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# **A STUDY ON IMPACT OF COVID-19 ON CONSUMER BUYING BEHAVIOUR TOWARDS ONLINE AND OFFLINE SHOPPING**

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## **ABSTRACT:**

The outbreak of COVID-19 has triggered unprecedented changes in consumer behaviour worldwide, particularly in the realm of shopping preferences. This study delves into the multifaceted impact of the pandemic on consumer buying behaviour, specifically focusing on the shift towards online and offline shopping channels. Through a comprehensive analysis, this research aims to uncover the intricate dynamics influencing consumer choices in the wake of the pandemic, shedding light on the implications for businesses and marketers.

The methodology employed in this study comprises both qualitative and quantitative approaches, incorporating surveys, interviews, and observational data analysis. By collecting data from a diverse sample of consumers across different demographic segments, this research seeks to capture a comprehensive picture of the evolving consumer landscape amid the COVID-19 crisis.

One of the key findings of this study is the significant surge in online shopping adoption as a consequence of the pandemic-induced restrictions and safety concerns. With lockdown measures prompting consumers to seek alternative shopping avenues, e-commerce platforms have experienced a remarkable increase in traffic and sales volume. Moreover, the convenience and safety offered by online shopping have emerged as primary drivers influencing consumer behaviour during the pandemic.

However, despite the exponential growth of online shopping, the study also highlights the enduring relevance of offline shopping experiences. While foot traffic in physical stores may have dwindled temporarily due to lockdown restrictions, consumers continue to value the tactile and sensory aspects of in-store shopping, particularly for certain product categories such as apparel and cosmetics. Furthermore, the resurgence of offline shopping post-lockdown underscores the enduring appeal of brick-and-mortar retail in fostering social interaction and experiential shopping.

Beyond the dichotomy of online versus offline shopping, this research explores the nuanced factors shaping consumer preferences in the pandemic era. Factors such as brand trust, product availability, pricing strategies, and delivery efficiency emerge as critical determinants influencing consumer decisions across both online and offline channels. Moreover, the study identifies shifting consumer priorities and values, with an increasing emphasis on sustainability, health, and hygiene considerations influencing purchasing behaviour.

The implications of these findings for businesses and marketers are profound. In the face of evolving consumer preferences, businesses must adapt their strategies to align with changing market dynamics. For online retailers, investing in user-friendly interfaces, seamless payment gateways, and expedited delivery services can enhance the shopping experience and foster customer loyalty. Conversely, brick-and-mortar retailers must prioritize safety protocols, enhance in-store experiences, and embrace omnichannel strategies to remain competitive in a rapidly evolving retail landscape.

In conclusion, this study underscores the transformative impact of COVID-19 on consumer buying behaviour towards online and offline shopping. By elucidating the complex interplay of factors influencing consumer choices, this research provides valuable insights for businesses seeking to navigate the challenges and opportunities presented by the pandemic. Moreover, the findings of this study contribute to the broader discourse on consumer behaviour in times of crisis, offering valuable implications for policymakers, academics, and industry practitioners alike.

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## **INTRODUCTION:**

In late 2019, Chinese authorities alerted the World Health Organization (WHO) about a series of severe lung disease cases in Wuhan, China, stemming from a wet market. This outbreak was later identified as COVID-19, caused by a coronavirus. The WHO declared it a pandemic on March 11, 2020, as it rapidly spread globally due to increased travel and globalization.

Countries responded with various measures, including school and business closures, quarantines, and border controls. Consumer behaviour shifted significantly, with people stockpiling emergency supplies, food, and hygiene products, as evidenced by a Nielsen study.

The retail industry is experiencing a profound shift with the rise of e-commerce, challenging traditional brick-and-mortar stores. Offline shopping offers tangible product experiences and immediate satisfaction but faces limitations like geographic reach and high overhead costs. Conversely, online shopping provides unparalleled convenience, global access, and lower prices but lacks physical interaction and may lead to purchase regrets and delivery delays. The future of retail lies in integrating both channels seamlessly, leveraging technology and omnichannel approaches.

Moreover, social commerce and mobile shopping are reshaping the retail landscape. Social media platforms enable direct brand-consumer connections and interactive shopping experiences, while mobile technology facilitates on-the-go browsing and purchasing. This shift impacts various industries differently, with some adapting more readily than others. Additionally, it strains logistics and supply chains, necessitating advancements in delivery systems and sustainability efforts. Ultimately, as online shopping grows, so do concerns about its environmental impact, highlighting the need for sustainable practices in packaging, transportation, and energy consumption.

This research examines COVID-19's impact on consumer buying behaviour, focusing on online and offline shopping. Through analysing existing studies and databases within a specific timeframe, we identified key themes influencing consumer choices during the pandemic. These insights can aid policymakers in enhancing consumer experiences. Further investigation into these factors would benefit academics, researchers, and professionals in the field of consumer behaviour.

