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A study on consumption pattern of millets among Udaipur city

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Abstract
On marginal land in dry areas, the group of small-seeded annual grasses known as millets is cultivated primarily as a grain crop. Millets, an ancient food grain that is presently farmed in 131 nations, were originally developed for human consumption. Millets are a staple diet for 59 crore people in Asia and Africa. Millets are the only crop that will be able to address challenges in the future related to food, feed, fuel, malnutrition, health, and climate change. Nutri-Cereals, sometimes referred to as millets, are a fantastic source of nutrients. When it comes to nutrition and health advantages, millets are amazing. A recent study found that millets can lower the risk of cardiovascular disease. Millets aid in weight loss. the distinctive qualities of millets, such as their high fibre content.

Keywords: Malnutrition, health, and climate change, Nutri-Cereals

Introduction
Millets are the group of small-seeded annual grasses that are grown as grain crops primarily on marginal land in dry areas. They are a staple diet for 59 crore people in Asia and Africa, and are a rich source of nutrients. They can lower the chance of acquiring cardiovascular problems, aid in weight reduction, and contain vitamins B such as Niacin, folacin, riboflavin, and thiamine and phosphorus. Millets have regained popularity recently due to their advantages in terms of health, low environmental effect, and climate change resistance. However, they are often disregarded and underappreciated in contemporary diets and agricultural practises.

Millets come in two varieties: Major and Minor, which are distinguished by the size of their grains and the regions in which they are grown. Pseudo millets are identical to those of major and minor millets, but belonging to a distinct botanical family. Major millets include pearl millet, sorghum, finger millet, foxtail millet, little millet, and kodo millet. Pearl millet is the most macronutrient-rich and notably rich in resistant starch, soluble and insoluble dietary fibres of all the millets. Sorghum is abundant in minerals and B vitamins and is a significant tropical cereal crop for food, feed, and fodder in semiarid climates. Finger millet is the best source of amino acids high in sulphur and calcium and has strong antioxidant properties. Minor millets include foxtail millet, little millet, and kodo millet. Kodo millet is the coarsest grain of all grains and has a high lecithin content and is good for boosting The consumption of millets in India has significantly increased over the past ten years due to growing knowledge of their health advantages and the availability of millet-based products on the market. According to Kumar *et al*. (2021), millets have more fiber than rice and wheat, with finger millet having thirty times more Calcium than rice and all other millets having at least double the amount of Calcium compared to rice. India is the world's largest producer of millets, and it is wise to increase millet consumption since it is a good source of complex carbohydrates, dietary fiber, vitamins, and minerals, as well as a reserve of phytochemicals that are good for health. Ancient grains now offer a far superior nutritional balance, and consumer knowledge of this fact is rapidly rising. Millet is becoming increasingly popular due to rising interest in foods with high protein, complex carbs, and fiber content.

As part of research on "Assessment of the State of Millet Farming in India," millets have strong root systems that enable them to withstand extreme temperatures, droughts, and floods. Behera (2017) [3] found that millets were consumed less frequently than other cereals, with wheat and rice being the favoured cereals. Devasenapathy *et al*. (2020) found that millets were consumed more frequently in rural than in urban areas. Bhagavatula *et al*. (2020) found that eating millets was linked to a lower body mass index (BMI) and a more varied diet. Research on "Millets: a solution to agrarian and nutritional challenges" has revealed that millets

outperform other grains like wheat and rice as climate change-resistant crops. These nutritional cereals contain vitamins, minerals, vital fatty acids, phytochemicals, and antioxidants that can aid in the eradication of a variety of ailments caused by a lack of dietary nutrient.

Methodology

The study was undertaken to access the Perception, Consumption pattern and Traditional practices of millets among Udaipur city. The collection of primary data was carried out by perceiving the views of the respondents regarding millets. The Sample size of 120 respondents was taken, 30 respondents were taken from each zone of Udaipur, with the help of random sampling for the proposed study, those who were willing to participate in the study. The data was further statistically analyzed by presenting the information through frequency, and percentages. An observational study was used in the assessment of general background information and to assessed the consumption pattern of millets among Udaipur city.

Results

A brief background on the respondents was generated based on their family size, degree of education, and field of employment.

