**Study the Consumption Pattern and Attitude of Salt in Participants Babasaheb Bhimrao Ambedkar University Lucknow, India**  

# Abstract

Salt plays a vital role in food production, affecting both the functional properties and taste characteristics of food products. This study aimed to assess the awareness, attitudes, and consumption patterns related to dietary salt among college-going students. A total of 200 participants were surveyed using a structured questionnaire focusing on salt sources, seasoning habits, label-reading behavior, awareness of healthy salt options, and sources of health information. Findings revealed that 57% of students did not recognize processed foods as significant sources of dietary salt, indicating a gap in nutritional knowledge. A majority (67%) reported sometimes adding salt during food preparation, while 10% always did so, raising concerns about excess salt consumption. Awareness regarding nutrition labels was moderate, with only 18% consistently checking salt content on packaged foods. While 72% of participants were aware of healthier salt alternatives, 28% lacked this knowledge. The most common source of information about salt and health was the internet and social media (59%), followed by other informal sources, with only 12% relying on health professionals. Overall, the study highlights the need for targeted educational interventions to improve awareness of hidden salt sources, promote healthier salt consumption behaviors, and encourage reliance on credible health information sources. These efforts are essential to reduce the risk of salt-related health issues such as hypertension and cardiovascular diseases in young populations.

**Keywords-** Consumption pattern, awareness, dietary salt, food products

# Introduction

Salt has an important function in food manufacturing, influencing the technical and sensory aspects of foods. By exactly the same time, increased dietary salt intake raises the risk of cardiovascular disease and is a major public health concern. Dietary habits and lifestyle have an impact on both quality of life and the long-term viability of healthcare systems. Unhealthy eating habits and a lack of regular exercise greatly contribute to the burden of persistent, noncommunicable (NCDs) and health-care expenses.

Concentrating on one particular food group, reducing salt levels in breads and bakery items would have a significant influence on worldwide healthcare due to both quantity consumed and salt content. Yeast activity, gluten network creation, loaf volume, dough handling, shelf life, and so on all rely on the presence of salt in bread. Along with an additional sensory trait. As a result, the bakery industry and other food makers are typically hesitant to cut salt levels just for public health reasons, as reformulating food items presents a number of problems. The reformulated products must attain sufficient sensory quality while remaining safe, shelf stable, and commercially viable. According to studies, a significant section of the population is unaware of salt intake recommendations or interested in salt reduction, limiting customer demand-side activation for food product repackaging.

Additionally, several studies have found that using "low salt" nutrition claims (in the absence of sensory evaluation) can have an undesirable effect on consumer buying choices. The food industry faces a unique difficulty in successfully implementing the "stealth reformulation approach," in which the consumer receives no information about salt reduction and perceives no difference in taste while retaining the meal's acceptability and technological features. **Kuhar, A., *et al.* (2020).**

When sodium and chlorine ions mix, they form salt, an inorganic substance. Sodium is a nutrient required by the body to maintain normal cell activity, acid-base balance, plasma volume, and nerve impulse transmission. **(Haron, H., *et al*. (2022)).**

On a global scale, it is advised that salt iodization projects be carried out alongside salt reduction efforts. Iodine deficiency disorders (IDD) are more prone to arise in persons who ingest insufficient amounts of iodine. **(Marakis, G., *et al.* (2021**)).

As has become widely known, the WHO suggests that adults consume fewer than 5 grams of salt each day. Nonetheless, an examination by McCarron and collaborators indicates that the minimal usual metabolic threshold for average salt consumption would be approximately 6–7 g/day for females and 8–9 g/day for males. **(Peters, R., *et al*. (2019))**.

A report from one study, people globally consume more sodium than they need for physical functions. The World Health Organization (WHO) recommends 2 grams of sodium per day for humans, which is significantly higher than the quantity of sodium ingested (5 grams of salt per day). **(Ravi, S., *et al.* (2016)**. Noncommunicable diseases (NCDs) are considered one of the major health challenges of the twenty-first century, as they pose a considerable risk to both human health and economic growth, particularly in low- and middle-income countries. **(Bhattacharya, et al (2022))**

Optimizing purchasing decisions based on the quantity of sodium on labels; attempting to choose food items with less salt; and ingesting less salt. The consumption of processed, readymade foods has been repeatedly demonstrated to be the primary contributor to salt intake. **(Cheikh, *et al.* (2019)).**

This intake is linked to three salt-related behaviors under investigation: shopping for lowsodium food items, adjusting purchasing decisions based on label sodium amount, and reading food labels for sodium content. The average daily salt intake was discovered to be 67% derived from processed foods, with bread and other bread-like products accounting for the biggest amount at 25%, processed meats at 12%, and cheese at 10%.

