

# Perceptions and Attitudes toward Dietary Practices in an Urban Himalayan Setting: Evidence from Nainital City, Uttarakhand

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## Abstract

Dietary practices are influenced by cultural, environmental, and socio-economic factors, particularly in ecologically sensitive regions such as the Himalayan belt. This study aimed to assess the perceptions, attitudes, and dietary practices of residents of Nainital City, Uttarakhand. A cross-sectional survey was conducted among urban residents using a semi-structured questionnaire to evaluate awareness of healthy diets, attitudes toward traditional and modern food practices, and prevailing dietary behaviors. A total of 90 respondents were included in the study. Most respondents (86.67%) reported changes in traditional food habits, mainly due to fast food availability (80%) and changing lifestyles (60%). Traditional foods are still consumed regularly, with 56.67 percent consuming them weekly. Perceptions of authenticity (76.67%) and healthiness (86.66%) were highly positive, driven by taste, natural ingredients, and traditional cooking methods. Strong support was shown for promoting traditional foods to tourists (87.78%), with 96.67 percent recognizing their health potential and 93.33 percent willing to recommend them, highlighting significant scope for tourism-based promotion. The study highlights the need for targeted nutrition education programs that respect local food traditions while promoting healthy eating practices. Our findings suggest that residents of Nainital City demonstrate a moderately high level of awareness and a positive perception of traditional dietary practices, strongly associating them with authenticity and health benefits despite recognizing shifts in food habits over time due to modern influences. The findings reveal strong support for the promotion of traditional foods, particularly in the context of tourism, with respondents acknowledging their health potential and expressing a willingness to recommend them to visitors. Enhancing nutrition awareness and encouraging the continued consumption of traditional Himalayan diets may support both cultural preservation and improved public health outcomes in the region.

**Keywords:** Healthy Diet, Dietary Practices, Perceptions, Attitudes, Himalayan Region, Nainital, Uttarakhand

## INTRODUCTION

Diet plays a critical role in maintaining health and preventing non-communicable diseases. In recent years, rapid urbanization and lifestyle transitions have significantly altered dietary patterns, especially in developing regions. A healthy diet practice start early in life like breastfeeding which fosters healthy growth, improves cognitive development and reduces the chances of developing non-communicable

diseases later in life. The energy intake (calories) should be in balance with energy expenditure. To avoid unhealthy weight gain, total fat should not exceed 30 per cent of total energy intake (Food and Agriculture Organization, 2010; Hooper et al., 2015; World Health Organization, 2003), limiting intake of free sugars to less than 10 per cent of total energy intake (World Health Organization, 2015), keeping salt intake to less than 5g per day (World Health Organization, 2012) are a part of a healthy diet. Though, the exact make-up of a diversified, balanced and healthy diet will vary depending on individual characteristics (e.g. age, gender, lifestyle and degree of physical activity) cultural context, locally available foods and dietary customs. However, the basic principles of what constitutes a healthy diet remain the same (World Health Organization, 2020).

Traditional diets closely align with World Health Organization (WHO) guidelines by emphasizing whole foods like grains, fruits, vegetables, legumes, and nuts, while naturally limiting processed sugars, unhealthy fats, and salt, offering protection against chronic diseases like heart disease, diabetes, and cancer, and promoting sustainability through local, minimally processed ingredients, though some traditional diets need improvements in plant-based variety. By incorporating traditional food patterns rich in fiber and nutrients, communities can boost health, but need to ensure adequate intake of vegetables, whole grains, and healthy fats, as seen in diets like the Mediterranean (Cena and Calder, 2020).

### **How Uttarakhand's traditional diets support WHO guidelines**

Uttarakhand, earlier known as *Uttaranchal*, was carved out of Uttar Pradesh in 2000, but its cultural and culinary history dates back thousands of years. The region is deeply connected with the Himalayan environment, Vedic traditions, and self-sustained agrarian life. The traditional food of Uttarakhand evolved as a response to its harsh climate, mountainous terrain, and limited agricultural land, making nutrition and health central to daily life. Historically, Uttarakhand was part of ancient Kedarkhand and Manaskhand, mentioned in Hindu scriptures like the *Skanda Purana*. The inhabitants relied on local grains, forest produce, and seasonal vegetables, as transporting food from plains was difficult.