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### **OBJECTIVES OF THE STUDY:**

- To inspect how the pandemic has influenced shifts in what consumers prioritize when choosing between online and offline shopping.
- To investigate the key factors that motivate consumers to choose online or offline shopping during and post COVID-19
- To see if COVID-19 affects how much people trust brands and think about product quality.
- To assure the level of customer satisfaction with online and offline shopping during and after COVID-19
- To inspect the psychological factors influencing consumers' decision-making processes in online and offline shopping post-COVID-19

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### **LITERATURE REVIEW:**

Examining the Heterogeneity of Online Grocery Shopping Adoption During the COVID-19 Pandemic: A Moderated Mediation Analysis" by Zhang et al. (2022) explores how factors like age, income, and pre-pandemic online shopping habits influenced the adoption of online grocery shopping during COVID-19.

Generational Differences in Online Shopping Behaviour During the COVID-19 Pandemic" by Fiore et al. (2021) examines how different age groups (Gen Z, Millennials, etc.) adapted their online shopping behaviour during the pandemic.

Consumer Buying Behaviour Towards Online and Offline Shopping: Pre, During and Post Covid 19 Pandemic (Akter et al., 2021): This study explores the multifaceted nature of consumer choice. While convenience and online offers played a role during COVID-19, factors like product experience and the need for social interaction might still favour physical stores.

The COVID-19 Pandemic and the Consumer Experience: Impacts and Future Directions (Kim et al., 2021): This research suggests that consumers might become more quality-conscious during uncertain times. The focus on hygiene and essential goods could lead to a heightened awareness of product quality and brand reliability.

Impact of COVID-19 on Consumer Buying Behaviour Towards Online and Offline Shopping (Singh & Jain, 2020): This research delves into the interplay between online and offline experiences. Consumers might prioritize factors like product touch-and-feel or immediate gratification for certain purchases, even during a pandemic.

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### **CORRELATION FOR THE STUDY:**

#### ***CORREATION 1:***

#### **CUSTOMER SUPPORT YOU RECEIVED IN ONLINE AND HOW LIKELY ARE YOU TO RECOMMEND YOUR PREFERRED SHOPPING METHOD (ONLINE) TO FRIENDS AND FAMILY.**

1 indicates a perfect positive correlation, (-1) indicates a perfect negative correlation, and 0 indicates no correlation. That is, if the correlation coefficient is greater than zero, it is a positive relationship. Conversely, if the value is less than zero, it is a negative relationship.

Therefore, a correlation coefficient of indicates a positive correlation between the factors contributing the customer support you received in online and how likely are you to recommend your preferred shopping method (online) to friends and family.

**CORRELATION FOR THE STUDY:****CORREATION 2:****PRODUCT QUALITY CHANGED WHEN PURCHASING FROM OFFLINE PLATFORMS BEFORE AND AFTER THE PANDEMIC AND THE PANDEMIC INFLUENCED YOUR WILLINGNESS TO TRY NEW OR UNFAMILIAR BRANDS.**

1 indicates a perfect positive correlation, (-1) indicates a perfect negative correlation, and 0 indicates no correlation. That is, if the correlation coefficient is greater than zero, it is a positive relationship. Conversely, if the value is less than zero, it is a negative relationship.

Therefore, a correlation coefficient indicates a positive correlation, between the perception of product quality changed when purchasing from offline platforms before and after the pandemic and the pandemic influenced your willingness to try new or unfamiliar brands.

**WEIGHTED AVERAGE FOR THE STUDY:****WEIGHTED AVERAGE 1:****THE SATISFACTION WITH THE FOLLOWING ASPECTS ON A SCALE FROM 1 TO 5 (1 BEING VERY DISSATISFIED AND 5 BEING VERY SATISFIED):****WEBSITE/APP USABILITY, PRODUCT INFORMATION ACCURACY, CHECKOUT PROCESS, DELIVERY TIME, CUSTOMER SERVICE.**

Through weighted average method, website / app usability is the first factor that have an impact of COVID-19 on consumer buying behaviour while consumer are selected the online shopping.

**WEIGHTED AVERAGE FOR THE STUDY:****WEIGHTED AVERAGE 2:****THE SATISFACTION WITH THE FOLLOWING ASPECTS ON A SCALE FROM 1 TO 5 (1 BEING VERY DISSATISFIED AND 5 BEING VERY SATISFIED):****STORE CLEANLINESS, STAFF HELPFULNES, AVAILABILITY OF PRODUCTS, IN-STORE PROMOTIONS AND DISCOUNTS, OVERALL AMBIANCE .**

Through weighted average method, In-store promotions and discounts is the first factor that have an impact of COVID-19 on consumer buying behaviour while consumer are selected the offline shopping.

