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Household Milk and Dairy Products Consumption Among Urban Population of Telangana

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ABSTRACT

Changing lifestyles, urbanization and industrialization, brought several changes in the dietary patterns especially milk and milk products. . This study is designed to assess the impact of changing lifestyles on the consumption of milk and dairy products. In the present scenario of corona virus pandemic, immunity building is of prime importance, that can be achieved through consumption of milk a rich source of vitamins and minerals necessary to build immunity. Two hundred forty middle income families from Hyderabad were randomly selected. A semi structured questionnaire was constructed to collect frequency of consumption of milk and dairy products.. Toned milk, buffalo milk packed and loose, cow's milk was consumed daily by 51.2, 35.0, 8.3 and 7.9 percent respectively. Others consumed alternate day or once a week or occasionally. Daily consumption of dairy products – curd or buttermilk by 73.3 percent, lassi by 52.1 percent and ghee is used by 54.2 percent. Seldom used are paneer, khoa, butter and cheese by 77.9, 80.0, 75.0, and 87.5 percent respectively. Adults and children were part of the family. In a sub sample of 50 families daily intake of milk was collected The per capita intake by adults is 375 ml which is 75 ml more than RDA, for children 375 ml is short of 125ml of RDA. In the low income families the milk intake is negligible. Probably there is need to think of second white revolution (operation flood) to tide over this deficient intake.

KEYWORDS: White revolution, dairy products, life style changes, per capita intake.

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INTRODUCTION

Food consumption patterns provide valuable information about nutrition and health status of individuals. Technological advancements in food science entirely changed the traditional healthy consumption pattern of meal by different age groups. This invites lots of health and nutritional problems. In view of the highest cost of animal products, most of the people in Telangana are resorting to vegetables. Under these circumstances milk known as a complete food, consumption of milk and milk products play a very important role in keeping the people sound and healthy. Previously milk and its products were used as a beverage or in sweets. Milk was consumed as tea, coffee, buttermilk, Lassi etc. present trend is that they are losing its place and being substituted by soft drinks, cold drinks, chocolate drink, beer, wine etc.^{1,11} Telangana people spend average of Rs.2150 on food, of which, cereals 19 percent and milk and milk products 15 percent.² “Telangana Today” reported that people of Telangana are consuming 4.6 liters of milk per month per capita (153 ml/day per person), PJS Agricultural University reported that milk and milk product consumption is 5.09 liters /per capita /pm(169ml/day /per capita) in Telangana³.

India is in state of transition with marked social, demographic and epidemiological changes under way⁴ this transition is characterized by increased longevity, an increasingly urbanized population, projected to rise from 28 percent in 2001 to 50 percent by 2025⁵ and rising burden of chronic diseases⁶. Evidence shows that obesity is a risk factor for several chronic diseases and is indicative of changes in activity and dietary patterns of population.⁷ The change in food intake in Indian population is characterized by an increase in the consumption of animal protein including dairy products^{8,9,11,12}. Milk is for growth, gaining height and strength.^{10,13-19}. Other benefits are good complexion, strong teeth, prevents cavities and tooth decay, muscle growth, weight loss among women, relieves stress, energy booster, heart burn eliminator by coating esophagus and stomach lining, lowers BP, reduces stroke, improves eye sight, reduces certain forms of cancer and develops immunity. In the present scenario of corona virus pandemic, milk is necessary to improve immunity and fight Corona Virus, Covid 19. Studies at household level in Telangana are scanty. The present study is an attempt to assess the consumption pattern of milk and milk products in Hyderabad, Telangana state.

METHODOLOGY

To assess the consumption pattern of milk and dairy products, Telangana state is selected. In Telangana, Hyderabad city is identified, since it has different socio-economic and diverse ethnic groups. Two hundred forty adults belonging to middle income group were randomly selected from different parts of the city. Semi structured questionnaire was prepared to collect information on the demographic profile and frequency of consumption (two times/day, daily, alternate day, twice in a week, once week, most often and not using). The questionnaire was pretested among 10 people and was finalized. A subgroup of 50 nuclear families 30 middle income group and 20 low income families were selected to conduct a quantitative survey of daily consumption of milk. Data is presented as percentages.

