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ANALYSIS OF HEALTHIER SNACK OPTIONS IN ONLINE SUPERMARKETS

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Introduction

The evolving concept of snacking has garnered widespread attention, yet its definition remains elusive. Contemporary studies often characterize snacks as any food or beverage consumed between main meals[1], sometimes specifying a caloric threshold of fewer than 150 calories per snack[2].

Furthermore, it's suggested that snacks should account for 5-15% of an individual's total daily energy intake per occasion. Amidst a global pivot towards healthier eating habits, the snack food sector has witnessed a noticeable shift. This trend has notably influenced the assortment of healthier snack options available in online supermarkets, particularly within the realms of healthy snacking and protein chips

This research, dated February 8, 2024, delves into the prevalence and diversity of healthier snack options available in the online munchies section of supermarkets. By focusing on healthy snacking and protein chips, the study aims to shed light on how the snack food industry is adapting to the increasing consumer demand for healthier eating options.

Through an examination of the variety and availability of these healthier snacks, insights into current trends and potential shifts in consumer preferences within the snack food market can be gained, reflecting the industry's response to a global move towards improved dietary habits.

Methodology

To refine the focus of our study on the availability and variety of healthier snack options in the online munchies section of "Instamart," our methodology was streamlined to concentrate solely on these aspects, alongside a detailed analysis of one representative product. The revised methodology is as follows:

Platform Selection: Instamart was chosen for its extensive range of snack items, making it a suitable platform for examining the current online snack food market's diversity and availability.

Inventory Overview: An initial overview of Instamart's munchies section was conducted to understand the scope of products offered. This section featured 940 items across various categories across various categories including Chips and Crisps, Nachos, Puffs and Crunchies, Bhujia and Namkeen, Nuts and Makhana, Indian Snacks, Popcorn, Healthy Snacking, Protein Chips, Value Packs, Newly Added, and Frozen Munchies.

Focus Categories: The study specifically targeted the "Healthy Snacking" and "Protein Chips" categories. These were selected to align with the research objective of exploring healthier snack options.

Availability and Variety Assessment: The primary focus was on assessing the availability (how many products are offered) and variety (the range of product types, flavors, and nutritional profiles) of healthier snack options within the chosen categories. This step did not involve detailed

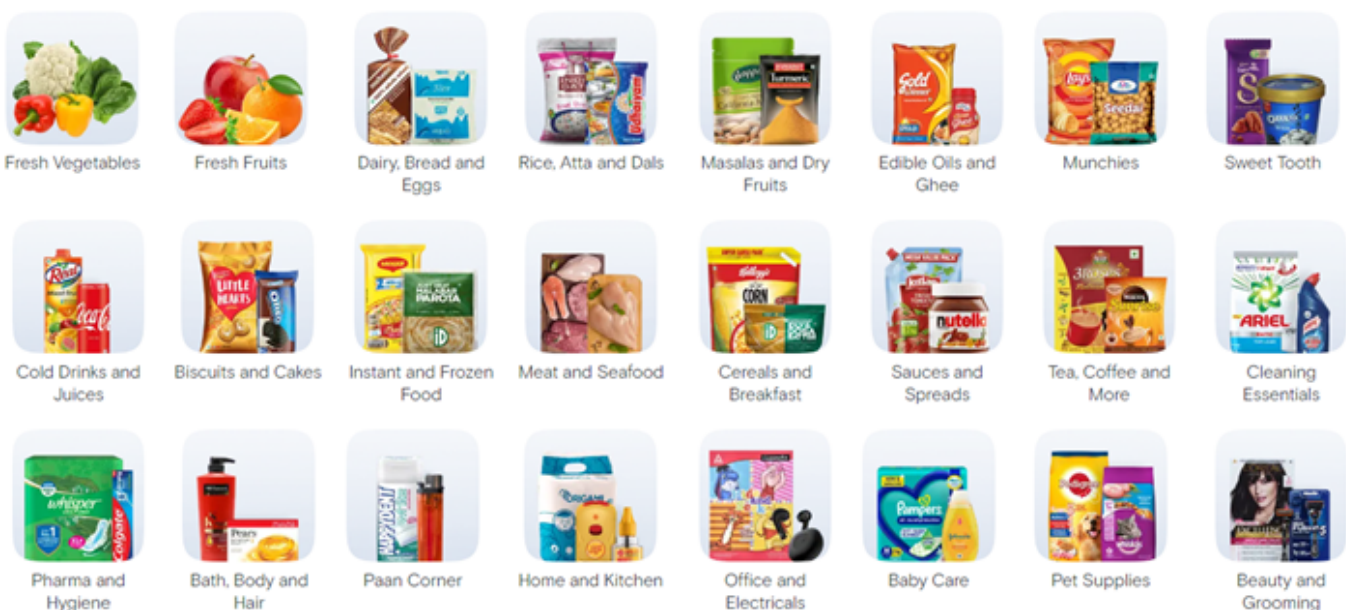
nutritional criteria but rather an exploration of the breadth of options marketed as healthier choices