**DATA COLLECTION INSTRUMENTS:**

- Primary data (Questionnaire, Interview and Observation)
- Secondary Data (Googe, Article and magazine)

**TOOLS AND TECHNIQUES OF DATA COLLECTION:**

The Study utilizes a questionnaire as its research instrument for the data collection this questionnaire was designed an alignment with the studies objectives and was administered to consumers to gather their perspectives the information was collected using a statured question

**PERCENTAGE ANALYSIS** - It refers to a special kind of rates; percentage are used in making comparison between two or more series of data. A percentage is used to determine relationship between the series.

**PIE CHART** – A pie chart is a circular statistical graphic, which is divided into slices to illustrate numerical proportion. In a pie chart, they are length of each slice is proportional to that will represent the data as per the responses by respondents throughout the questionnaire.

**USING CORRELATION, WEIGHTED AVERAGE FROM SPSS**

SPSS (Statistical Package for the social sciences) is a software package used for the analysis of statistical data.

**CORRELATION:**

Correlation is a statistical technique used to understand the relationship between two variables in your project. It tells you whether and how strongly those variables change together.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

n = Number of values or elements  
 $\sum x$  = Sum of 1st values list  
 $\sum y$  = Sum of 2nd values list  
 $\sum xy$  = Sum of the product of 1st and 2nd values  
 $\sum x^2$  = Sum of squares of 1<sup>st</sup> values  
 $\sum y^2$  = Sum of squares of 2<sup>nd</sup> values

**WEIGHTED AVERAGE:**

A weighted average is a calculation method used when different values in your data set have varying degrees of importance. It considers these weights to give you a more accurate overall average.

**ANALYSIS & INTERPREATION OF DATA:**

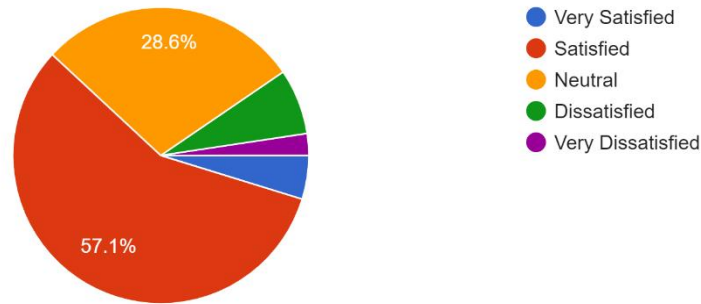
**TABLE 1: Level of satisfaction with online customer support received:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 2                  | 4.8%       |
| 2    | Satisfied         | 24                 | 57.1%      |
| 3    | Neutral           | 12                 | 28.6%      |
| 4    | Dissatisfied      | 3                  | 7.1%       |
| 5    | Very Dissatisfied | 1                  | 2.4%       |

SOURCE: Primary Data

How satisfied are you with the customer support you received in online?

42 responses



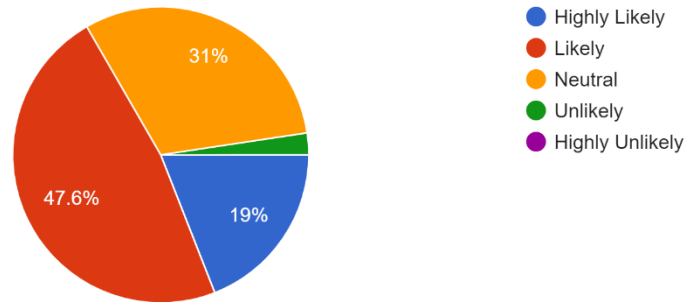
INFERENCE: - Majority 57.1% are responded to Satisfied.

**TABLE 2: Likelihood of recommending preferred online shopping method to friends and family:**

| SINO | PARTICULARS     | NO: OF RESPONDENTS | PERCENTAGE |
|------|-----------------|--------------------|------------|
| 1    | Highly Likely   | 8                  | 19%        |
| 2    | Likely          | 20                 | 47.6%      |
| 3    | Neutral         | 13                 | 31%        |
| 4    | Unlikely        | 1                  | 2.4%       |
| 5    | Highly Unlikely | 0                  | 0%         |

SOURCE: Primary Data

How likely are you to recommend your preferred shopping method (online) to friends and family?  
42 responses



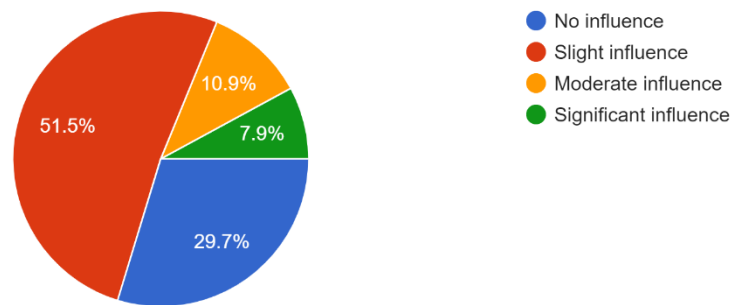
INFERENCE: - Majority 47.6% are responded to Likely.