These diets are typically centered on whole grains specially nutrient rich millets such as finger millet (ragi or mandua), barnyard millet (jhangora), kodo millet, porso millet (cheena), little millet (kutki), amaranth (ramdana or rajgira or cholai) alongside staples like wheat, maize and rice, indigenous root vegetables taro or colocasia (gaderi), tedu, sweet potato, yams (jimikand), potatoes, organically grown pulses including kidney beans (red, white, munsiyari's rajma), horse gram (gahat/kulthi), black soybean (kala bhatt), lentils (masoor), black gram (urad daal), moth beans, navrangi daal as well as fruits like peaches, plums, apricots, kafal, golden raspberry (hisalu), wild fig (bedu), malta (*Citrus sinensis*), orange, himalayan firethorn (ghingaru), mulberries, pomegranate (dadim), pear, cherries, strawberries, apples, nuts and seeds like walnut, pine nuts (chilgoza), almonds, peanuts, flowers for edible purpose like rhododendron (burans), orchid (kanchnar), silk cotton (semal), pea family (sakina/sakini), spices like wild dog mustard (jakhya), perilla seeds (bhangeera), *Allium stracheyi* (jambu or chive), *Angelica glauca* (gandrayani), ginger, garlic providing dietary diversity and high fiber intake essential for good health. They are generally low in processed ingredients, containing less added sugar, salt, and industrially produced trans and saturated fats, which helps reduce the risk of non-communicable diseases such as cardiovascular disease and diabetes. Their several health benefits include supporting the immune system, circulatory system, brain function and several other metabolic functions in the human body (NDTV, 2018). In addition, traditional diets often supply healthy unsaturated fats from sources such as fish, nuts, and plant-based oils, supporting heart health. Beyond their nutritional value, these diets are

deeply rooted in local cultures, rituals, festivals, ayurveda and environments, making them nutrient-dense, accessible, and supportive of food security. Many traditional foods were designed to increase stamina and provide natural warmth in cold season. These food systems also promote environmentally sustainable practices, reinforcing broader goals of WHO for population and planetary health. Collectively, these characteristics highlight how traditional dietary patterns provide a practical and culturally relevant foundation for healthy eating and long-term disease prevention.

Being a foundation for healthy eating and a means of long-term disease prevention, traditional diets in urban Himalayan cities are increasingly being replaced by processed and convenience foods due to changing socio-economic conditions and greater exposure to modern food systems. With the rapid expansion of tourism in Uttarakhand, particularly in the Kumaon region, Nainital has emerged as one of the most visited tourist destinations. Nainital City represents a unique urban Himalayan setting where traditional food habits coexist with modern dietary influences. Tourism-driven urbanization and changing lifestyles in hill destinations like Nainital City have significantly influenced local food habits. Increased exposure to popular and foreign cuisines has not only altered visitors' food choices but has also impacted the dietary practices of local residents. This transition raises concerns regarding the preservation of traditional dietary habits and their associated cultural and health benefits. Despite the growing importance of this issue, limited empirical evidence is available on how residents perceive these changes and the extent to which traditional food practices are still valued. Therefore, the present study aims to assess the level of awareness and perception regarding dietary practices among residents of Nainital City and to evaluate their attitudes and preferences toward traditional dietary habits.

## **MATERIALS AND METHODS**

### **Study area**

Nainital, known as the Lake City of Uttarakhand, is a prominent town in the Kumaon region, positioned in the foothills of the Himalayas. Centered around the sacred Naini Lake and the Naina Devi Temple, the town has a rich cultural and spiritual heritage that strongly influences local traditions and food practices. Historically developed as a British summer retreat, Nainital reflects a blend of colonial, Kumaoni, and modern influences in its lifestyle and cuisine. Its high tourist inflow, evolving food culture, and economic dependence on tourism make Nainital an appropriate study area for examining changes in traditional dietary practices in the Himalayan region.

### **Study design**

A cross-sectional descriptive study was conducted among the urban population of Nainital City, Uttarakhand. The study included adult residents aged 18 years and above. A total of 90 participants were selected using simple random sampling techniques. Data were collected using a pre-tested, semi-structured questionnaire comprising sections on Awareness and perception of dietary practices and Attitude and preferences towards traditional dietary habits. Participants were informed about the purpose of the study, and informed consent was obtained. Data were collected through online e-mailing self-administered questionnaires. Collected data were coded and analyzed using MS Excel software. Descriptive statistics such as frequencies and percentages were used to summarize the data.

## **RESULTS**

The results of the study are presented and discussed under broad headings viz. awareness and perception on traditional dietary practices and attitude and preferences regarding traditional dietary practices.

**Awareness and Perception on Traditional Dietary Practices**

Table 1 presents a detailed overview of the awareness, perceptions, and consumption patterns related to traditional dietary practices among 90 respondents.

