# A Socio-Demographic Perspective and the COVID-19 Effect on Indian Ayush Products

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## **Abstract**

This research paper investigates the association between various demographic factors and consumer behaviour in the context of Ayush product consumption. The study explores the preferences and purchase decisions of individuals based on gender, age, education level, and income providing valuable insights into the diverse and dynamic landscape of the Ayush product market.

Findings reveal distinct gender-based differences in Ayush product usage, with females exhibiting a higher preference for Ayush body and beauty products, emphasizing their interest in natural alternatives for personal care. Additionally, highly educated individuals prioritize natural ingredients and place a greater emphasis on product quality when making purchasing decisions, indicating their discerning approach towards Ayush products. Further analysis demonstrates that the unemployed or less income group shows a strong inclination towards Ayush and natural alternatives, driven by their belief in the health benefits of such products.

The findings of this research shed light on the diverse and dynamic nature of Ayush product consumption, paving the way for further exploration and informed decision-making in this burgeoning industry.

#### Introduction

According to the research report on the Ayush sector conducted by the Forum on Indian Traditional Medicine (FITM) under the Research and Information System for Developing Countries (RIS), the market size of the Ayush industry in 2020 was estimated at US\$ 18.1 billion. This reflects a significant growth from its market size of US\$ 2.85 billion in the year 2014-15 (PIB, 2023). The data indicates a substantial expansion of the Ayush sector over the six-year period, showcasing its increasing popularity and economic significance. Furthermore, in terms of overall exports, India's total Ayush export has witnessed a growth from US\$ 1.09 billion in 2014 to US\$ 1.54 billion in 2020 (PIB, 2023). This indicates a notable increase in international demand for Ayush products

and highlights the industry's potential to contribute to the country's economy through foreign trade. The global pandemic of COVID-19 has sparked unprecedented changes in consumer behavior, particularly in the health and wellness sector. In India, a country with a rich heritage of traditional medicine, Ayush products have garnered significant attention for their perceived natural and holistic approach to health. As the Ayush product market continues to thrive, understanding the socio-demographic factors influencing consumer behavior becomes crucial for businesses and policymakers alike.

During the pandemic, the government promoted several immunity-boosting products rooted in Ayurvedic science, such as teas, kadhas, and other concoctions. This endorsement provided a significant boost to the Ayurvedic industry. As consumers increasingly prioritize a healthy lifestyle and express growing concerns about environmental issues like climate change and pollution, natural products that are safe for oneself and the environment have become focal points for various stakeholders, including businesses, multinational corporations (MNCs), academicians, and the government. The research highlights the significance of demographic factors in shaping consumer preferences and behaviors related to Ayush products. It emphasizes the importance of tailoring marketing strategies and product offerings to different target groups, taking into account their specific preferences and motivations.

This study not only provides valuable insights to businesses in the Ayush product industry but also offers potential benefits for public health initiatives. Understanding the motivations behind consumer choices can facilitate the promotion of natural alternatives and traditional healthcare practices, fostering a holistic approach to health and wellness.

## **Theoretical Concepts:**

Consumer Behaviour - The field of consumer behavior is essential for businesses and marketers as it helps them understand consumers' motivations, preferences, attitudes, and decision-making patterns. There exists diverse and extensive literature on consumer behavior as changes in society, economics, and technology affect the way consumers behave. As per Kotler (1994), consumer behavior refers to the study of people's purchasing decisions, including what, when, and why they buy. According to Solomon et al. (1995), consumer behavior entails the examination of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to fulfill their needs and desires. As stated by Schiffman (2007), consumer behavior is the observable behavior displayed by consumers during the process of searching for, purchasing, using, evaluating, and disposing of products and services with the expectation of satisfying their needs. In more recent literature, Kotler and Keller (2011) define consumer buying behavior as the comprehensive study of how individuals, groups, and organizations buy and dispose of goods, services, ideas, or experiences to meet their needs and wants.

Ayush Products—Ayush products are healthcare and wellness products that are derived from the principles and practices of Ayurveda, an ancient traditional system of medicine that originated in India. Ayush products are formulated using natural ingredients, such as herbs, plants, minerals, and essential oils, and are believed to promote physical, mental, and spiritual well-being. Ayush products can come in various forms, including herbal supplements, oils, teas, cosmetics, personal care items, and dietary supplements.

The manufacturing of Ayush products follows specific guidelines to ensure authenticity and efficacy. Traditional Ayush texts, like CharakaSamhita and SushrutaSamhita, serve as references for formulating these products. Moreover, Ayush products are often manufactured using sustainable and eco-friendly practices to maintain the holistic principles of Ayush.