**TABLE 3: Influence of the pandemic on willingness to try new or unfamiliar brands:**

| SINO | PARTICULARS           | NO: OF RESPONDENTS | PERCENTAGE |
|------|-----------------------|--------------------|------------|
| 1    | No influence          | 30                 | 29.7%      |
| 2    | Slight influence      | 52                 | 51.5%      |
| 3    | Moderate influence    | 11                 | 10.9%      |
| 4    | Significant influence | 8                  | 7.9%       |

SOURCE: Primary Data

Has the pandemic influenced your willingness to try new or unfamiliar brands?  
101 responses



INFERENCE: - Majority 29.7% are responded to No influence.

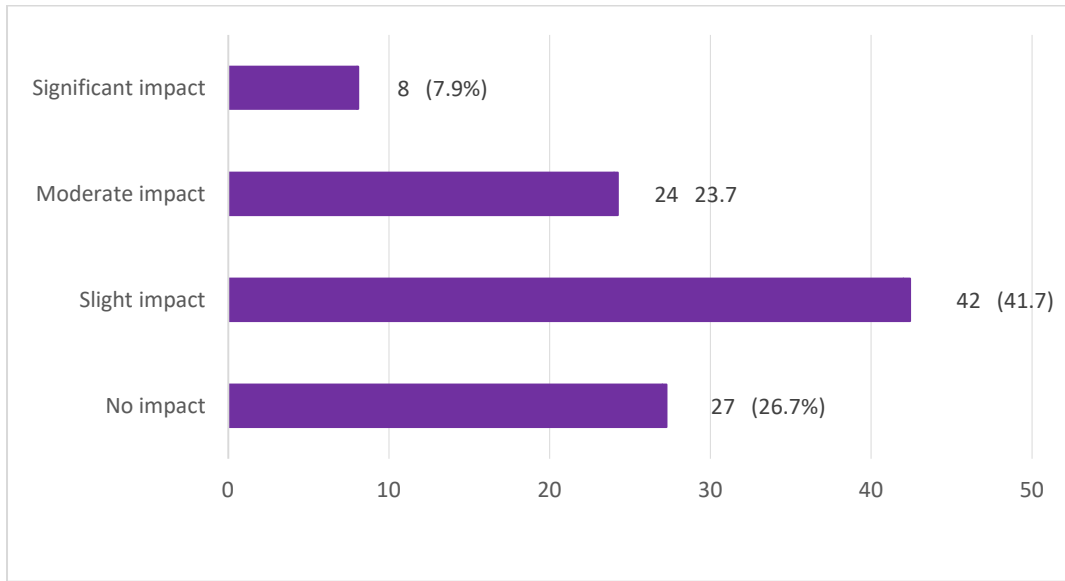
**TABLE 4: Influence of the pandemic on willingness to try new or unfamiliar brands:**

| SINO | PARTICULARS        | NO: OF RESPONDENTS | PERCENTAGE |
|------|--------------------|--------------------|------------|
| 1    | No impact          | 27                 | 26.7%      |
| 2    | Slight impact      | 42                 | 41.7%      |
| 3    | Moderate impact    | 24                 | 23.7%      |
| 4    | Significant impact | 8                  | 7.9%       |

SOURCE: Primary Data

Has the pandemic affected your perception of product quality from different brands?

101 responses



INFERENCE: - Majority 42% responded to Slight impact.

**TABLE 5: Certainly! Please provide the aspects you would like to rate for satisfaction on a scale from 1 to 5.**

**Website/App usability:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 6                  | 13.9%      |
| 2    | Satisfied         | 12                 | 27.9%      |
| 3    | Neutral           | 9                  | 20.9%      |
| 4    | Dissatisfied      | 10                 | 23.2%      |
| 5    | Very Dissatisfied | 6                  | 13.9%      |

INFERENCE: - Majority 27.9% are respondents to Satisfied.

**Product information accuracy:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 0                  | 0%         |
| 2    | Satisfied         | 16                 | 37.2%      |
| 3    | Neutral           | 18                 | 41.8%      |
| 4    | Dissatisfied      | 8                  | 18.6%      |
| 5    | Very Dissatisfied | 1                  | 2.3%       |

INFERENCE: - Majority 41.8% are responded to Neutral.