RESULTS AND DISCUSSIONS

Results are projected as demographic profile of respondents, frequency of consumption of milk and milk products. Per capita daily consumption, production figures, awareness of nutritional significance.

Demographic Profile: Age of respondents ranged between 20-80 years, 82.6 percent are in the age groups between 21 and 50, while other groups together constituted 17.4 percent (Table 1). Nuclear families constitute 85.7 percent, joint families 2.3 and extended families or families with one of the in laws 14.3 percent. (Table 2)

Table 1: Age of Respondents

Age/yrs.	No	%
<20	6	2.5
21- 30	58	24.2
31-40	68	28.4
41-50	72	30.0
51-60	26	10.8
61-80	10	4.1

Nuclear families constitute 85.7 percent, joint families 4.2 percent and extended families or families with one of the in laws 9.1 percent. Non-vegetarians are 85.7 percent while 14.3 percent are vegetarians. (Table 2)

Table 2. Type of family

Family type	%	No
Nuclear	86.7	208
Joint	4.2	10
Extended	3.8	9
One -In law	5.3	13

Total number of members in each family ranged from two to 10. Families with three to five members constituted a major group of 82.1 percent . (Table 3).

Table: 3. Family Size

No of persons	Total	
	%	No
2	12.1	29
3	20.8	50
4	33.8	81
5	27.5	66
6	3.3	8
7 -10	2.5	6

All respondents are educated (Table 4) . Participants with B. Tech and M Tech qualifications are 19.5 percent in males and 13.7 in females. Doctors constituted 3.6 and 2.9 percent among males and females respectively. Postgraduates are 20.3 percent in females and 17.2 percent males, 9.7 percent females are with 10th class . As both males and females are equally, highly qualified, food selection and food consumption behavior may have an influence.

Milk and milk products –

Milk is available in sealed sachets, supplied by various vendors . Commonly available are Vijaya dairy, heritage and Jersey. T.S. Dairy Vijaya supplies pasteurized and homogenized milk, fortified with Vitamin A and D. Nutritional information for 100 ml is printed. Different fat concentrations are available- toned milk with 3 percent fat, standardized milk 4 percent and whole milk 5 percent. Other mandatory information and fssai license number is printed. Heritage and Jersey sell whole milk and they also comply with labeling regulations. .Milk available by local vendors, bring milk in cans and supply to houses, they are neither pasteurized nor homogenized. . Milk powders are

available as skim milk powders, whole milk powder and milk powders designed for normal babies, under weight babies and for the sick.

Table 4: Educational Status of Family Members

Education	Males		Females		Total	
	%	No	%	No	%	No
10th Class	0	0	9.7	34	4.6	34
Inter mediate	6.2	24	29.7	104	30.9	228
Graduates	51.4	200	28.3	99	26.9	199
Post graduates	17.2	67	20.3	71	18.7	138
Engineering	19.5	76	7.1	25	13.7	101
Medicine	3.6	14	2.3	8	2.9	22
Others	2.1	8	2.6	9	2.3	17
	100	389	100	350	100	739

Procurement and Consumption of milk:

Milk purchased from Vijay dairy is by 66.7 percent, from heritage 54.2, jersey 35.8 and small vendors (loose milk) 25 percent. With corona pandemic, all those who were purchasing from local vendors, switched over to branded milk (Table 5).