**(Nasreddine, L., *et al.* (2014)).**

Education for the public, user-friendly product labelling, processed food reformulation, and taxes are all important components of successful dietary salt reduction programs. For example, Finland's average salt intake has decreased by one-third over the last three decades as a result of efforts such as cautionary labels on high-salt meals, public education, food procurement rules with Na requirements, and voluntary recommendations for decreasing Na in foods. **(Garg, V., *et al*. (2019)).**

Furthermore, in the present study, following the prevention measure, the rate of those who paid careful attention to salt warning signs on food labels increased, whereas the frequency of those who did not decline. However, labels in various formats, such as the traffic light label affixed to the front of the packaging describing the amounts of sodium and salt content of the product, will assist consumers in distinguishing between low and high-sodium foods. **(Gökmen, E., & Aktaş, N. (2024)).**

Consuming these fast foods increases the risk of exceeding the recommended salt levels, especially if many servings or types are taken. The ongoing rise in salt levels, according to the most recent studies, highlights the need for increased awareness and regulatory actions to address the nutritional consequences of these fast-food items. Savory snack foods vary in their seasoning level, which can be up to 15% of the snack's weight.

 **(Amashakya, P. M. H. K., *et al* (2024))**

# Methodology

The current study was conducted at Babasaheb Bhimrao Ambedkar University in Lucknow, Uttar Pradesh, India. The study's target population consists of college students (graduate, postgraduate, and PhD). This is a cross-sectional survey. Convenience sampling was used.

The study has a sample size of 200. The data was gathered through a questionnaire. The inclusion criteria for selecting study samples include young persons between the ages of 18 and 25, regardless of gender, education level, family annual income, or occupation.

Along with the health-related question. The data analysis is performed using Microsoft Excel to examine the data by frequency and percentage, providing a clear and thorough depict of the dataset's properties. This chapter discusses the analysis and interpretation of data acquired to examine young adults in knowledge, attitude, and salt consumption pattern in Lucknow City.

# Result

The data collected was used to screening the attitude towards salt analysis the consumption pattern of salt among participants.

A minimum sample size of 200 college going students, aged 18 to 25, was chosen for the research.

**Table 1. Distribution of participants processed food items good source of dietary salt.**

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| --- | --- |
| **Processed food items good Frequency** **source of dietary salt**  | **Percentage %**   |
| **No**  115  | 57%  |
| **Yes**  85  | 43%  |

**Table 1. shows** Out of the total participants surveyed, 57% (115 people) responded "No," indicating they do not consider processed food items as a good source of dietary salt. Meanwhile, 43% (85 people) answered "Yes," meaning they do believe that processed foods contribute significantly to dietary salt intake.

**Table 2. Distribution of participants according to how often do you add salt, in seasoning food.**

|  |  |  |
| --- | --- | --- |
| **How often do you add salt, in seasoning food**  | **Frequency**  | **Percentage%**  |
| **Always**   | 20  | 10%  |
| **Never**   | 47  | 23%  |
| **Sometime**   | 133  | 67%  |

**Table 2. shows** 67% (133 participants) reported that they sometimes add salt during seasoning. 23% (47 participants) stated that they never add extra salt. 10% (20 participants) said they always add salt while seasoning food.

**Table 3. Pay attention to indication on packages about salt.**

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| --- | --- | --- |
| **Do you pay attention to indication on packages about salt**  | **Frequency**  | **Percentage%**  |
| **Always**  36  | 18%  |
| **Never**  51  | 25%  |
| **Sometime** 113  | 57%  |

**Table 3. shows** 57% (113 participants) said they sometimes pay attention to the salt indication on packages. 25% (51 participants) reported that they never check for salt content on packaging. 18% (36 participants) stated that they always check the salt indication before purchasing or consuming packaged food.