**Checkout process:**

| SINO | PARTICULARS    | NO: OF RESPONDENTS | PERCENTAGE |
|------|----------------|--------------------|------------|
| 1    | Very Satisfied | 3                  | 6.9%       |
| 2    | Satisfied      | 19                 | 44.1%      |
| 3    | Neutral        | 11                 | 25.5%      |

|   |                   |   |       |
|---|-------------------|---|-------|
| 4 | Dissatisfied      | 7 | 16.2% |
| 5 | Very Dissatisfied | 3 | 6.9%  |

INFERENCE: - Majority 44.1% are responded to Satisfied.

**Delivery time:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 8                  | 18.6%      |
| 2    | Satisfied         | 22                 | 51.1%      |
| 3    | Neutral           | 7                  | 16.2%      |
| 4    | Dissatisfied      | 4                  | 9.3%       |
| 5    | Very Dissatisfied | 2                  | 4.6%       |

INFERENCE: - Majority 51.1% are responded to Satisfied.

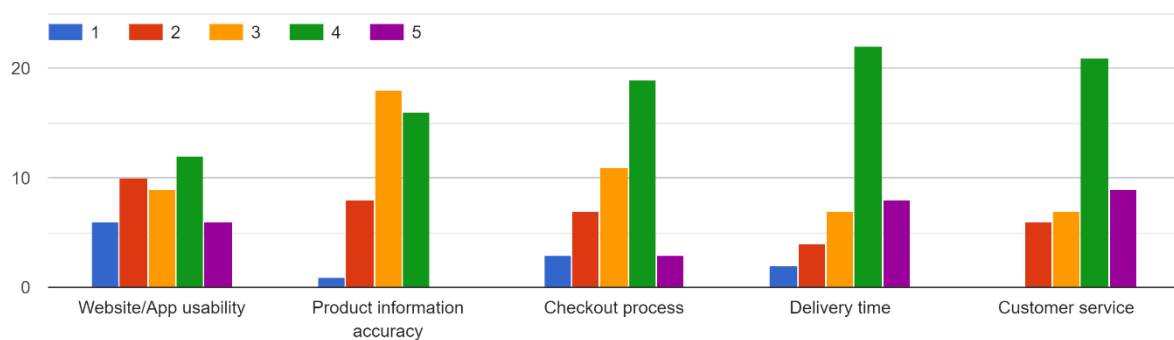
**Customer service:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 9                  | 20.9%      |
| 2    | Satisfied         | 21                 | 48.8%      |
| 3    | Neutral           | 7                  | 16.2%      |
| 4    | Dissatisfied      | 6                  | 13.9%      |
| 5    | Very Dissatisfied | 0                  | 0%         |

INFERENCE: - Majority 48.8% are responded to Satisfied

SOURCE: Primary Data

Please rate your satisfaction with the following aspects on a scale from 1 to 5 (1 being very dissatisfied and 5 being very satisfied):



**TABLE 6: Certainly! Please provide the aspects you would like to rate for satisfaction on a scale from 1 to 5.**

**Store cleanliness:**

| SINO | PARTICULARS    | NO: OF RESPONDENTS | PERCENTAGE |
|------|----------------|--------------------|------------|
| 1    | Very Satisfied | 7                  | 12%        |
| 2    | Satisfied      | 11                 | 18.9%      |
| 3    | Neutral        | 23                 | 39.6%      |

|   |                   |   |       |
|---|-------------------|---|-------|
| 4 | Dissatisfied      | 9 | 15.5% |
| 5 | Very Dissatisfied | 8 | 13.7% |

INFERENCE: - Majority 39.6% are responded to Neutral.

**Staff helpfulness:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 7                  | 12%        |
| 2    | Satisfied         | 12                 | 20.6%      |
| 3    | Neutral           | 20                 | 34.4%      |
| 4    | Dissatisfied      | 15                 | 24.8%      |
| 5    | Very Dissatisfied | 4                  | 6.8%       |

INFERENCE: - Majority 34.4% percentage of respondents to Neutral.

**Availability of products:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 5                  | 8.6%       |
| 2    | Satisfied         | 20                 | 34.4%      |
| 3    | Neutral           | 22                 | 37.9%      |
| 4    | Dissatisfied      | 11                 | 18.9%      |
| 5    | Very Dissatisfied | 0                  | 0%         |

INFERENCE: - Majority 37.9% percentage of responded Neutral.