Product Selection for Detailed Analysis: From the assortment of products identified, one product was selected for an in-depth analysis. This selection was based on its relevance to the criteria of healthier snacking and its potential representativeness of the trends observed in the market.

Detailed Product Analysis: For the selected product, we conducted a comprehensive review that included examining its nutritional information, ingredient list, and health claims. This analysis aimed to provide insights into how such products might contribute to healthier snacking habits.

Synthesis and Insights: The findings from both the broader assessment of availability and variety and the detailed product analysis were synthesized to offer insights into the current state of healthier snack options on Instamart. This included identifying any notable trends in product offerings and consumer preferences within the healthy snacking and protein chips segments.

The focus was narrowed down to the Healthy Snacking and Protein Chips categories, identifying a subset of products that align with the criteria of healthier snacking options.



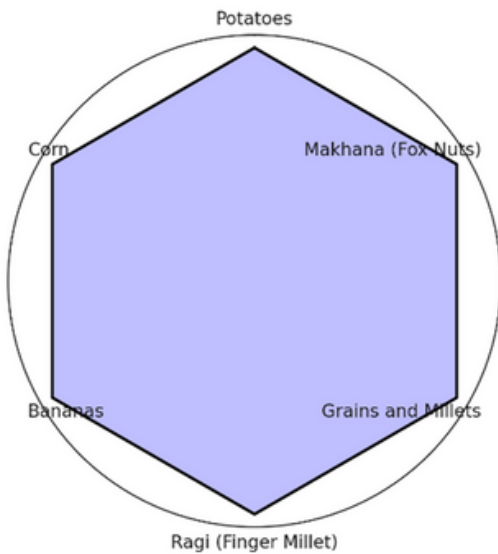
Results:

Out of the 940 items listed in the munchies section, 49 items, accounting for 5.2% of the total offerings, were classified under Healthy Snacking and Protein Chips categories. These items represent a diverse range of products aimed at catering to health-conscious consumers. The identified products include:

#	Brand	Product
1	Epigamia	Green Yoghurt with oats & Seed Mix (Chia, Amaranth & Flax Seeds)
2	Happilo	Makhana
3	Gerber	Multigrain Puffs: Protein Puff Masala Mania (5 variations)
4	Why FRYY	Popped Potato Chips Mirch Masala (4 flavors)
5	BRB	Rice Popped Chips (4 flavors)
6	Snackible Dipsters	Cheesy Jalapeno dip with Ragi Chips (2 variations); Vacuum Fried Banana Chips, Corn Chips + Sun Dried Tomato
7	4700 BC	Corn Chips (4 flavors)
8	Open Secret	Unjunked Bhujia, Haldiram Fatafat Bhel Cup

9	Mom Roasted Makhana	Cheddar Cheese (2 variations)
10	Halidram Nagpur	Bhel Cup
11	Mr Makhana / Farmley / Happilo	(Piri Piri), Roasted Makhana, Cream & Onion (2 variations)
12	Farmley	Roasted Salted Makhana: Himalayan Salt
13	Daadis	Methi Khakhra, Pani Puri Khakhra, Let's Try Pudina Makhana, Butter Garlic Khakhra
14	True Elements	Chatpata Mix, Millet Mix
15	Taali	Protein Puffs: Cheese & Herbs + Diet Coke Can, Protein Puffs (6 variations)
16	Mom Meal of the Moment	Roasted Makhana

Transformation of Traditional Snacks to Healthier Alternatives



The analysis of the provided product list reveals a trend towards healthier snack options across 16 brands, focusing on the transformation of traditional snacks into more nutritious alternatives. Despite the apparent variety, the core ingredients are limited to potatoes, corn, ragi (finger millet), puffed rice, bananas, and various grains or millets. However, the preparation methods—such as popping, roasting, vacuum frying, and puffing—play a crucial role in enhancing the health aspect of these snacks. Here's a summary of key points:

Ingredients and Preparation Methods

Potatoes:

Traditionally associated with less healthy fried snacks, here they are transformed into a healthier option through popping, as seen in the "Why FRY: Popped Potato Chips."