#### **Review of Literature**

Ayush, initially an acronym representing various alternative systems of medicine recognized by the Government of India, encompasses Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa-Rigpa, and Homoeopathy. The research findings indicate that the

adoption of AYUSH practices is relatively lower among middle-income households in comparison to both poorer and wealthier households. (Rudra et. al., 2017). After the implementation of the 'mainstreaming' policy in post-2005, the National Rural Health Mission (NRHM) presented an opportunity to adopt strategies such as the availability of AYUSH drugs, integrating providers at public health facilities, and fostering inter-sectoral convergence with Indian Systems of Medicine practitioners involved in national health programs.

The general opinion among the public is increasingly favoring the use of herbal drugs. This shift in sentiment is evidenced by the gradual rise in the global trade of herbal drugs. More and more customers are turning to Ayurvedic drugs as an alternative to allopathic drugs due to concerns about side effects and the high costs associated with allopathic treatments. (Jalwa et al., 2009).

The call for mainstreaming AYUSH in India is growing, primarily driven by the desire to enhance complementarity and optimize the roles of AYUSH providers within the formal healthcare system. (Rudra et. al., 2017) During the 12th plan, the Department of AYUSH launched the National AYUSH Mission with the primary objective of ensuring affordable, sustainable, and accessible healthcare. As a significant policy decision, the AYUSH Department was subsequently elevated into an independent Ministry in November 2014. This move aimed to further elevate AYUSH educational standards, focusing on leveraging epistemological strengths, ensuring quality standardization, and enhancing overall stewardship in the field. It was also seen that the use of alternative medicines, increased dramatically or there was a shift toward them, during COVID-19 due to several factors. (TOI, 2022).

Ayush medicines are classified into Branded Medicines and Traditional Medicines, encompassing a wide range of products. The market offers over 30,000 branded medicines and approximately 1,500 traditional products, providing consumers with a diverse selection of Ayush remedies to choose from. (Dhar&Dey, 2019) Further, the efficacy of Ayurvedic drugs was found to be satisfactory for 41% of consumers surveyed. (Sinha et al., 2013).

In addition to manufacturing pharmaceutical products,

numerous Ayurvedic companies are also engaged in producing nutraceuticals and fast-moving consumer goods (FMCG) such as soaps, shampoos, toothpaste, and toothpowder. These products are formulated using traditional herbal ingredients, reflecting the companies' commitment to incorporating natural and traditional remedies into their diverse product range (Vaijayanthi et al., 2012).

A significant majority of consumers in rural areas displayed a strong awareness of and preference for Ayurvedic products. (Sawant et al., 2013). Promoting Ayurvedic products through advertisements and other communication channels has gained significant popularity. These communication programs play a crucial role in creating awareness about alternative medicine among the public. As a result, the market value of Ayurvedic products has witnessed an increase, particularly in the over-the-counter (OTC) segment. (Sharma et al., 2014

A research study demonstrated a high demand for herbal cosmetics. The conclusion drawn from the study indicated that people in the research area exhibited a greater interest in Ayurvedic over-the-counter (OTC) products compared to prescribed Ayurvedic medicines.(Arya et al., 2012). Most importantly, consumers expressed the belief that advertising and promotional activities would lead to an increase in the sales of Ayurvedic products (Dhar&Dey, 2019).Rawat and Kala (2021) referred to the study conducted by Jai Singh Parmar (2007) which focused on exploring the impact of demographic factors, such as age, occupation, and income, on the use of cosmetics in a specific town. The study revealed that brand switching was a common practice among cosmetic users, particularly when their preferred brand was unavailable. Additionally, the research highlighted a preference among users for homemade or herbal cosmetics over synthetic alternatives.

According to Joshi (2017), UrvashiMakkar et al. (2007) observed that the expanding middle-class population in India, accompanied by an increase in disposable income, has resulted in a surge in the demand for cosmetics. Notably, customers exhibit a strong positive attitude towards herbal cosmetics, and these consumers are more inclined to purchase higher-priced products.

Joshi (2017) also referred to a study by Sundari and Murugan (2011) on women's buying behavior of personal care products. The study highlighted that the factors influencing the purchase decisions of personal care products can be categorized into "primary benefits" and "secondary benefits." The primary benefits encompass aspects like price, quality, and quantity of the products. On the other hand, the "secondary benefits" include considerations such as the ingredients used in the product, its purpose, innovative features, the reputation of the manufacturer, and certifications related to the product.