No

28

%

Yes

72

%

No

Yes

**Figure 1. Awareness about healthy salt available in the market.**

**Figure 1. shows** 72% of participants responded "Yes," indicating that they are aware of healthy salt options. 28% of participants answered "No," showing a lack of awareness about such products.

**Table 4. Distribution of participants obtain information regarding salt and health.**

|  |  |  |
| --- | --- | --- |
| **Where do you obtain information regarding salt and health**   | **Frequency**   | **Percentage%**   |
| **Health worker**   | **24**   | **12%**   |
| **Internet/social media**   | **119**   | **59%**   |
| **Others**   | **36**   | **18%**   |
| **Television**   | **21**   | **11%**   |

**Table 4. shows** 59% (119 participants) reported getting information from the Internet or social media, making it the most common source. 18% (36 participants) mentioned other sources, which could include books, family, or friends. 12% (24 participants) get information from health workers, such as doctors or nutritionists. 11% (21 participants) rely on television as their source of information.

# Discussion

The study aimed to assess the attitudes and consumption patterns related to dietary salt among a sample of 200 college-going students. The findings highlight a moderate level of awareness and mixed behaviors regarding salt consumption. The results suggest that a majority of participants are either unaware or do not associate processed food with high salt content. This may highlight the need for greater awareness about hidden salt in packaged or processed foods, which are often significant contributors to daily salt intake and may impact public health.

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| --- |
| 72% of participants said "yes," indicating that they are aware of healthy salt options. 28% of  |
| interviewees said "No," indicating a lack of awareness of such products. |   |

The majority of participants (67%) occasionally add salt, suggesting a flexible approach to salt use based on taste or the type of food. A smaller group (10%) consistently adds salt, which could raise concerns about excessive sodium intake. Meanwhile, nearly one-fourth (23%) avoid adding extra salt altogether, which may reflect a health-conscious behavior. Most participants (57%) occasionally check salt content, indicating some level of awareness. However, a significant portion (25%) never check labels, which may reflect low health awareness or a lack of understanding of nutrition labels. Only a small group (18%) consistently pay attention, showing conscious dietary habits. These findings suggest the need for better public education on reading nutrition labels and the health risks associated with high salt intake.

A significant majority of participants are aware that healthier salt options are available in the market. However, nearly one-third are still unaware, which suggests that more awareness campaigns and educational efforts are needed to promote healthier choices and reduce the risk of salt-related health issues such as hypertension. The majority of participants depend on digital platforms (internet/social media) for health-related information, including salt intake. Traditional and professional sources like health workers and television are less frequently used. This highlights both the influence of digital media and the potential risk of misinformation. It also suggests a need to strengthen the role of health professionals and credible educational media in spreading accurate nutrition-related information.

**Recommendations:**

1. **Nutrition education campaigns** in colleges should focus on the hidden salt content in processed foods and the importance of reading food labels.
2. **Workshops or digital modules** could be developed to teach students how to interpret nutritional information, especially sodium levels.
3. **Promotion of reliable sources** of health information, including direct engagement with health workers and certified professionals.
4. **Encouraging the adoption of healthy salt options** and reinforcing the health consequences of high sodium consumption, such as hypertension, should be a public health priority.

# Conclusion

The research underscores the importance of targeted health education campaigns to improve awareness, promote healthier salt consumption behaviors, and encourage the use of credible information sources to reduce the risks associated with high salt intake, such as hypertension and cardiovascular diseases.

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| The study identified gaps in salt and snack consumption, attitudes, practices, and behaviour  |
| among college students. Some notable gaps include a lack of awareness of the necessary daily  |
| value for salt, an unfamiliarity with the quantity of salt in food, and the belief that they ingested  |
| the appropriate amount of salt, despite the fact that the majority are ignorant of how much salt  |
| they consume. The majority of people used table salt when cooking, which is a significant  |
| factor that may be modified to implement reduced salt usage by gradually decreasing the  |
| amount of salt added, resulting in salt reduction in daily life. |   |

 **Consent**

As per international standards or university standards, Participants’ written consent has been collected and preserved by the author(s).

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