businesses have recently entered the Indian sanitizer market. in that, there is FMCG, alcohol, and sugar producing sectors. In order to seize the opportunity, many people entered the market as a result of the demand.

Due to preventive actions, people's behavior shifted from not purchasing any hand sanitizer in pre-covid lead to purchasing four per month in covid times. Additionally, a worldwide shortage was caused by panic buying. In order to maintain inventory and prevent stockouts, some stores even set a restriction of 2 hand sanitizers per purchase.

Industry leaders lost their monopoly over the entire market as a result of the increasing number of companies entering the market. They have a market share of over 81 percent in January 2020, but it drops to 39 percent in March. That is the fundamental change in dynamics. And large corporations caused a decline in price. Due to the high cost, many consumers have expressed increased interest in local businesses. By the end of March, newly established businesses had seized the majority of the market.

Nutraceuticals-

When it comes to this market, people started consuming more than previously because of the fact that it is a known immunity builder and has a significant impact on combating contagious diseases, which caused panic buying.

The only reason why people's behaviour patterns have changed is that preventative care has become more popular, there are easier ways to boost immunity against diseases, and there is a greater understanding of health issues. Both customers and pharmacists have noticed pricing adjustments and a shortage as a result of limited supply and high demand at the same time that new companies have joined the market. Additionally, numerous new and regional multivitamin companies have been purchased by local pharmacies.

Sanitizers and nutraceuticals industry dynamics have completely transformed due to Covid. They were terribly ignored in their anticipated growth. The market share soared to an exceedingly high magnitude when the covid was released. both in the domestic and worldwide markets. There has been a complete paradigm change.

Recommendations –

To get the more insights into the market, more sample size which covers all the tires of cities, will help us to understand in a better way.

Every place have faced different situations when it comes to shortage and demand problems, to understand it, we need to involve more sample in the study.

The different range of pharmacies are involved in the study, like branded chines like apollo and Medplus, along with old and renowned pharmacies along with small pharmacies are present in the sample, which may cause the outliers problem.

Study with same level of sample will give better insight.

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8. Annexures

Questionnaire –

Questionnaire for Pharmacist -

1.What is the demand status of sanitizers during pre-Covid times?

- Very low
- Low
- Rare
- Sometimes

2. What is the status of sanitizers during Covid times?

- Extremely high
- High

3. Have you faced Shortage problem during Covid time?

- Yes
- No

4. During early Covid, have you faced the stockout situation for sanitizers?

- Yes
- No

5. Have you noticed the price changes of sanitizers/ compared to pre and durig covid?

- Yes
- No

6. In early Covid, is price of the sanitizers was high/ normal?

- High
- Low
- Normal

7. Have you bought new brands of sanitizers? During the Covid?

- Yes
- No

8. Have you bought new brands of sanitizers? During the Covid?

- Yes
- No

9. Have you bought new brands of sanitizers? During the Covid?

- Normal

- Low demand
- High demand

10. Is sales of nutraceuticals has grown in Covid time?

- Yes
- No

11. Has new companies entered the market of Nutraceuticals? during Covid?

- Yes
- No

12. Have you faced shortage problems for Nutraceuticals during Covid?

- Yes
- No

13. Have you observed Price changes in Nutraceuticals during Covid?

- Yes
- No

General population -

1.Pre Covid, have you Used sanitizers?

- Yes
- No

2.which company sanitizer, you used in pre Covid?

- Dettol
- Life buoy
- Himalay
- Others

3.Pre Covid, what is the frequency of buying the sanitizer per month?

- 1
- 2
- 3
- 4
- Rarely

4.In Pre Covid time, have you felt, sanitizers are more Costly ?

- Yes
- No
- Maybe

5.Post Covid, what is the frequency of buying the sanitizers per month?

- 1
- 2
- 3
- 4
- >4

6.which company sanitizer are you using during Covid time?

7.Have you observed the new Sanitizer companies in the market during Covid time?

- Yes
- No
- Maybe

8.Have you noticed the price change comparative to pre Covid and present?

- Yes
- No
- Maybe
- Never observed

9.During pre-Covid, have you faced unavailability and shortage problems?

- Yes
- No

10.have you observed the Sanitizer price change during early Covid and late Covid period?

- Yes
- No

11.Have you used the Vitamin supplements in Pre Covid times?

- Yes
- No

12.Pre Covid, reason for vitamin supplements? (If applicable)

- Doctor's prescription
- Own interest

13.During Covid, have you faced the problem during purchase of vitamin, due to unavailability?

- Yes
- No

14.Have you noticed the price change in vitamin supplements, compare to pre Covid and post Covid?

- Yes
- No

15.Do you feel, the Covid have huge role in unavailability of vitamin supplements during Covid?

- Yes
- No