As per the study conducted by Rekha and Gokila (2015), the findings indicate that a majority of the respondents are well-informed about herbal cosmetics. The perception of cosmetics as a luxury is shifting, as many consumers now recognize the potential risks associated with the chemicals present in traditional cosmetics, which can lead to various side effects. Consequently, there is a notable trend of consumers switching to herbal-based cosmetics as a safer and more natural alternative.

According to Sawant (2013), consumers in rural areas have higher trust in nature-based (Ayush) products, associating them with indigenous treatment. Additionally, Anute et al. (2015) found that the younger female population is particularly drawn towards natural products. Furthermore, Rekha and Gokila (2015) highlighted that many consumers are shifting towards herbal-based cosmetics due to their experiences with harmful chemicals in traditional cosmetics, which can lead to various side effects.

## **Research Objectives**

## The objectives of this study are:

- 1. To investigate the impact of age on consumer behaviour towards Ayush products
- 2. To investigate the impact of gender on consumer behaviour towards Ayush products
- 3. To investigate the impact of education on consumer behaviour towards Ayush products
- 4. To investigate the impact of income on consumer behaviour towards Ayush products

## Research Methodology

The research population consists of consumers residing in Mumbai. The sample was selected using Snowball sampling method, and data collection was conducted through an online form. 105 responses were subjected to analysis using contingency tables, and hypotheses were tested using the chi-square test.

## Significance of this study:

Overall, this research provides crucial information to businesses in the Ayush product industry and other related sectors. Understanding the demographic preferences and motivations behind Ayushproduct usage can enable manufacturers and marketers to tailor their offerings to specific target groups better. This customization can enhance product positioning and marketing strategies, leading to increased market share and customer loyalty.

Moreover, the insights gained from this study can aid in the development of more effective public health campaigns. As Ayush products gain popularity for their perceived health benefits, public health initiatives can be designed to promote natural alternatives and raise awareness about the potential advantages of Ayurveda. Such campaigns could potentially impact overall public health and foster a greater acceptance of traditional and holistic healthcare practices.

In conclusion, this research sheds light on the interplay of various demographic factors in influencing the usage of Ayush products. The findings are not only beneficial to businesses in the industry but also hold potential for positively impacting public health outcomes. With this newfound knowledge, stakeholders can better cater to consumer preferences, promote natural alternatives, and encourage the adoption of Ayush products as part of a holistic approach to health and wellness.

### **Development of Hypotheses:**

In order to study the role of socio-demographic variables on Green Marketing of Ayushproducts, the null and alternate hypotheses are defined as follows:

**Table 1: Hypotheses** 

| Null Hypothesis  | Alternate Hypothesis  |
|--|---|
| $H_{0a}$ – Age has no impact on Consumer Behaviour towards AyushProducts       | $\begin{array}{c} H_a-Age \ has \ an \ impact \ on \ Consumer \ Behaviour \ towards \\ AyushProducts \end{array}$ |
| $H_{0b}$ - Gender has no impact on Consumer Behaviour towards AyushProducts    | H <sub>b</sub> - Gender has an impact on Consumer Behaviour towards<br>AyushProducts                              |
| $H_{0c}$ - Education has no impact on Consumer Behaviour towards AyushProducts | H <sub>c</sub> - Education has an impact on Consumer Behaviour towards<br>AyushProducts                           |
| $H_{0d}$ - Income has no impact on Consumer Behaviour towards AyushProducts    | $H_{0d}$ - Income has an impact on Consumer Behaviour towards AyushProducts                                       |

# **Data Analysis and Findings:**

Socio-Demographic Profile of Survey Respondents:

Table 2: Age

| Age Group      | Frequency |
|----------------|-----------|
| 20 - 30 years  | 68        |
| 31 - 40 years  | 9         |
| 41 - 50 years  | 6         |
| 51 - 60 years  | 2         |
| Below 20 years | 20        |
| Total:         | 105       |

# **Table 3: Gender**

| Gender | Frequency |
|--------|-----------|
| Female | 63        |
| Male   | 42        |
| Total: | 105       |

# **Table 4: Income**

| Income Group:           | Frequency |
|-------------------------|-----------|
| 25,000-50,000 per month | 27        |
| 50,000-75,000 per month | 9         |
| Above 75,000 per month  | 11        |
| Below 25,000 per month  | 17        |
| Unemployed              | 41        |
| Total                   | 105       |

# **Table 5: Education**

| <b>Education Level:</b> | Frequency |
|-------------------------|-----------|
| Up to Class 10          | 1         |
| Up to Class 12          | 19        |
| Graduate                | 47        |
| Post Graduate           | 38        |
| Total                   | 105       |

The respondents were also asked to name a few Ayushbrands - the top 3 names given by the respondents were Patanjali, Dabur and Himalaya.