According to the data in the table, 56.67% of respondents were between the ages of 40 and 45. This was followed by 18.33% of respondents between the ages of 46 and 50, followed by 6.67%of respondents between 51 and 55 and 18.33% of respondents were beyond the age of 55 and 60. Education is crucial in determining a person's social position and significantly influences how they live their lives. According to the data regarding respondents' educational backgrounds, 8.33%were illiterate, 20.83% belonged to primary school, 24.17% belong to secondary education, 28.33% were graduates,16.67% were postgraduates and 1.67% held doctoral degrees. According to the data, 43.33% percent of respondents were from nuclear families, while 56.67% were from joint families. Family income represents the income earned by the family during certain period of time. The results show that 34.17% of respondents had income less than 3 lakhs annually, followed by 54.17% with incomes under 4 to 6 lakhs annually and 11.67% with incomes more than 7 lakhs annually. Occupation is the crucial factor in defining a person's economic situation is their line of work. According to data on occupational status, 76.67% of women were housewives, 5% were involved in business sector and 18.33% worked in the private sector.

Table 1: Distribution of the consumers on the basis of background information n = 120

S. No.	Parameters	Variables	F	%
1	Age	40-45	68	56.67%
		46-50	22	18.33%
		51-55	8	6.67%
		56-60	22	18.33%
2	Education	Illiterate	10	8.33%
		Primary Education	25	20.83%
		Secondary Education	29	24.17%
		Graduate	34	28.33%
		Postgraduate	20	16.67%
3	Occupation	Doctorate	2	1.67%
		Housewife	92	76.67%
		Businesswomen	6	5.00%
		Private job	22	18.33%
4	Type of Family	Joint	52	43.33
		Nuclear	68	56.67
6	Family Income	Less than 3 lakhs	44	34.17
		4 to 6 lakhs	65	54.17
		More than 7 lakhs	14	11.67

Table 2: Shows Distribution of Respondents on the basis of types of millets they are aware about

Sr. no.	Paramters	F	%
1	Sorghum	99	82.5
2	Finger millet	73	60.83
3	Pearl millet	98	81.67
4	Buckwheat	47	39.17
5	Proso millet	21	17.50
6	Kodo millet	8	6.67
7	Barnyard	71	59.17
8	Foxtail millet	72	60.00
9	Little millet	18	15.00
10	Amaranth	66	55.00

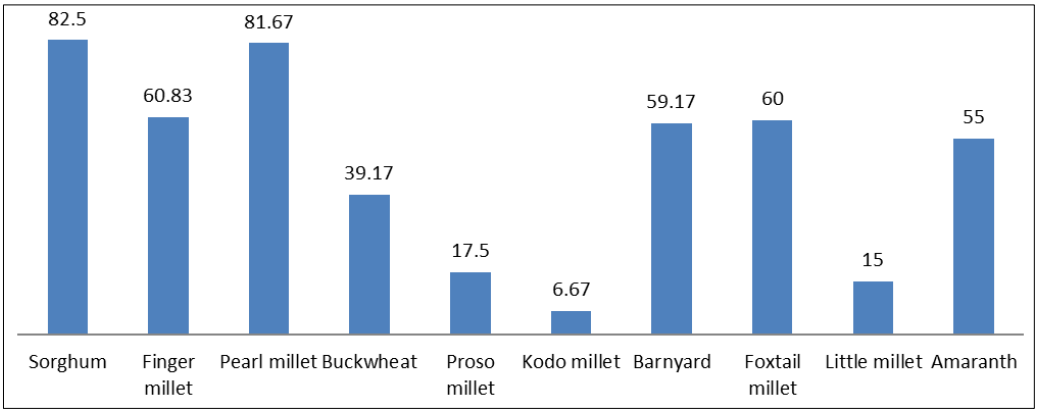

Fig 1: Awareness regarding millets

The above table 2 shows the awareness of consumers about variants of millets. It was observed that, almost all the respondents 82.50 percent were aware of sorghum, followed by pearl millet 81.67 percent, followed by finger millet 60.83percent, followed by barnyard 59.17 percent, followed by foxtail millet 60.00 percent, Followed by buckwheat 39.17 percent, followed by 55 percent amaranth followed by proso millet 17.50 percent followed by little millet 15.00 percent

and respondents are least aware about kodo millet. Similar to this, consumers reported being aware of millets' excellent nutritional value in a study on awareness of millets like sorghum and foxtail and it also states that rural areas had significantly lower consumption rates than urban areas, which was linked to a lack of knowledge about the nutritional value. Schipmann-Schwarze *et al.* (2013) [72].

