A study on the consumption pattern of Khandsari sugar in Coimbatore city, Tamil Nadu

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ABSTRACT

India is one of the major Jaggery and Khandsari sugar producing country. Nowadays demand for Khandsari sugar is growing high and its consumption is also gradually increasing. Hence the study was carried out to find out the consumption pattern of Khandsari sugar in Coimbatore city, Tamil Nadu. Convenience sampling method was used to collect the information from the sample respondents. Totally five regions were selected; each region consisted of 24 samples that made a total sample size of 120. Primary data were collected using the face to face interview with the help of structured-questionnaire. From the results it was concluded that majority of the sample respondents were females, young, graduates, earning Rs 21,00-40,000 and living in nuclear families of 3-5 members. The duration of usage, purchase location and source of information of Khandsari sugar were not dependent on age of respondents whereas purchasing frequency, quantity purchased and purpose of consumption were dependent. The packing of the product was the major problem in purchasing the Khandsari sugar.

Keywords: Khandsari sugar; consumption pattern; purchasing; quantity; purpose

INTRODUCTION

Sugarcane (*Saccharum officinarum* L) is one of the most important commercial crops of the tropics. It is the main source of sugar in the world. Among the world level sugarcane production, India is the second largest sugar producer in the world after Brazil. Sugarcane production has been more or less static (around 350 million tonnes) in India during the past 10 years. During the year 2014-15 the total production was 362.33 million tonnes. As per 2015-16 estimates Uttar Pradesh is the largest producer of sugarcane as it produces an estimated 145.39 million tonnes of sugarcane which is 41.28 per cent of the all-India production. The crop is sown in an area of 2.17 million hectares in the state which amounts to 43.79 per cent share of all-India sugarcane farming. Tamil Nadu is the fourth largest producer of sugarcane with an estimated production of 26.50 million tonnes which roughly amounts to 7.5 per cent of country's sugarcane production (https://www.mapsofindia.com/answers/india/state-biggest-sugarcane-producer/).

According to Directorate of Economic and Statistics, Ministry of Agriculture and Foreign Agricultural Services (FAS), India's Khandsari sugar production in the year 2016-17 was 8.50 million MT and FAS estimated that the production of Khandsari sugar was going to increase to nine metric tonnes in the year 2018-19 (Anon 2017). In India, Uttar Pradesh ranks first in production of gur and Khandsari sugar followed by Maharashtra.

Jaggery (Gur) and Khandsari sugar are a traditional product of sugarcane which is the natural mixture of sugar and molasses. Jaggery and Khandsari sugar production rested with unorganized sectors and mainly these were represented under cottage industries (Jagannadha Rao 2007).

Jaggery and Khandsari are found to be a major agro-processing industry in rural sector. It was an seasonal business where rural people had only been doing the production in conventional manner at the time of harvesting of sugarcane. Khandsari sugar is also

termed as 'cottage sugar' which is obtained in unrefined crystalline form from small scale industries (https://www.entrepreneurindia.co/ Document/Download/ Khandsari%20Sugar%20 Processing%20Industry-928604-.pdf).

Around 40-45 per cent of sugarcane crop is processed annually for jaggery and Khandsari sugar production (Kumbhar 2016). The production of jaggery ranges between five to seven million tonnes. It is estimated that two-third of the sweetening requirement in rural areas is met by jiggery (Kavitha 2014). As per present scenario people are consuming more Khandsari sugar than white sugar due to various health issues. The process of jaggery and Khandsari sugar making is simple and cheap compared to sugar processing. Jaggery and Khandsari sugar making units are classified under unorganized sector and located in rural areas of Tamil Nadu. Mostly small and medium farmers are involved in jaggery and Khandsari sugar production. As it needs only little labour skill in processing of jaggery and Khandsari sugar rural people with minimal educational background were involved. There is a huge space to be filled between the urban market and rural supply zone.

In Tamil Nadu major production of Khandsari sugar and jaggery areas are Erode, Namakkal, Salem and Dindigul districts. In some places of Tamil Nadu, farmers were jointly organised for production of Khandsari sugar to get the better price. Hence the study was undertaken to know about the consumption pattern of Khandsari sugar in Coimbatore city.