**In-store promotions and discounts:**

| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 4                  | 6.8%       |
| 2    | Satisfied         | 14                 | 24.1%      |
| 3    | Neutral           | 20                 | 34.4%      |
| 4    | Dissatisfied      | 11                 | 18.9%      |
| 5    | Very Dissatisfied | 9                  | 15.5%      |

INFERENCE: - Majority 34.4% are responded Neutral

**Overall ambiance:**

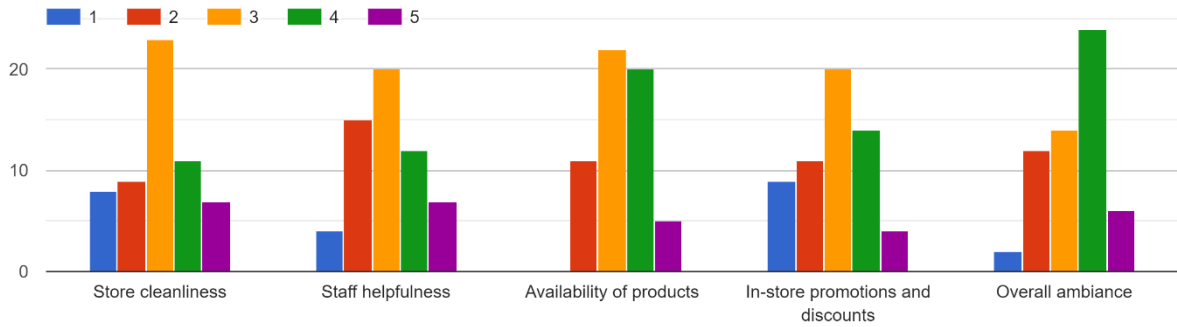
| SINO | PARTICULARS       | NO: OF RESPONDENTS | PERCENTAGE |
|------|-------------------|--------------------|------------|
| 1    | Very Satisfied    | 6                  | 10.3%      |
| 2    | Satisfied         | 24                 | 41.3%      |
| 3    | Neutral           | 14                 | 24.1%      |
| 4    | Dissatisfied      | 12                 | 20.6%      |
| 5    | Very Dissatisfied | 2                  | 3.4%       |

INFERENCE: - Majority 41.3% are responded to Satisfied.

SOURCE: Primary Data



Please rate your satisfaction with the following aspects on a scale from 1 to 5 (1 being very dissatisfied and 5 being very satisfied):



**CORRELATION 1:**

**STEP 1:**

**CORRELATION:** Correlation Analysis is statistical method that is used to discover if there is a relationship between two variables/datasets, and how strong that relationship may be.

**KARL PEARSON COEFFICIENT:** Karl Pearson's coefficient of correlation is an extensively used mathematical method in which the numerical representation is applied to measure the level of relation between linearly related variables.

**AIM:** To test whether there is correlation, between the customer support you received in online and how likely are you to recommend your preferred shopping method (online) to friends and family.

**STER:2**

**THE CUSTOMER SUPPORT YOU RECEIVED IN ONLINE**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 2                  |
| Satisfied         | 24                 |
| Neutral           | 12                 |
| Dissatisfied      | 3                  |
| Very Dissatisfied | 1                  |

**HOW LIKELY ARE YOU TO RECOMMEND YOUR PREFERRED SHOPPING METHOD (ONLINE) TO FRIENDS AND FAMILY**

| PARTICULARS     | NO: OF RESPONDENTS |
|-----------------|--------------------|
| Highly Likely   | 8                  |
| Likely          | 20                 |
| Neutral         | 13                 |
| Unlikely        | 1                  |
| Highly Unlikely | 0                  |

**STEP:3**

| x              | y              | x <sup>2</sup>              | y <sup>2</sup>              | xy               |
|----------------|----------------|-----------------------------|-----------------------------|------------------|
| 2              | 8              | 4                           | 64                          | 16               |
| 24             | 20             | 576                         | 400                         | 480              |
| 12             | 10             | 144                         | 100                         | 120              |
| 3              | 1              | 9                           | 1                           | 3                |
| 1              | 3              | 1                           | 9                           | 3                |
| <b>Σx = 42</b> | <b>Σy = 42</b> | <b>Σx<sup>2</sup> = 734</b> | <b>Σy<sup>2</sup> = 574</b> | <b>Σxy = 622</b> |

**STEP:4**

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$

$$r = \frac{5(622) - 42 \times 42}{\sqrt{5(734) - (42)^2 \times 5(574) - (42)^2}}$$

$$r = \frac{3110 - 1764}{\sqrt{3670 - 1764} \times \sqrt{2870 - 1764}}$$

$$r = \frac{1346}{\sqrt{3670 - 1764} \times \sqrt{2870 - 1764}}$$

$$r = \frac{1346}{\sqrt{1906} \times \sqrt{1106}}$$

$$r = \frac{1346}{43.657 \times 33.256}$$

$$r = \frac{1346}{1451.8}$$

$$r = 0.927$$

**STEP: 5**

**1** indicates a perfect positive correlation, **(-1)** indicates a perfect negative correlation, and **0** indicates no correlation. That is, if the correlation coefficient is greater than zero, it is a positive relationship. Conversely, if the value is less than zero, it is a negative relationship.