Table 3: Distribution of Respondents on the basis their frequency of millet consumption at home

Sr.no.	Frequency of consumption at home	F	%
1	Regularly	33	27.50
2	Vey often	62	51.67
3	Not at all	08	06.67%
4	Occasionally	17	14.17

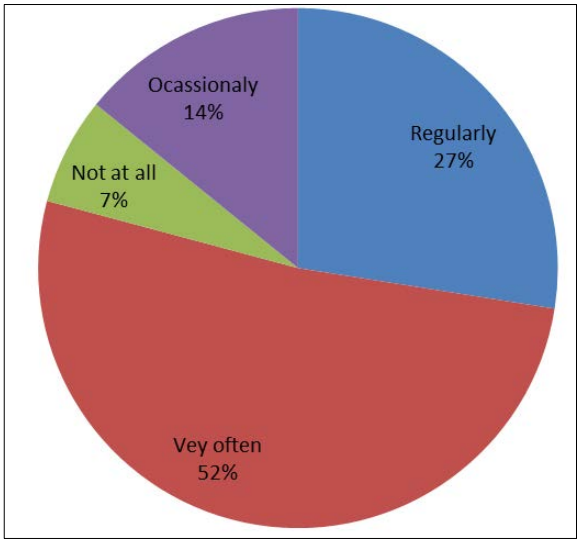

Fig 2: Frequency of consumption of millets

The above figure 3 shows that more than half of respondents consume very often which is 51.67%, 27.50% consume it on regular basis, 6.67% does not consume at all and rest 14.17% consume it occasionally usually on their fast days which is concluded in below table:

Occasion	Receipe
Bohr chauth	Bajre ki khichdi
Bachbaras	Roti and churma
Sogarvart	Ragi and chena roti
Sigarvart	Rajgira roti and puri
Saptmi	Kagni sbzi

Chan Sulthana (2014) findings were found in study on millet-based healthful foods, which found that sorghum multigrain flour was regularly consumed by 58% of consumers, moderately by 29% of consumers, and infrequently by 14% of consumers. Therefore, it can be stated that the popularity of millets' value-added products has a significant impact on how frequently millets and their products are consumed.

Table 4: Depicts the Distribution of data on the basis of their frequency of consumption of millets by different age groups

Sr.no	Millets	Children		Adolescents		Adulthood		Elderly	
		F	%	F	%	f	%	F	%
1	Sorghum	70	58.33	78	65.00	79	65.83	73	60.83
2	Finger millet	46	38.33	56	46.67	51	42.50	44	36.67
3	Pearl millet	78	65.00	88	73.33	86	71.67	79	65.83
4	Buckwheat	32	26.67	36	30.00	34	28.33	29	24.17
5	Proso millet	6	5.00	10	8.33	12	10.00	10	8.33
6	Kodo millet	0	00	02	1.5	03	2.7	02	1.5
7	Barnyard	53	44.17	57	47.50	58	48.33	56	46.67
8	Foxtail millet	56	46.67	58	48.33	60	50.00	55	45.83
9	Little millet	06	5.00	11	9.17	09	7.50	09	7.50
10	Amaranth	41	34.17	48	40.00	48	40.00	45	37.50

