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# A Comparative Study on Consumption of Millets in Urban and Rural Areas

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*The pressing need is to improve livelihoods and well-being through improved use of biodiversity. Thus, focus in India is to be on small-grain cereals, notably millets. Millets are also more reliable and produce a harvest even under adverse growing conditions. Millets can be used for traditional as well as novel foods. The richness of starch, protein and fibre, niacin, magnesium, phosphorus, manganese, iron, potassium, essential amino acids and vitamin E make millets an important nutritional bio-source. In addition, millets have therapeutic benefits such as prevention of heart diseases, diabetes, migraine and premature death. In line with the recent awareness on functional foods and nutraceuticals, millets have a great potential. The revival of millets can be achieved through concerted efforts of research, marketing testing, and entrepreneurial training and demonstration to stimulate the processing of high quality, competitive products for urban areas. Thus, in dry regions, processing facilities are particularly vital to the future of local millet farming. Thus, millets are so compelling to agree the needs and to educate consumers on health benefits and to encourage increased consumption. The aim of the present study was to assess the consumption of millets in urban and rural areas of Hyderabad. A survey on 400 samples was conducted. A well structured questionnaire was employed to interview the subjects about their age, dietary habits and lifestyle. The data so collected was subjected to statistical analysis using chi square test.*

## I. INTRODUCTION

Nutritional quality of food is the most important parameter for maintaining human health and complete physical well being. Since nutritional well being is the driving force for development and maximization of human genetic potential.[1]Dietary quality of food should be taken into consideration for maintaining overall maximization of human health and fitness to solving the problem of deep rooted malnutrition. Diversification of food production must be encouraged both at national and household level in tandem with increasing yields and household techniques. [2]Some of the agricultural foods are not using as human main food because of unawareness of people. Millets are one of them. . Millet has many nutritious and medical functions reported. [3] Millets offer nutritional security and there is a need for promoting millets as they are highly nutritious per FAO production data of 2014. Some of the known nutrients vitamins, minerals, essential fatty acids also have benefits in terms of prevention of degenerative diseases besides their known functions of preventing nutritional deficiency diseases. [4] The important nutrients present in millets include resistant starch, oligosaccharides, lipids, antioxidants such as phenolic acids, avenanthramides, flavonoids, lignans and phytosterols which are believed to be responsible for many health benefits. [5] Millets have potential for protection against age-onset degenerative diseases. Consumption of millets reduces risk of heart disease, protects from diabetes, improves digestive system, lowers the risk of cancer, detoxifies the body, increases immunity in respiratory health, increases energy levels and improves muscular and neural systems and are protective against several degenerative diseases such as metabolic syndrome and Parkinson's disease. [6] Millets are also rich sources of phytochemicals and micronutrients. Phytochemicals such as phenolics (bound phenolic acid-ferulic acid, free phenolic acid-protocatechuic acid), lignans,  $\beta$ -glucan, inulin, resistant starch, phytates, sterols, tocopherol, dietary fiber and carotenoids are present in millets. The main polyphenols are phenolic acids and tannins, while flavonoids are present in small quantities; they act as antioxidant and play many roles in the body immune system. [7] Sorghum and millets namely, Pearl millet, Finger millet, Kodo millet, Proso millet, Foxtail millet, Little millet, and Barnyard millet are important staples to millions of people world-wide.. Millets are nutritionally comparable to major cereals and serve as good source of protein, micronutrients and phytochemicals. Processing methods like soaking, malting, decortications, and cooking affect the anti-oxidant content and activity. [8]

## II. MATERIALS AND METHOD

A cross-sectional, multi-centered, stratified and correlational study was performed with a sample of 400 subjects which included people from both urban and rural areas of age between 20-60years. Data was collected from urban areas of Hyderabad like Tolichowki, Mehdiapatnam and rural areas namely Mahboobnagar, Kondkur and Amangal. A market survey was also conducted to know the availability and cost of millets in local shops and super markets. An interview-cum-questionnaire method was used to collect the data from the respondents, who were questioned about their general information to get the following details like personal information of the respondent

viz age, gender, medical history, eating habits, and economic status and lifestyle. Statistical analysis using chi square test was applied to show the significant association between the consumption of millets in urban and rural areas.

### III. RESULTS AND DISCUSSION

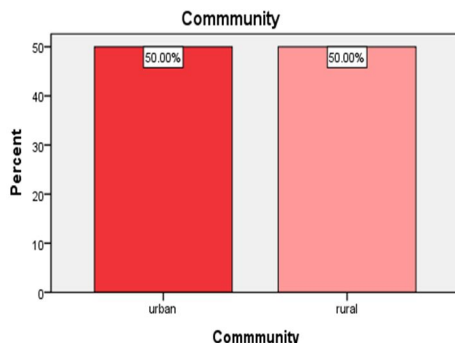


Figure 1: Shows the No. of samples from urban and rural areas

Figure 1 shows the sample size in which 50% of the samples belonged to urban area and 50% of the samples belonged to rural area.