## **Testing the Hypotheses:**

 ${\rm H0_a}$  – Age has no impact on Consumer Behaviour towards Ayush Products

 $H_a$  – Age has an impact on Consumer Behaviour towards AyushProducts

The relationship between age and Ayushproducts is testedin the light of the COVID-19 pandemic. The chi square test was conducted to test the association between age and buying Ayushproducts before the COVID-19 pandemic. To this, 78/105 respondents said yes. However, the chi square test was not statistically significant as the p value is greater than 0.05.

Table 6: Chi square test for age and purchase of Ayush products before COVID-19

|                   | Have you purchased Ayu | Have you purchased Ayushproducts before the Covid-19 pandemic? |       |  |  |  |
|-------------------|------------------------|--|-------|--|--|--|
| Age Group         | No                     | Yes  | Total |  |  |  |
| 20 - 30 years     | 19                     | 49   | 68    |  |  |  |
| 31 - 40 years     | 3                      | 6  | 9     |  |  |  |
| 41 - 50 years     | 1                      | 5  | 6     |  |  |  |
| 51 - 60 years     | 1                      | 1  | 2     |  |  |  |
| Below 20 years    | 3                      | 17   | 20    |  |  |  |
| Total             | 27                     | 78   | 105   |  |  |  |
| Chi-Squared Tests |                        |  |       |  |  |  |
|                   | Value                  | df   | p     |  |  |  |
| 2                 | 2.527                  | 4  | 0.64  |  |  |  |
| N                 | 105                    |  |       |  |  |  |

On applying single factor ANOVA to the same question to find out the difference between means of age groups, the p

value was 0.00047 which shows is significant.

Table 7: ANOVA for age and purchase of Ayushproducts before COVID-19

| Groups  | Count   | Sum | Average | Variance |             |         |
|---|---------|-----|---------|----------|-------------|---------|
| Age Group   | 105     | 112 | 1.06667 | 0.67821  |             |         |
| Have you purchased Ayush products before the Covid-19 pandemic? | 105     | 78  | 0.74286 | 0.19286  |             |         |
| ANOVA – Single Factor   |         |     |         |          |             |         |
| Source of Variation   | SS      | df  | MS      | F        | P-<br>value | F crit  |
| Between Groups  | 5.50476 | 1   | 5.50476 | 12.6392  | 0.000<br>47 | 3.88655 |
| Within Groups   | 90.5905 | 208 | 0.43553 |          |             |         |
| Total   | 96.0952 | 209 |         |          |             |         |

The chi square test was also used to check the association with usage of Ayushproducts in the pre and post-pandemic period. The test result was significant with p value at 0.026.

Further 20-30 year olds were the majority group (46/105) that said they used Ayushproducts before COVID-19 and continue to do so.

Table 8: Chi square for age & usage of Ayush products in the pre and post pandemic period.

|                   | Select the option that applies to you: |  |   |       |  |
|-------------------|--|--|---|-------|--|
| Age Group         | I do not use Ayush<br>products         | I started using Ayush<br>products during Covid and<br>now prefer them over<br>others | I was using Ayush<br>products before Covid and<br>continue to do so | Total |  |
| 20 - 30 years     | 19                                     | 3  | 46  | 68    |  |
| 31 - 40 years     | 3                                      | 2  | 4   | 9     |  |
| 41 - 50 years     | 1                                      | 2  | 3   | 6     |  |
| 51 - 60 years     | 2                                      | 0  | 0   | 2     |  |
| Below 20 years    | 2                                      | 2  | 16  | 20    |  |
| Total             | 27                                     | 9  | 69  | 105   |  |
| Chi-Squared Tests |  |  |   |       |  |
|                   | Value                                  | df   | p   |       |  |
| 2                 | 17.398                                 | 8  | 0.026   |       |  |
| N                 | 105                                    |  |   |       |  |

From the data, we can accept the alternate hypothesis - Age has an impact on Consumer Behaviour towards Ayush Products

H0b - Gender has no impact on Consumer Behaviour towards AyushProducts

Hb - Gender has an impact on Consumer Behaviour towards Ayush Products

The chi square test was used to test the association between gender and use of Ayushproducts which was significant from the p value. Among the males, the highest response said that they do not use Ayushproducts. Among the females, the highest response was for Body and beauty products such as facewash, soaps, oils, shampoos, make up, hair colour, etc.