Therefore, a correlation coefficient of 0.927 indicates a positive correlation between the factors contributing the customer support you received in online and how likely are you to recommend your preferred shopping method (online) to friends and family.

## CORRELATION 2:

### STEP 1:

**CORRELATION:** Correlation Analysis is statistical method that is used to discover if there is a relationship between two variables/datasets, and how strong that relationship may be.

**KARL PEARSON COEFFICIENT:** Karl Pearson's coefficient of correlation is an extensively used mathematical method in which the numerical representation is applied to measure the level of relation between linearly related variables.

**AIM:** To test whether there is correlation, between the perception of product quality changed when purchasing from offline platforms before and after the pandemic and the pandemic influenced your willingness to try new or unfamiliar brands

### STEP:2

#### THE PANDEMIC INFLUENCED YOUR WILLINGNESS TO TRY NEW OR UNFAMILIAR BRANDS?

| PARTICULARS           | NO: OF RESPONDENTS |
|-----------------------|--------------------|
| No influence          | 30                 |
| Slight influence      | 52                 |
| Moderate influence    | 11                 |
| Significant influence | 8                  |

#### THE PRODUCT QUALITY CHANGED WHEN PURCHASING FROM OFFLINE PLATFORMS BEFORE AND AFTER THE PANDEMIC

| PARTICULARS        | NO: OF RESPONDENTS |
|--------------------|--------------------|
| No change          | 27                 |
| Slight change      | 42                 |
| Moderate change    | 24                 |
| Significant change | 8                  |

### STEP:3

| x                | y                | x <sup>2</sup>      | y <sup>2</sup>      | xy                 |
|------------------|------------------|---------------------|---------------------|--------------------|
| 30               | 27               | 900                 | 729                 | 810                |
| 52               | 42               | 2704                | 1764                | 2184               |
| 11               | 24               | 121                 | 576                 | 264                |
| 8                | 8                | 64                  | 64                  | 64                 |
| $\Sigma x = 101$ | $\Sigma y = 101$ | $\Sigma x^2 = 3789$ | $\Sigma y^2 = 3133$ | $\Sigma xy = 3322$ |

**STEP:4**

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$$

$$r = \frac{4(3322) - 101 \times 101}{\sqrt{4(3789) - (101)^2 \times 4(3133) - (101)^2}}$$

$$r = \frac{13288 - 10201}{\sqrt{15156 - 10201} \times \sqrt{12532 - 10201}}$$

$$r = \frac{3087}{70.39 \times 48.28}$$

$$r = \frac{3087}{3398.429}$$

$$r = 0.908$$

**STEP: 5**

**1** indicates a perfect positive correlation, **(-1)** indicates a perfect negative correlation, and **0** indicates no correlation. That is, if the correlation coefficient is greater than zero, it is a positive relationship. Conversely, if the value is less than zero, it is a negative relationship.

Therefore, a correlation coefficient of 0.908 indicates a positive correlation, between the perception of product quality changed when purchasing from offline platforms before and after the pandemic and the pandemic influenced your willingness to try new or unfamiliar brands.

**WEIGHTED AVERAGE 1:****STEP:1****Website/App usability:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 6                  |
| Satisfied         | 12                 |
| Neutral           | 9                  |
| Dissatisfied      | 10                 |
| Very Dissatisfied | 6                  |

**Product information accuracy:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 0                  |
| Satisfied         | 16                 |
| Neutral           | 18                 |
| Dissatisfied      | 8                  |
| Very Dissatisfied | 1                  |

**Checkout process:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 3                  |
| Satisfied         | 19                 |
| Neutral           | 11                 |
| Dissatisfied      | 7                  |
| Very Dissatisfied | 3                  |

**Delivery time:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 8                  |
| Satisfied         | 22                 |
| Neutral           | 7                  |
| Dissatisfied      | 4                  |
| Very Dissatisfied | 2                  |

**Customer service:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 9                  |
| Satisfied         | 21                 |
| Neutral           | 7                  |
| Dissatisfied      | 6                  |
| Very Dissatisfied | 0                  |

**STEP:2**

| PARTICULARS                  | $W_5$ | $W_4$ | $W_3$ | $W_2$ | $W_1$ | TOTAL | RANK |
|------------------------------|-------|-------|-------|-------|-------|-------|------|
| Website/App usability        | 30    | 40    | 27    | 24    | 6     | 127   | I    |
| Product information accuracy | 5     | 32    | 54    | 32    | 0     | 123   | II   |
| Checkout process             | 15    | 28    | 33    | 38    | 3     | 117   | III  |
| Delivery time                | 10    | 16    | 21    | 44    | 8     | 99    | IV   |

|                  |   |    |    |    |   |    |   |
|------------------|---|----|----|----|---|----|---|
| Customer service | 0 | 24 | 21 | 42 | 9 | 96 | V |
|------------------|---|----|----|----|---|----|---|

**STEP:3**

Through weighted average method, website / app usability is the first factor that have an impact of COVID-19 on consumer buying behaviour while consumer are selected the online shopping.