Makhana (Fox Nuts):

Known for its health benefits, makhana is presented in roasted form, highlighting its appeal as a nutritious snack.

Grains and Millets:

Known for its health benefits, makhana is presented in roasted form, highlighting its appeal as a nutritious snack.

Ragi (Finger Millet):

Utilized in chips and other snack forms, ragi represents an ancient grain known for its nutritional value, including high fiber content.

Bananas:

The transformation of bananas into vacuum fried chips showcases an innovative approach to making fruit-based snacks more appealing and shelf-stable.

Corn:

Offered in both popped and chip form, corn snacks like "4700 BC: Corn Chips" cater to the demand for lighter, healthier snack options.

Potatoes:

Traditionally associated with less healthy fried snacks, here they are transformed into a healthier option through popping, as seen in the "Why FRY: Popped Potato Chips."



While the trend towards healthier snack options is evident, it is noteworthy that the choice within this category appears somewhat limited. A significant proportion of the identified products are focused on incorporating ingredients such as makhana and millets, which, while nutritious, may not cater to all consumer preferences. Additionally, there is a notable absence of products centered around vegetables or fruits, with only one product based on bananas and another on potatoes. This suggests a potential opportunity for manufacturers to explore a wider variety of ingredients, catering to diverse tastes and preferences within the health-conscious consumer segment. By diversifying ingredient choices, brands can enhance product appeal and meet the varied dietary needs of consumers seeking healthier snack alternatives. Furthermore, upon analyzing a single product as a case study, it becomes evident that it exhibits high sodium content. The product, Taali Protein Puffs, claims to have "60% less fat than Potato Chips." However, upon calculation, the difference is found to be minimal, albeit slightly above the claimed percentage. This discrepancy suggests that while the claim is approximately accurate, it may not be entirely exact. It is crucial for such comparative claims to adhere closely to standard serving sizes and typical products to ensure accuracy and avoid potentially misleading consumers.

Additionally, the product compares itself to the nutritional content of two glasses of milk, equating 10 grams of protein with the protein content found in milk. However, standard values indicate that two glasses of milk typically provide 16 grams of protein. Consequently, the claim on the packaging appears to be inaccurate or, at the very least, misleading, as the product contains less protein than what is typically found in two glasses of milk. This highlights the importance of ensuring that claims regarding nutritional content are precise and based on standardized values to provide consumers with accurate information.

Note: It's not inherently wrong to compare different protein sources and provide claims to consumers. However, it's essential that such comparisons and claims are accurate, transparent, and based on reliable evidence. In the case of the protein puffs compared to milk protein, if the claim is inaccurate or misleading, it could potentially lead consumers to make choices that aren't aligned with their nutritional needs.

Discussion:

The findings indicate that while the online supermarket offers a wide range of snack items, healthier snack options constitute a relatively small proportion (5.2%) of the total munchies available. The variety within the healthier snacks and protein chips categories, however, suggests an effort to cater to diverse taste preferences and dietary needs. These products range from multigrain and protein-enriched puffs to vacuum fried fruit chips, popped chips, and culturally familiar snacks like khakhra and makhana, indicating a blend of traditional and innovative approaches to healthier snacking these by reducing the fat content and improve the nutritional profile of snacks.

The analysis of the provided list of healthier snack options across 16 brands has several limitations, which are important to consider for a comprehensive understanding:

For instance, if the protein puffs claim to provide the same amount of protein as milk but actually contain less, consumers may opt for the puffs thinking they're getting an equivalent nutritional benefit. This could result in consumers missing out on the essential nutrients found in milk (high biological value of protein), such as calcium, vitamin D, potassium and other essential amino acids which are crucial for bone health and overall well-being. Therefore, it's crucial for manufacturers to ensure that any claims made on packaging are supported by evidence and accurately represent the nutritional content of their products. Additionally, consumers should be encouraged to consider a variety of protein sources in their diet, including both dairy and plant-based options, to ensure they're meeting their nutritional requirements adequately. Ultimately, transparency and accuracy in nutritional labeling are essential for promoting informed consumer choices and supporting overall health and wellness.

Limited Product Range:

The analysis is based on a select list of products and brands, which may not fully represent the diversity within the healthier snack market. There are likely many more brands and types of products that could offer additional insights into trends and consumer preferences.