Table 9: Chi square test for gender and purpose of using Ayush products

|             | What Ay ush / Natural / Herbal Products do you use? |   |                   |                                   |                  |  |   |       |
|-------------|---|---|-------------------|-----------------------------------|------------------|--|---|-------|
| Gender:     | Medicines<br>for illness                            | Medicines for<br>illness +<br>General<br>Health | General<br>Health | I do not use<br>Ayush<br>products | Body &<br>Beauty | Body &<br>Beauty +<br>Medicines for<br>illness | Body &<br>Beauty +<br>General<br>Health | Total |
| Female      | 9   | 5   |                   | 12                                | 18               | 15   | 1                                       | 63    |
| Male        | 2   | 3   | 2                 | 2 19                              | 7                | 4  | 5                                       | 42    |
| Total       | 11  | 8   | 4                 | 31                                | 25               | 19   | 6                                       | 105   |
| Chi-Squared | Chi-Squared Tests                                   |   |                   |                                   |                  |  |   |       |
|             | Value   | df  | p                 |                                   |                  |  |   |       |
| 2           | 17.764  | 7   | 0.013             |                                   |                  |  |   |       |
| N           | 105   |   |                   |                                   |                  |  |   |       |

The chi square test also revealed a strongly significant association between gender and a preference towards Ayushproducts and natural alternatives to products. The reason stated was that it is good for health. Here, the female gender had the majority share and stated that they agreed to the same.

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Table 10: Chi square test for gender and use of Ayush alternatives because they are good for health

|                   | Have you purchased Ayush pand |     |       |     |
|-------------------|-------------------------------|-----|-------|-----|
| Gender:           | No                            | Yes | Total |     |
| Female            | 10                            | 53  | 63    |     |
| Male              | 17                            | 25  | 42    |     |
| Total             | 27                            | 78  |       | 105 |
| Chi-Squared Tests | Value                         | df  | p     |     |
| 2                 | 7.986                         | 1   | 0.005 |     |
| N                 | 105                           |     |       |     |

Chi square test was also applied to check the association between gender and purchase behaviour of Ayushproducts prior to COVID-19. The data revealed that the female population occupied the majority and purchased Ayushproducts prior to Covid-19.

Table 11: Chi square test for gender and purchase of Ayush products before COVID-19

|                   | Have you purchased Ayush pand |     |       |  |
|-------------------|-------------------------------|-----|-------|--|
| Gender:           | No                            | Yes | Total |  |
| Female            | 10                            | 53  | 63    |  |
| Male              | 17                            | 25  | 42    |  |
| Total             | 27                            | 78  | 105   |  |
| Chi-Squared Tests |                               |     |       |  |
|                   | Value                         | df  | p     |  |
| 2                 | 7.986                         | 1   | 0.005 |  |
| N                 | 105                           |     |       |  |

The chi square test showed a strong association between gender and the purchase behaviour of Ayushproducts in the pre and post-pandemic period. Majority of the female population studied used Ayushproducts before the pandemic and continues to do so. The lowest number of respondents was of the opinion that the pandemic caused them to start using Ayushproducts and that they now prefer them over others.

Table 12: Chi square for gender & usage of Ayush products in the pre and post pandemic period.

|                          | Select the option that applies to you: |   |   |       |  |  |
|--------------------------|--|---|---|-------|--|--|
| Gender:                  | I do not use Ayush<br>products         | I started using Ayush products during Covid and now prefer them over others | I was using Ayush<br>products before Covid<br>and continue to do so | Total |  |  |
| Female                   | 11                                     | 4   | 48  | 63    |  |  |
| Male                     | 16                                     | 5   | 21  | 42    |  |  |
| Total                    | 27                                     | 9   | 69  | 105   |  |  |
| <b>Chi-Squared Tests</b> |  |   |   |       |  |  |
|                          | Value                                  | df  | p   |       |  |  |
| 2                        | 7.711                                  | 2   | 0.021   |       |  |  |
| N                        | 105                                    |   |   |       |  |  |

H0c – Education has no impact on Consumer Behaviour towards Ayush Products

Hc – Education has an impact on Consumer Behaviour towards Ayush Products

The chi square test revealed a statistically significant association between education level and the importance

they place on natural vs chemical ingredients while buying products. The respondents who had an education up to graduation placed highest emphasis on the use of chemicals vs natural ingredients as a factor influencing the purchase decision.