The majority of respondents (86.67%) reported that traditional food habits in their area have changed over the years, while only 13.33% felt that they have remained unchanged. Among those who perceived a change, multiple reasons were identified. The most prominent reason was the availability of outside or fast food, cited by 80.00 percent of respondents. Changing lifestyles and time constraints were also major contributors (60.00%), followed by the influence of tourism (33.33%). Media and advertisements were mentioned by 20.00% of respondents, whereas economic reasons were considered least influential, reported by only 10.00 percent. In terms of consumption frequency, more than half of the respondents (56.67%) stated that they consume traditional local food on a weekly basis. Daily consumption was reported by 13.33 percent, while 23.33 percent consumed such foods occasionally. A small proportion (6.67%) reported rarely consuming traditional foods, indicating that although traditional foods are still part of regular diets, they are not consumed daily by most households. Respondents expressed preferences for a wide range of traditional dishes, including Bhatt ki chudkani, Gahat daal, Bhatt ke dubke, Chainsu, Jhangore ki kheer, Maduwe ki roti, Jholi bhaat, Bhaang ki chutney, Aloo ke gutke, Kheera raita with raai, Chawal ki syaali, Ragi porridge, Bhatiya, Kandali saag, and Kulat ki daal. This reflects the rich diversity of traditional cuisine and familiarity with indigenous dishes.

Regarding authenticity, a large majority of respondents (76.67%) rated the traditional food they had tried as very authentic. Another 13.33 percent perceived it as somewhat authentic, while 10.00 percent remained neutral. Notably, none of the respondents rated traditional food as “not very authentic” or “not authentic at all,” suggesting an overall strong confidence in the authenticity of traditional foods. Perceptions of healthiness were similarly positive. An overwhelming 86.66 percent of respondents rated traditional food as very healthy. Both “somewhat healthy” and “neutral” responses were reported by 6.67 percent each, while no respondents perceived traditional food as unhealthy. When asked about factors influencing their perception of authenticity, taste and flavor emerged as the most influential factor (86.66%), followed by the ingredients used (76.67%) and cooking methods (66.67%). Information provided about the food, such as menu descriptions or staff explanations, influenced 23.33 percent of respondents. Ambience and presentation were considered less important, each cited by 10.00 percent, while recommendations influenced only 6.67 percent. Similarly, perceptions of health value were mainly shaped by the use of natural or organic ingredients (83.33%). Freshness of food (66.67%) and nutritional information (50.00%) were also significant determinants. Preparation style influenced 40.00 percent of respondents, while low oil or spice content and personal dietary beliefs were each cited by 30.00 percent. Local reputation influenced 23.33 percent of respondents.

**Table 1. Distribution of Respondents on the Basis of their Awareness and Perception on Traditional Dietary Practices (n = 90)**

Variable	Categories	<i>f</i>	Percentage (%)
<b>Do you think traditional food habits have changed over the years in your area?</b>	<b>Yes</b>	<b>78</b>	<b>86.67</b>
	<b>No</b>	<b>12</b>	<b>13.33</b>
<b>If yes, what do you think are the</b>	Influence of tourism	<b>30</b>	<b>33.33</b>

<b>major reasons for the change?</b> (Selection of more than one option were allowed)	Availability of outside/fast food	72	80.00
	Changing lifestyle and time constraints	54	60.00
	Media and advertisements	18	20.00
	Economic reasons	9	10.00
<b>How often do you or your family consume traditional local food?</b>	Daily	12	13.33
	Weekly	51	56.67
	Occasionally	21	23.33
	Rarely	6	6.67
<b>Which traditional dishes do you like or prefer?</b>	Bhatt ki chudkani, Gahat daal, Bhatt k dubke, Chainsu, Jhangore ki kheer, Maduwe ki roti, Jholi bhaat, Bhaang ki chutney, Aloo k gutke, Kheera raita with raai, Chawal ki syaali, Ragi porridge, Bhatiya, Kandali saag, Kulat ki daal		
<b>How would you rate the authenticity of the traditional food you tried?</b>	Very authentic	69	76.67
	Somewhat authentic	12	13.33
	Neutral	9	10.00
	Not very authentic	-	-
	Not authentic at all	-	-
<b>How would you rate the healthiness of the traditional food?</b>	Very healthy	78	86.66
	Somewhat healthy	6	6.67
	Neutral	6	6.67
	Not very healthy	-	-
	Not healthy at all	-	-
<b>What factors influenced your perception of authenticity?</b> (Selection of all which applies)	Taste and flavor	78	86.66
	Ingredients used	69	76.67
	Cooking method	60	66.67
	Ambience of the place	9	10.00
	Presentation	9	10.00
	Information provided (e.g. menu, staff explanation)	21	23.33
	Recommendations	6	6.67
<b>What factors influence your perception of health value?</b>	Use of natural/organic ingredients	75	83.33
	Low oil/spice content	27	30.00
	Freshness of food	60	66.67
	Preparation style	36	40.00
	Local reputation	21	23.33
	Nutritional information	45	50.00
	Personal dietary	27	30.00

	beliefs/preferences		
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**Attitudes and Preferences**

Table 2 illustrates the attitudes and preferences of 90 respondents regarding traditional dietary practices, particularly in the context of tourism and health awareness.