Health Claims:

The analysis assumes that the methods of preparation (popping, roasting, vacuum frying) inherently make these snacks healthier without a detailed examination of the nutritional profiles. For instance, a popped snack might still be high in sodium or added sugars, which can affect its overall healthiness.



Ingredient Focus:

While the analysis highlights the use of specific ingredients (e.g., potatoes, corn, ragi) and preparation methods (e.g., popping, roasting), it may overlook other important aspects such as nutritional content, presence of additives, and overall health benefits. The health impact of a snack is not solely determined by its main ingredient or how it's cooked.

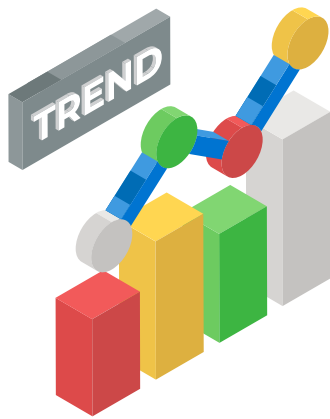


Consumer Behavior and Preferences:

The analysis does not account for consumer behavior, preferences, or perceptions regarding these snacks. Factors such as taste, price, packaging, and brand reputation can significantly influence purchasing decisions, beyond the health aspects of the products.

Cultural and Regional Differences:

The selection of brands and products may reflect a specific regional or cultural preference that might not be applicable globally. Snack preferences and perceptions of healthiness can vary widely across different regions and cultures.



Market Trends and Innovations:

While the analysis identifies a trend towards healthier snacking options, it may not capture the latest market innovations or emerging trends due to the snapshot nature of the data provided. The snack industry is rapidly evolving, with new products and health claims constantly entering the market.

Nutritional Science Perspective:

The analysis lacks a detailed nutritional science perspective that would evaluate the health claims of these snacks based on their macro and micronutrient profiles. A more thorough examination would include considerations of calorie content, fiber, protein, vitamins, minerals, and the presence of processed ingredients.



Comparative Analysis:

There's no comparative analysis with traditional snacks to quantitatively or qualitatively assess the degree of health improvement. Such a comparison could provide a clearer picture of the benefits and possibly the drawbacks of these healthier alternatives.

Conclusion

This research highlights the growing presence of healthier snack options in online supermarkets, reflecting a response to the increasing consumer demand for snacks that support a health-conscious lifestyle. Although these healthier options currently represent a small fraction of the total snack offerings, the variety and innovation observed within this segment are promising signs of the snack food industry's adaptation to healthier eating trends. Moving forward, it is anticipated that the availability of such options will continue to expand, further supporting the shift towards more nutritious snacking habits.

Recommendations

For Retailers:

Increase the inventory of healthier snack options in online supermarkets to meet the rising consumer demand.

For Manufacturers:

Continue innovating and expanding the range of healthier snack products to include diverse tastes and dietary requirements.

For Consumers:

Engage with online platforms to express preferences for healthier options, influencing market offerings.

***This report underscores the importance of ongoing research and dialogue among manufacturers, retailers, and consumers to promote the availability and diversity of healthier snack options in the marketplace.**

INGREDIENTS: Taali Protein Puff Blend (Jowar, Chickpeas, Daal, Rice, Soy Protein Isolate), Cheese Seasoning (Corn Starch, Iodised Salt, Sugar, Milk Solids, Spices & Condiments (Onion, Garlic, Parsley, Oregano), Cheese Powder, Yeast Extract Powder, Acidity Regulator (E270)), Edible Vegetable Oil

Nutrition Facts

	Per 60g	Per 100g
Calories	250kcal	417kcal
Protein	10g	18g
Total Carbohydrates	31g	52g
Of Which Sugar	2g	3g
Dietary Fiber	3g	5g
Total Fat	9g	15g
Saturated Fat	3g	6g
Trans Fat	0g	0g
Sodium	488mg	813mg

Approximate Values
*Taali Protein Puffs has 60% less fat than Potato Chips

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The label provided appears to be for a product called "Taali Protein Puff" and outlines both the ingredients and the nutritional facts of the product. Here's an analysis of the information:

Ingredients:



Taali Protein Puff Blend:
A mixture of various grains and legumes like Jowar (Sorghum), Chickpeas, and Daal, which are generally good sources of protein and dietary fiber.



Soy Protein Isolate:
A highly refined form of soy protein that is high in protein and typically used to increase the protein content of food products.