Table 5 : Source of Purchase

Source of purchase	No.	%
Vijaya	160	66.7
Heritage	130	54.2
Jersey	86	35.8
Local vendors	60	25

34.5 percent and from jersey 9.2 percent. Local vendors sell milk drawn directly from the buffaloes and small dairies who sell loose packets are not processed. Among those, consuming toned milk daily is by a major group of 51.2 percent. The purpose of selecting toned milk is that it has lesser amount of fat. If there are children they also buy whole milk for them, this trend is observed in the upper middle class groups. Buffalo milk in sachets, from branded manufacturers is purchased daily by 35 percent, while milk loose sold by petty vendors is purchased daily by 13.8 percent. Cow's milk is used

by 7.9 percent, they use for performing rituals, for puja, preparations during festivals. With corona virus around, many consumers who can afford shifted to milk from branded companies. (Table 6).

Table 6: Consumption of milk

Foods	Daily	Alternate day	Twice week	Once/ week	Often	Never	Percent Total
Toned milk	51.2 (123)	6.3(15)	3.7(9)	5.0(12)	12.1(29)	21.7(52)	100(240)
Buffalo milk packed	35.0(84)	8.3(20)	3.3(8)	2.5(6)	27.9(67)	22.9 (55)	100(240)
Buffalo milk(loose)	8.3(33)	0	0	0	23.4(56)	68.3(151)	100(240)
Cow's milk	7.9 (19)	2.5(6)	0.4(1)	1.3(3)	32.9(79)	55.0(132)	100(240)

Quantitative Assessment of Milk Consumption:

A total of fifty families (30 middle income and 20 low income families) having two kids were randomly selected to assess the daily consumption of milk. The average per capita intake of milk (2 adults and 2 children) of middle income group is 1.5 liters per day accounting to 375 ml per capita per /day. As per RDA an adult should get 300ml and a child up to 18 years 500 ml . The intake is 75ml more for an adult and 125ml less for the child. In the low income group, women working as household helpers get tea at the work spot, and municipal workers and men buy tea , sometimes they prepare tea at home by buying about 100 to 200 ml of milk , children also get tea. Milk purchase is so erratic that it was difficult to assess per capita intake.

Consumption of dairy milk products:

Common dairy products consumed are curds, buttermilk, lassi , paneer, khoa, butter, ghee and cheese. Curds or buttermilk is consumed daily by 73.3 percent , while 26.7 percent take occasionally among them majority are Muslims.

Daily consumption of lassi is by 52.1 percent , this is mainly during summer months and in other months it is occasional -when days are hot or when children ask for lassi .Majority consume occasionally paneer, khoa and butter. The percentages are 77.9, 80.0, 75 respectively. Ghee is used both by elders as part of breakfast with idly or with dhal and rice. Cheese is preferred by all children the percent consumption is 87.5 and 12.5 they do not buy but eat as pizza or with sandwich or any other item with cheese .Overall picture indicates that dairy products form part of the daily diet in some form or other.

Table 6: Consumption of dairy products

Foods	Daily	Occasional	Never	Percent Total
Curd/ butter milk	73.3(176)	26.7(64)		100(240)
Lassi	52.1(125)	41.7(100)	6.2(15)	100(240)
Paneer		77.9(187)	22.1(53)	100(240)
Khoa		80.0(192)	20.0(48)	100(240)
Butter		75.0(180)	25.0(60)	100(240)
Ghee	54.2(130)	45.8(110)		100(240)
Cheese		87.5(210)	12.5(30)	100(240)

CONCLUSION:

Milk consumption has increased (12). White revolution in India (Operation Flood) which started in 1970-85-2000, increased per capita availability to 299 g/day by 2012 to 2013, making India biggest milk producing country in the world (14). Requirement as per ICMR-NIN RDA is 300 ml of milk for adults per day and 500 ml for children and adolescents up to 18 years. Although the milk consumption increased it did not yet meet the RDA. Probably with the intake of dairy products may improve partially. There is a need to educate the importance of taking milk every day. Probably there is a need for second white revolution (Operation Flood) to meet the requirements and reduce the malnutrition in India.

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