A substantial majority of respondents (87.78%) expressed a clear preference for having more traditional food options available for tourists. Only a very small proportion (3.33%) did not support this idea, while 10.00 percent of respondents remained undecided, indicating overall strong support for the promotion of traditional cuisine among visitors. Nearly all respondents (96.67%) believed that the traditional food of Uttarakhand has strong potential to be positioned as a health-conscious cuisine. None of the respondents rejected this idea outright, and only 3.33 percent responded with “maybe,” reflecting a near-unanimous agreement on the health value and marketability of traditional foods. In terms of advocacy, an overwhelming majority (93.33%) stated that they would definitely recommend traditional food to other tourists. The remaining 6.67 percent indicated that they might recommend it, while no respondents reported reluctance to do so. This highlights a very positive attitude toward traditional cuisine and strong confidence in its appeal to visitors.

Respondents also identified several key improvements that could enhance the attractiveness of traditional food for tourists. These included increased promotion and visibility to raise awareness, improved presentation and hygiene standards, and maintaining authenticity through the use of local ingredients. Emphasizing the health and nutritional benefits of traditional dishes was also considered important, along with better accessibility and availability across tourist destinations. Additionally, ensuring good economic value and quality was suggested as a factor that could further strengthen tourists’ interest in traditional dietary practices.

**Table 2. Distribution of respondents on the basis of their attitudes and preferences regarding traditional dietary practices (n = 90)**

Variable	Categories	<i>f</i>	Percentage (%)
<b>Would you prefer more traditional options to be available for tourists?</b>	Yes	78	87.78
	No	3	3.33
	Maybe	9	10.00
<b>Do you think traditional food of Uttarakhand has potential as a health-conscious cuisine?</b>	Yes	87	96.67
	No	-	-
	Maybe	3	3.33
<b>Would you recommend trying traditional food to other tourists?</b>	Definitely	84	93.33
	Maybe	6	6.67
	Not really	-	-
<b>What improvements would make traditional food more appealing to tourists?</b>	<ul style="list-style-type: none"> <li>• Promotion and visibility</li> <li>• Presentation and hygiene</li> <li>• Authenticity and use of local ingredients</li> <li>• Health and nutritional benefits</li> </ul>		

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• Accessibility and availability</li><li>• Economic value and quality</li></ul> |
|--|---|

### Suggestions and feedback

While asking about the suggestions and feedback regarding steps to be taken to preserve traditional dietary practices in their respective region respondents emphasized on active promotion, education, and community involvement. Key measures include encouraging local food vendors, hotels, and restaurants to serve authentic traditional dishes and inform consumers and tourists about their health benefits, while maintaining hygiene and traditional preparation methods to preserve nutritional value. Promoting local crops such as mandua, jhangora, and bhatt through community programs, school meal inclusion, food festivals, and support for local farmers was highlighted as essential. Awareness campaigns, educational initiatives, and digital documentation of traditional recipes in local dialects can help engage younger generations. Respondents also stressed the importance of cultural pride, urging locals not to feel ashamed of their traditional foods, and called for collective efforts—starting at home—to sustain and celebrate these healthy, sustainable food traditions.

### DISCUSSION

As per Singh et al., 2020, traditional health practices have supported human societies for centuries, from ancient times to the present day. However, their use has declined as many people are unaware of the benefits these practices offer. In contrary to it the study findings indicated that a majority of respondents were aware of the importance of a balanced diet, though detailed knowledge of nutritional recommendations was limited. Traditional foods such as millets, pulses, and locally grown vegetables were perceived as healthy and culturally significant. However, increased consumption of fast foods and packaged items was observed, particularly among younger respondents reflecting the ongoing nutrition transition in urban Himalayan regions. Positive attitudes toward healthy eating were reported, yet time constraints, taste preferences, and accessibility influenced dietary choices. The results suggest a transitional dietary pattern influenced by both traditional practices and urban lifestyle factors. Similar trends have been reported in other urban settings across India, where traditional diets are being replaced by energy-dense, nutrient-poor foods. The continued appreciation for traditional foods presents an opportunity for public health initiatives to promote locally available, nutrient-rich diets. Nutrition education programs tailored to the cultural and environmental context of Nainital City could help bridge the gap between awareness and practice.

### CONCLUSION

The study concludes that residents of Nainital City exhibit moderate high level of awareness and positive perception of traditional dietary practices, with respondents strongly associating traditional foods with authenticity and health benefits, despite acknowledging noticeable changes in traditional food habits over time. However, modern dietary influences are increasingly shaping food choices. Respondents also reflects highly favorable attitudes toward traditional food, with respondents strongly supporting its promotion, recognizing its health potential, and expressing willingness to recommend it to tourists, while also providing practical suggestions for enhancing its appeal. Strengthening nutrition awareness programs while encouraging the consumption of traditional Himalayan diets may contribute to improved public health outcomes in the region.

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