Table 13: Chi square test for education level and importance of natural ingredients as a factor influencing purchase decision.

|                         | Rate the following product. (1-L |    |       |    |       |
|-------------------------|----------------------------------|----|-------|----|-------|
| <b>Education Level:</b> | 1                                | 2  | 3     | 4  | Total |
| Graduate                | 2                                | 6  | 16    | 23 | 47    |
| Post Graduate           | 3                                | 9  | 15    | 11 | 38    |
| Up to Class 10          | 1                                | 0  | 0     | 0  | 1     |
| Up to Class 12          | 0                                | 1  | 7     | 11 | 19    |
| Total                   | 6                                | 16 | 38    | 45 | 105   |
| Chi-Squared Tests       |                                  |    | T     |    |       |
|                         | Value                            | df | р     |    |       |
| 2                       | 24.584                           | 9  | 0.003 |    |       |
| N                       | 105                              |    |       |    |       |

The chi square test also revealed a strong significant relationship between education level and the quality of products. 56 out of 105 respondents belonging to the

Graduate and Post Graduate education levels rated quality as a factor of highest importance while purchasing Ayushproducts.

Table 14:Chi square test for education level and importance of quality as a factor influencing purchase decision.

|                         | Rate the following factors in order of importance while purchasing a product.  (1-Lowest, 4-Highest) [Quality] |    |        |    |       |  |
|-------------------------|--|----|--------|----|-------|--|
| <b>Education Level:</b> | 1  | 2  | 3      | 4  | Total |  |
| Graduate                | 1  | 1  | 11     | 34 | 47    |  |
| Post Graduate           | 3  | 1  | 12     | 22 | 38    |  |
| Up to Class 10          | 1  | 0  | 0      | 0  | 1     |  |
| Up to Class 12          | 0  | 0  | 1      | 18 | 19    |  |
| Total                   | 5  | 2  | 24     | 74 | 105   |  |
| Chi Cananad Tosts       |  |    |        |    |       |  |
| Chi-Squared Tests       | ¥7-1   | 36 |        |    |       |  |
|                         | Value  | df | p      |    |       |  |
| 2                       | 29.16  | 9  | < .001 |    |       |  |
| N                       | 105  |    |        |    | •     |  |

The questionnaire also included a question on whether the respondents used Ayushproducts like herbal cough syrups, teas, kadhas, Chywanprash, etc. during the pandemic. 72 out of 105 respondents responded negatively

(disagreed/strongly disagreed) with this. Further, the chi square test revealed an association between education level and this behaviour. The respondents who said they disagreed and did not use these products during COVID-19 possessed a graduate or post graduate degree.

Table 15:Chi square test for education level and use of COVID-19 specific Ayush products

|                          | I started using Ayush products such as herbal cough syrups, teas, kadhas,<br>Chywanprash, etc. during the Covid-19 pandemic |          |       |                |       |
|--------------------------|---|----------|-------|----------------|-------|
| <b>Education Level:</b>  | Strongly Disagree   | Disagree | Agree | Strongly Agree | Total |
| Graduate                 | 7   | 22       | 13    | 5              | 47    |
| Post Graduate            | 10  | 22       | 5     | 1              | 38    |
| Up to Class 10           | 0   | 0        | 0     | 1              | 1     |
| Up to Class 12           | 1   | 10       | 5     | 3              | 19    |
| Total                    | 18  | 54       | 23    | 10             | 105   |
| <b>Chi-Squared Tests</b> |   |          |       |                |       |
|                          | Value   | df       | p     |                |       |
| 2                        | 18.524  | 9        | 0.03  |                |       |
| N                        | 105   |          |       |                |       |

H0c – Income has no impact on Consumer Behaviour towards Ayush Products

Hc – Income has an impact on Consumer Behaviour towards Ayush Products

The chi square test revealed an association between income and the preference towards Ayushproducts since they are perceived to be good for health. This association was proved with p value of 0.046. However, the majority that agreed with this were from the unemployed category. The second largest group that agreed to this were from the 25,000-50,000 income group.

Table 16:Chi square test for income and use of Ayush alternatives because they are good for health

|                         | I always look for Ayush and natural alternatives to the products I purchase because they are good for health |          |       |                |       |
|-------------------------|--|----------|-------|----------------|-------|
| Income Group:           | Strongly Disagree  | Disagree | Agree | Strongly Agree | Total |
| 25,000-50,000 per month | 2  | 7        | 14    | 4              | 27    |
| 50,000-75,000 per month | 0  | 3        | 5     | 1              | 9     |
| Above 75,000 per month  | 2  | 6        | 3     | 0              | 11    |
| Below 25,000 per month  | 1  | 8        | 6     | 2              | 17    |
| Unemployed              | 0  | 8        | 31    | 2              | 41    |
| Total                   | 5  | 32       | 59    | 9              | 105   |
|                         |  |          |       |                |       |
| Chi-Squared Tests       |  |          |       |                |       |
|                         | Value  | df       | p     |                |       |
| 2                       | 21.326   | 12       | 0.046 |                |       |
| N                       | 105  |          |       |                |       |

The chi square test was also applied to test the association between income and a preference toward natural ingredients as against chemical ingredients as a factor influencing purchase behaviour. The p value is 0.054 which

can be approximately considered as 0.05 which is borderline significant. Here, the majority category agreeing to this preference was unemployed.