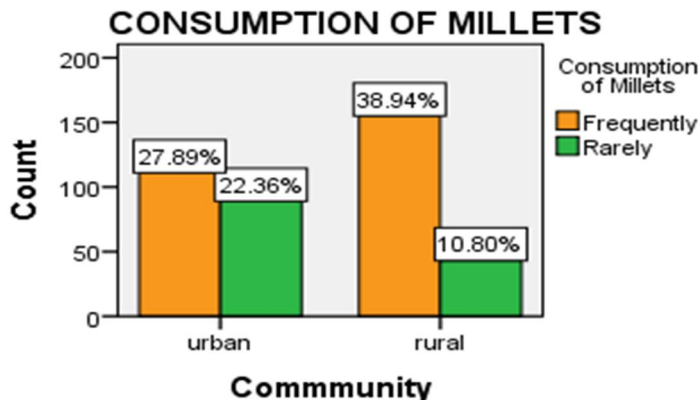


Figure 2: Shows the percentage of consumption of millets in urban and rural areas

Figure 2 shows consumption of millets in which 27.89% consumed millets frequently and 22.36% consumed millets rarely in the urban areas. Whereas 38.94% consumed millets frequently and 10.80% consumed millets rarely in the rural areas. Hence it concludes that consumption of millets is comparably higher in rural areas than in urban areas. Statistical analysis of the data was found to be significant at  $p < .05$ .

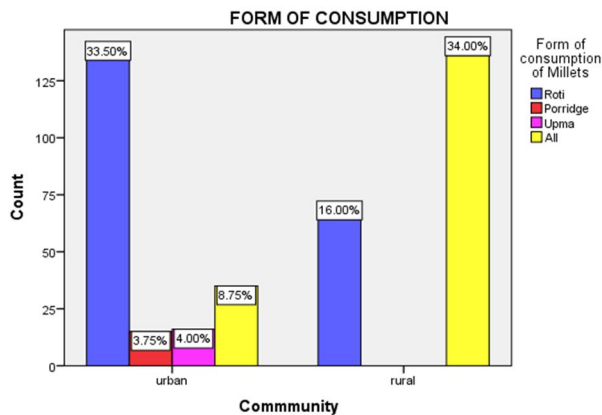


Figure 3: Shows the form of consumption of millets

Figure 3 shows the form of consumption of millets where among urban people 33.50% consumed millets in the form of roti. 3.75% consumed millets in the form of porridge. 4.00% consumed millets in the form of upma. 8.75% consumed millets in all forms. whereas 16.00% consumed millets in the form of roti. 34.00% consumed millets in all forms in the rural areas.

Statistical analysis of the data was found to be significant at  $p < .05$ .

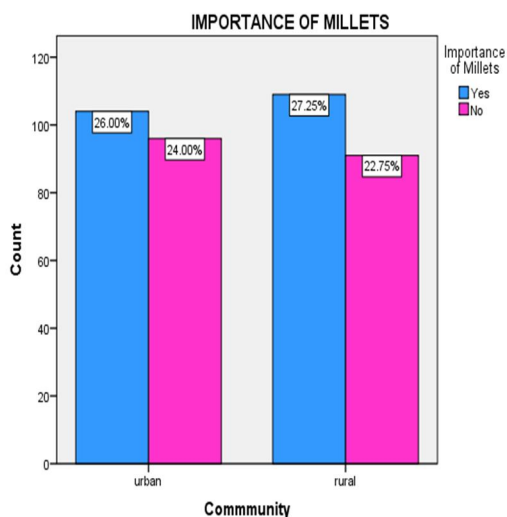


Figure 4: Shows the percentage of people having knowledge about the importance of millets

Figure 4 shows the knowledge of urban and rural people about the importance of millets in which 26.00% were aware of the importance of millets were 24.00% were unaware of the importance of millets in urban areas. Whereas 27.25% were aware of the importance of millets were 22.75% were unaware of the importance of millets in rural areas. Hence it concludes that both urban and rural people have knowledge about the importance of millets but the consumption is comparably higher in rural areas.