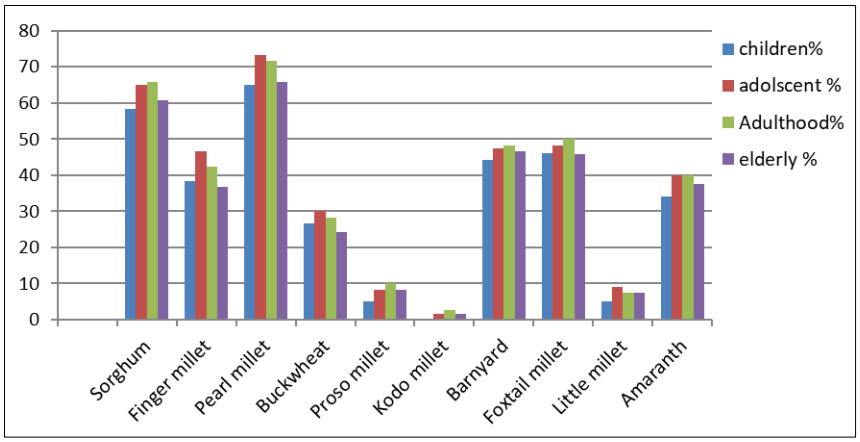

Fig 3: Depicts the information regarding frequency

Consumption of millet of different age groups in which sorghum is most preferred millet by every age group mostly consumed by adolescents g 73.33 percent followed by by adulthood 72.50 percent followed by elderly 66.67 percent and least by children 65.83 percent mostly they consumed it on a form of sorghum roti and least preferred millet is proso millet of all age groups mostly consume by adolescents and adulthood 10.83 percent followed by elderly 10.00 percent and again least preferred by children 6.67 percent, consumption patterns of millets are very specific and continue to remain regional specific, and popularization in the broader range is essential. According to Malathi *et al.* (2016) [8], this positive shift associated with the recent addition of millets made in the public distribution system with the implementation of the food security bill 2013. Shirisha (2018) studied on pattern of consumption regarding millets and millet-based products. Research was conducted in Guntur city, results of that study showed that 70% were consuming

millets, 30% were not consuming and 92% were aware of millets.

Conclusion

Millets are a staple diet for 59 crore people in Asia and Africa, and come in two varieties: Major and Minor. Research has revealed that millets outperform other grains as climate change-resistant crops, and contain vitamins, minerals, vital fatty acids, phytochemicals, and antioxidants. A study was conducted in Udaipur to assess the consumption pattern of millets among families among 120 respodents of four different zones. The data showed that 82.50 percent of respondents were aware of sorghum, followed by pearl millet, finger millet, barnyard and foxtail millet, pearl millet, and rarely kodo and little millet. Frequency of consumption of millets at home table shows that 51.67% of respondents consume millet very often, 27.50% regularly, 6.67% does not consume at all, and 14.17% occasionally and Sorghum is the most preferred millet by all age groups, followed by pearl millet, and proso millet is least preferred by children. Consumption patterns of millets are specific and remain regional, and popularization in the broader range is essential.

References

1. Amadon Issoutou, Mahamadou E, Guo-wei Le. Millets: Nutritional Composition, some Health Benefits and Processing – A Review, Emir. J Food Agrie. 2013;25(7):501-508.
2. Ambati K, Sucharitha KV. Millets-Review on Nutritional Profiles and Health Benefits. Int J Recent Sci Res. 2019;10(7):33943-33948.
3. Behera MK. Assessment of the state of millets farming in India. MOJ Eco Environ Sci. 2017;2(1):16-20. Retrieved from: Doi: 10.15406/mojes.2017.02. 00013
4. Basavaraj G, Rao PP, Bhagavatula S, Ahmed W. Availability and utilization of pearl millet in India. SAT eJournal, 2010, 8.
5. Chan Sulthana P. Consumer acceptability and demand for health foods. A study of Millet based ANGRAU-foods in metro Hyderabad. M.Sc. Thesis. Acharya N.G. Ranga Agricultural University, Hyderabad, India. 2014, 1-82.
6. Devi M, Sangeetha N. Extraction and dehydration of millet milk powder for formulation of extruded product. IOSR Journal of Environmental Science. Toxicology and Food Technology. 2013:7(1):63-70.
7. Dhevika D, Saradha J. Health awareness about organic cereals and millets among Women college teachers in Tiruchirappalli. Journal of Exclusive Management Science, 2018;7(10).
8. Malathi B, Appaji C, Reddy GR, Dattatri K, Sudhakar N. Growth pattern of millets in India. Indian Journal of Agriculture Research. 2016;50(4):382-386.
9. Priya C. Consumers perception towards millet products. Infokara Research. 2019;8(11):356-364.
10. Reddy A, Prasad KG Return of the Forgotten Crop - Brown Top Millet, Millet Farming Systems, Leisa India. 2017;19(4). Retrived from https://leisaindia.org/returnof-the-forgotten-crop-brown-top-millet
11. Schipmann-Schwarze C, Orr A, Mafuru J, Mulinge W. Consumer surveys for sorghum and finger millet in Kenya and Tanzania. Socioeconomics Discussion Paper Series Number 10- ICAR- New Delhi
12. Umanath M, Balasubramaniam R, Paramasivam Millets R. Consumption Probability and Demand in India: An Application of Heckman Sample Selection Model. Economic Affairs, Retrived from: 2018;63(4):1033-1044. DOI: 10.30954/0424-2513.4.2018.29.