Table 17:Chi square test for income and importance of natural ingredients as a factor influencing purchase decision.

|                         | Rate the following factors in order of importance while purchasing a product. (1 Lowest, 4-Highest) [Use of chemicals vs natural ingredients] |          |       |                |       |
|-------------------------|---|----------|-------|----------------|-------|
| Income Group:           | Strongly<br>Disagree  | Disagree | Agree | Strongly Agree | Total |
| 25,000-50,000 per month | 1   | 2        | 12    | 12             | 27    |
| 50,000-75,000 per month | 0   | 2        | 2     | 5              | 9     |
| Above 75,000 per month  | 0   | 6        | 4     | 1              | 11    |
| Below 25,000 per month  | 2   | 2        | 5     | 8              | 17    |
| Unemployed              | 3   | 4        | 15    | 19             | 41    |
| Total                   | 6   | 16       | 38    | 45             | 105   |
| Chi-Squared Tests       |   |          |       |                |       |
|                         | Value   | df       | p     |                |       |
| 2                       | 20.757  | 12       | 0.054 |                |       |
| N                       | 105   |          |       |                |       |

The questionnaire also included a question on whether the respondents used Ayushproducts like herbal cough syrups, teas, kadhas, Chywanprash, etc. during the pandemic. 72 out of 105 respondents responded negatively (disagreed/strongly disagreed) with this. Further, the chi

square test revealed an association between education and this behaviour. A majority of respondents who said they disagreed and did not use these products during COVID-19 belonged to the unemployed and minimum 25,000 to 50,000 income group.

| Income Group:           | I started using Ayush products such as herbal cough syrups, teas, kadhas,<br>Chywanprash, etc. during the Covid-19 pandemic |          |       |                |       |
|-------------------------|---|----------|-------|----------------|-------|
|                         | Strongly Disagree   | Disagree | Agree | Strongly Agree | Total |
| 25,000-50,000 per month | 10  | 8        | 6     | 3              | 27    |
| 50,000-75,000 per month | 1   | 7        | 0     | 1              | 9     |
| Above 75,000 per month  | 3   | 6        | 2     | 0              | 11    |
| Below 25,000 per month  | 1   | 11       | 5     | 0              | 17    |
| Unemployed              | 3   | 22       | 10    | 6              | 41    |
| Total                   | 18  | 54       | 23    | 10             | 105   |
| Chi-Squared Tests       |   |          |       |                |       |
|                         | Value   | df       | p     |                |       |
| 2                       | 21.484  | 12       | 0.044 |                |       |

Table 18:Chi square test for income and use of COVID-19 specific Ayush products

## **Key Findings and Interpretation:**

## Age:

The data suggests that there is an association between age and the use of Ayushproducts, with the 20-30 year age group being the most popular consumers. It is noteworthy that Ayushproducts have been popular even before the pandemic, indicating that their usage is not solely influenced by recent health concerns. This trend could be influenced by several factors:

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- Health and Wellness Consciousness: The younger generation tends to be more health-conscious and actively seeks natural and traditional remedies for various health concerns. Ayushproducts, which are often perceived as more natural and holistic, align with their wellness-focused lifestyles.
- Marketing and Accessibility: Ayushproducts may have gained popularity due to effective marketing strategies targeting the younger demographic. These products might also be more easily accessible through online platforms and health food stores, catering to the preferences of the tech-savvy younger generation.
- Cultural Factors: In some cultures, the use of Ayushproducts is deeply ingrained, and younger individuals might be continuing family traditions or embracing their heritage.

- Prevention and Well-being: Ayushmedicine is known for its emphasis on preventive healthcare and overall well-being. The younger population might be more interested in maintaining good health and preventing potential health issues.
- Natural and Sustainable Trend: There is a growing global trend towards natural and sustainable products. Ayushproducts, which often use plant-based ingredients and eco-friendly practices, align with this movement and resonate with environmentally conscious young consumers.

## Gender:

- There appears to be a clear association between gender and the use of Ayushproducts.
- Males: The highest response among males indicated that they do not use Ayushproducts. This suggests that Ayushproducts are less popular among the male population surveyed.
- Females: The highest response among females indicated a preference for Body and beauty products, which are Ayushproducts such as facewash, soaps, oils, shampoos, make-up, hair color, etc. This indicates that Ayushbody and beauty products are particularly favored by the female population surveyed.