**WEIGHTED AVERAGE 2:****STEP:1****Store cleanliness:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 7                  |
| Satisfied         | 11                 |
| Neutral           | 23                 |
| Dissatisfied      | 9                  |
| Very Dissatisfied | 8                  |

**Staff helpfulness:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 7                  |
| Satisfied         | 12                 |
| Neutral           | 20                 |
| Dissatisfied      | 15                 |
| Very Dissatisfied | 4                  |

**Availability of products:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 5                  |
| Satisfied         | 20                 |
| Neutral           | 22                 |
| Dissatisfied      | 11                 |
| Very Dissatisfied | 0                  |

**In-store promotions and discounts:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 4                  |
| Satisfied         | 14                 |
| Neutral           | 20                 |
| Dissatisfied      | 11                 |
| Very Dissatisfied | 9                  |

**Overall ambiance:**

| PARTICULARS       | NO: OF RESPONDENTS |
|-------------------|--------------------|
| Very Satisfied    | 6                  |
| Satisfied         | 24                 |
| Neutral           | 14                 |
| Dissatisfied      | 12                 |
| Very Dissatisfied | 2                  |

**STEP:2**

| PARTICULARS                  | $W_5$ | $W_4$ | $W_3$ | $W_2$ | $W_1$ | TOTAL | RANK |
|------------------------------|-------|-------|-------|-------|-------|-------|------|
| Website/App usability        | 40    | 36    | 69    | 22    | 7     | 174   | II   |
| Product information accuracy | 20    | 60    | 60    | 24    | 7     | 171   | III  |
| Checkout process             | 0     | 44    | 66    | 40    | 5     | 155   | IV   |
| Delivery time                | 45    | 44    | 60    | 28    | 4     | 181   | V    |
| Customer service             | 10    | 48    | 42    | 48    | 6     | 154   | I    |

**STEP:3**

Through weighted average method, In-store promotions and discounts is the first factor that have an impact of COVID-19 on consumer buying behaviour while consumer are selected the offline shopping.

**KEY FINDINGS:**

- The survey results indicate a strong trend among respondents aged 16-24, with males constituting the majority, many being students.
- Online shopping is preferred by most, particularly for electronics, driven by safety concerns and a preference for home delivery.
- Despite comfort levels varying, satisfaction remains high, especially regarding ease and security of transactions.
- While price is a priority, in-store experiences and product inspection also hold significance.
- Respondents often express neutrality on certain matters but consistently report satisfaction and indicate a preference for frequent interactions.
- Overall, the findings highlight a dynamic consumer landscape with evolving preferences and a blend of traditional and digital shopping behaviours.

**STARTEGIES FOR SUCCESS:**

- To ensure success, target marketing towards the 16-24 age group, especially males and students, reflecting the majority of respondents. Focus on online shopping, acknowledging its preference among the majority, while prioritizing safety measures to address concerns.
- Emphasize home delivery options, as favoured by the overwhelming majority, and consider expanding offerings in electronics, the top choice for many respondents. Transparently address safety concerns to build trust and loyalty.

- Regularly assess feedback to adapt offerings promptly, considering the reported slight changes in preferences. Maintain a customer-centric approach, emphasizing satisfaction and competitive pricing. Offer avenues for in-person product inspection to enhance the shopping experience.
- By aligning strategies with prevailing preferences and needs, businesses can effectively position themselves for success, ensuring sustained growth and profitability in the market.

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## CONCLUSION:

The COVID-19 pandemic catalysed a seismic shift in consumer behaviour, with a surge in online shopping and a decline in offline retail activity. This transition was propelled by safety concerns, lockdown measures, and a preference for contactless transactions. E-commerce experienced a notable boom across all demographics, from essentials to non-essentials. While brick-and-mortar stores saw reduced foot traffic, they still offer advantages like product inspection and immediate gratification. As the pandemic recedes, a hybrid approach may emerge, where consumers utilize both online and offline channels. Businesses adept at navigating this shift, with a strong presence in both spheres, stand to thrive post-pandemic. A study underscores a pronounced move towards online shopping, notably among young male students, driven by convenience and safety. While price sensitivity persists, satisfaction with online transactions is high, indicating potential for improvement in traditional retail experiences. Overall, there's optimism for a blended future of online and offline shopping.

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