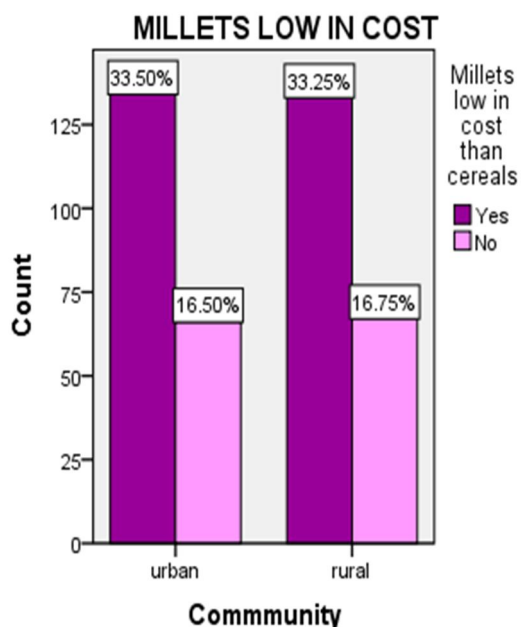


Figure 5: Shows the cost of millets in comparison with cereals in rural and urban areas

Figure 5 shows the perception of people regarding the cost of millets in which 33.50% said that millets are low in cost whereas 16.50% samples said that millets are not low in cost in urban area. Whereas 33.25% said that millets are low in cost whereas 16.75% samples said that millets are not low in cost in rural area. Hence it concludes that millets are low in cost than compared to cereals.

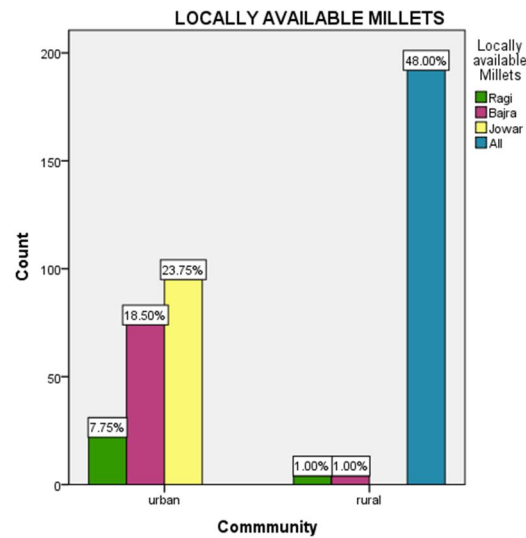


Figure 6: Shows the availability of millets in urban and rural areas

Figure 6 shows the availability of millets in urban and rural areas in which 7.75% of the samples said ragi is locally available 18.50% said that bajra is locally available. 23.75% said that jowar is locally available when asked in the urban areas. Whereas 1.00% of the samples said ragi is locally available. 1.00% said that bajra is locally available. 48.00% said that all are locally available in the rural area. . Hence it concludes that all millets are locally available in rural areas whereas particular millets are available in urban areas Statistical analysis of the data was found to be significant at  $p < .05$ .

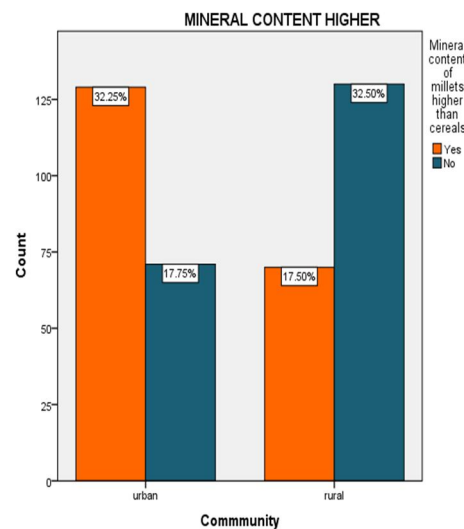


Figure 7: Shows the knowledge of people about the mineral content of millets

Figure 7 shows the knowledge of people about the mineral content of millets in which 32.25% of the samples said that millets have high mineral content whereas 17.75% said that minerals do not have high mineral content in the urban areas. Whereas 17.50% of the samples said that millets have high mineral content whereas 32.50% said that minerals do not have high mineral content. statistical analysis of the data was found to be significant at  $p < .05$ .

#### IV. CONCLUSION

From the above graphical and statistical analysis, our study concluded that consumption of millets is comparably higher in rural areas than urban areas. Our study also assessed that millets are low in cost than cereals. All millets( ragi, bajra , jowar) are locally available in rural



areas whereas particular millets are available in urban areas. Through this study we conclude that rural area people have less knowledge about the importance of millets but they consume it frequently and in various forms like roti, porridge, upma etc. whereas urban people have more knowledge about the importance of millets but they consume it rarely and mostly in the form of roti.

#### V. ACKNOWLEDGMENT

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