- Preference for AyushProducts and Natural Alternatives: The females also showed a preference towards Ayushproducts and natural alternatives to products, with the stated reason being that it is good for health. This highlights that health benefits and a focus on well-being are key motivators for using Ayushproducts among females.
- Purchasing Behavior: The data reveals that females purchased Ayushproducts even prior to the COVID-19 pandemic, and this behavior continued during and after the pandemic. This implies that the pandemic had little to no impact on the purchasing behavior of Ayushproducts among females, indicating a sustained preference for these products.

## **Education:**

- It appears that there is a notable association between education level and certain factors influencing the purchase decision of Ayushproducts, as well as the use of specific products during the COVID-19 pandemic. This is due to:
- Emphasis on Chemicals vs. Natural Ingredients: Individuals with higher levels of education placed the highest emphasis on the use of chemicals vs. natural ingredients as a factor influencing their purchase decision. This suggests that more educated consumers are more discerning about the ingredients used in Ayushproducts and are likely to prefer products with natural ingredients over those with synthetic chemicals.
- Emphasis on Quality: Highly educated individuals rated quality as a factor of highest importance while purchasing Ayushproducts. This indicates that the quality of the products is a significant consideration for them, and they are likely to seek high-quality Ayushproducts.
- Use of COVID-19 Specific Products: Interestingly, highly educated individuals did not use COVID-19 specific products such as herbal cough syrups, teas, kadhas, Chyawanprash, etc. during the COVID-19 pandemic. It's not clear from the provided information why this is the case, but it could be due to various

reasons, such as personal preferences, beliefs, or alternative healthcare practices.

#### **Income:**

The unemployed or less income group expressed a strong inclination towards Ayushand natural alternatives, stating that they always look for Ayushand natural alternatives because they are good for health. This suggests that health benefits play a significant role in their decision-making process when choosing Ayushproducts.

Similar to their preference for Ayushand natural alternatives, the unemployed or less income group showed a preference for natural ingredients over chemical ingredients. This indicates that they prioritize products made with natural ingredients, possibly due to health-related concerns or personal beliefs.

Interestingly, the unemployed or less income group reported not using COVID-19 specific products such as herbal cough syrups, teas, kadhas, Chyawanprash, etc. during the pandemic. The reason for this behavior is not provided in the information given, but it could be due to various factors such as affordability, availability, personal preferences, or alternative healthcare practices.

## **Conclusion:**

The findings of this research reveal valuable insights into the association between various demographic factors and the use of Ayushproducts. The data suggests that gender, education level, and income or employment status play significant roles in shaping consumer preferences and behaviors related to Ayushproducts. Females exhibit a higher preference for Ayushbody and beauty products, emphasizing their interest in natural alternatives for personal care. This finding aligns with the broader trend of wellness-consciousness among the female demographic. Secondly, education level appears to be a crucial factor influencing consumer choices. Highly educated individuals prioritize the use of natural ingredients and place a greater emphasis on product quality when making purchasing decisions. This suggests that informed consumers with higher educational backgrounds are more discerning about the composition and efficacy of Ayushproducts.

While the current study highlights gender-based differences in Ayushproduct usage, further research can delve deeper into the specific reasons behind these preferences. Further research can provide valuable insights into their attitudes, beliefs, and perceptions towards Ayushproducts, helping marketers better tailor their offerings to each gender. There is also scope to investigate how education influences consumers' knowledge and awareness of specific Ayushingredients. Besides quality, other factors such as packaging, certifications, brand reputation, and manufacturing processes could be explored to understand their impact on consumer decision-making. The research indicates that the unemployed or less income group prefers Ayushand natural alternatives due to health benefits. Further studies could focus on understanding the reasons behind this preference, such as affordability, accessibility, or cultural influences. This research can guide the development of more affordable and accessible Ayushproducts for this segment. The study reveals that certain demographic groups did not use COVID-19 specific Ayushproducts during the pandemic. Further research can investigate the reasons behind this non-usage, including perceptions of effectiveness, safety concerns, or alternative healthcare practices during the pandemic.

The current findings open up numerous avenues for further research in understanding the intricacies of Ayushproduct consumption. In conclusion, this research sheds light on the interplay of various demographic factors in influencing the usage of Ayushproducts. The findings are not only beneficial to businesses in the industry but also hold potential for positively impacting public health outcomes. With this newfound knowledge, stakeholders can better cater to consumer preferences, promote natural alternatives, and encourage the adoption of Ayushproducts as part of a holistic approach to health and wellness.

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