Edible Vegetable Oil:
Used in the processing of the product, but the type of oil is not specified.



Cheese Seasoning:
Includes corn starch, iodized salt, sugar, milk solids, a blend of spices and condiments (onion, garlic, parsley, oregano), cheese powder, yeast extract powder, and an acidity regulator (E270, which is lactic acid). This seasoning mix is likely to contribute to the product's flavor profile.

Nutrition Facts (per 60g and per 100g servings):

Calories:



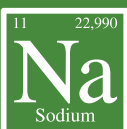
A mixture of various grains and legumes like Jowar (Sorghum), Chickpeas, and Daal, which are generally good sources of protein and dietary fiber.

Protein:



A mixture of various grains and legumes like Jowar (Sorghum), Chickpeas, and Daal, which are generally good sources of protein and dietary fiber.

Sodium:



488mg per 60g serving, which is relatively high and may be a concern for those on sodium-restricted diets.

Total Carbohydrates:



Contains 31g per 60g serving, which includes 2g of sugars and 3g of dietary fiber. The 100g serving contains 52g of carbohydrates, 3g of sugars, and 5g of dietary fiber.

Total Fat:



9g per 60g serving, with 3g being saturated fat and 0g trans fat. Per 100g, the total fat is 15g with 6g saturated and 0g trans fats.

This product, offering 3g of fiber per 60g serving, can be a valuable fiber source for children. Especially beneficial for picky eaters, it aids in meeting daily fiber goals when combined with other sources like fruits, vegetables, whole grains, and legumes.

Claims:

Claim # 1:

The label also includes a claim that "Taali Protein Puffs has 60% less fat than Potato Chips." The claim of 60% less fat would mean that the Taali Protein Puffs should have 40% of the fat content of Lay's chips, since $100\% - 60\% = 40\%$. Now, let's calculate 40% of Lay's fat content to see if it aligns with the fat content of Taali Protein Puffs: $\text{40\% of Lay's fat content} = 36\text{g} \times 0.4$

Let's perform the calculation. # Given fat content for Lay's chips per 100g $\text{lays_fat_per_100g} = 36.0$ # Calculate 40% of Lay's fat content $\text{taali_expected_fat_content} = \text{lays_fat_per_100g} * 0.4$ $\text{taali_expected_fat_content}$. If Taali Protein Puffs claim to have 60% less fat than Lay's chips, they should have 40% of the fat content of Lay's. Calculating 40% of the 36g of fat in Lay's yields 14.4g of fat per 100g. The Taali Protein Puffs have 15g of fat per 100g, which is slightly higher than the expected 14.4g if they were to have 60% less fat than Lay's. The difference is minimal, but strictly speaking, it's slightly above the claim. The claim could be considered approximately accurate but not exact. It's important for such comparative claims to be based on standard serving sizes and typical products for accuracy and to avoid misleading consumers.

Claim #2:

The product label for the protein puffs claims to have "as much protein as 2 glasses of milk". To assess this claim, we need to know the standard protein content in a glass of milk and compare it to the protein content of the product. A typical glass of milk, which is approximately 240 milliliters (8 ounces), contains about 8 grams of protein. Therefore, two glasses of milk would contain approximately 16 grams of protein. The protein puffs claim to contain 10 grams of protein, which would be less than the 16 grams provided by two glasses of milk based on the standard values. Therefore, the claim on the package appears to be inaccurate or at least misleading, as the product contains less protein than what would be found in two glasses of milk. For a precise assessment, one would need to consider the type of milk being referred to (whole milk, skim milk, etc.) as protein content can vary slightly. However, in general, the typical glass of milk used for nutritional comparisons contains around 8 grams of protein.

Label Analysis:

- The product name and ingredients suggest a focus on protein and grains, which can appeal to health-conscious consumers.
- The nutritional facts are clearly outlined, providing transparency regarding calorie, protein, carbohydrate, fat, and sodium content.
- The claim of having "60% less fat than Potato Chips" could be a significant selling point; however, it would require validation against a standard serving size of potato chips for accuracy, which our data shows it somewhat not accurate.
- A potential area of improvement would be to specify the type of edible vegetable oil used, as some consumers may have preferences or allergies.
- The sodium content is something consumers might want to consider, especially those monitoring their sodium intake.
- The presence of dietary fiber is a positive aspect, as it is beneficial for digestion and can contribute to a feeling of fullness.

Overall, the label seems to comply with standard food labeling practices, providing essential information that allows consumers to make informed dietary choices.





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