METHODOLOGY

The study was conducted in Coimbatore City of Tamil Nadu during the period of November 2018-February 2019. The city was categorized into South, West, North, Central and East regions. Convenience sampling method was used to collect the information from the people who purchased Khandsari sugar. The data were collected through personal interview by using well-structured and pre-tested interview schedule. In order to draw meaningful conclusion percentage analysis was used to analyse the socio-economic characteristics of the respondents; chi-square test was used to analyse the consumption pattern and Garrett's ranking technique (Garrett and Woodworth 1969) was used to analyse the constraints in purchasing and consumption of Khandsari sugar.

Table 1. Demographic profile of the respondents (n= 120)

Component	Category	Respondents	
		Number	Percentage
Gender	Male	56	46.67
	Female	64	53.33
Age (years)	<20	4	3.33
	21-30	40	33.33
	31-40	47	39.16
	41-50	16	13.33
	>50	13	10.83
Educational status	Illiterate	5	4.16
	Primary	1	0.83
	Secondary	6	5.00
	Higher secondary	10	8.33
	Graduate	98	81.66
Monthly income (Rs)	<20,000	20	16.66
	21,000-30,000	29	24.16
	31,000-40,000	27	22.50
	41,000-50,000	24	20.00
	>50,000	20	16.66
Family type	Joint	28	23.33
	Nuclear	92	76.66
Family size (members)	<3	16	13.33
	3-5	76	63.33
	>5	28	23.33

Table 2. Relationship of age of the respondents vis a vis duration of consumption, purchasing frequency, purchase location, quantity purchased, purpose of consumption and source of information of Khandsari sugar

Age (years)	Duration of consumption (years)					Purchasing frequency					Purchase location					
	<1	1-2	2-3	>3	Total	Once/ week	Once/ 2 weeks	Once/ month	Once/ 2 months	Total	Specified organic stores	Farmers field	Retail shops	Supermarkets	Others	Total
<20	5	1	1	2	9	1	6	2	0	9	1	0	3	5	0	9
21-30	21	21	12	21	75	3	17	25	30	75	9	15	29	22	0	75
31-40	1	7	0	5	13	4	1	6	2	13	2	2	9	0	0	13
41-50	1	2	1	0	4	1	1	1	1	4	0	1	2	1	0	4
>50	2	5	3	9	19	7	1	5	6	19	1	5	5	7	1	19
Total	30	36	17	37	120	16	26	39	39	120	13	23	48	35	1	120

Table 2. contd.....

Age (years)	Quantity purchased (kg)					Purpose of consumption				Source of information					
	<1	1-2	2-3	>3	Total	Coffee/ tea	Sweets (sweetening agent)	Others	Total	Friends and relatives	Themselves	Mass media	Doctors advice	Others	Total
<20	6	2	1	0	9	9	0	0	9	4	5	0	0	0	9
21-30	13	36	17	9	75	61	9	5	75	31	31	8	3	2	75
31-40	2	8	2	1	13	10	2	1	13	4	6	2	1	0	13
41-50	1	2	1	0	4	4	0	0	4	3	1	0	0	0	4
>50	0	3	3	13	19	7	2	10	19	2	7	2	4	4	19
Total	22	51	24	23	120	91	13	16	120	44	50	12	8	6	120

	χ^2 value	df	Sig
Duration of consumption	17.055	12	0.148
Purchasing frequency	34.995	12	0.000
Purchase location	19.312	16	0.253
Quantity purchased	51.329	12	0.000
Purpose of consumption	33.415	8	0.000
Source of information	27.975	16	0.032

RESULTS and DISCUSSION

Demographic profile of the respondents

The data given in Table 1 show that female respondents were more (53.33%) than the males (46.67%); majority were of the age of 31-40 years (39.16%) followed by 21-30 years (33.33%); majority were graduates (81.66%); about one-fourth of them were earning Rs 21,000-30,000 (24.16%) followed by Rs 31,000-40,000 (22.50%) and majority had nuclear families (76.66%) with 3-5 members in the family (63.33%). It depicts that females, young people between the age of 21 to 40 years, graduates, earning between Rs 21,000 to 40,000 leaving in nuclear families of 3-5 members were more involved in purchase and consumption of Khandsari sugar.

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Age-wise consumption pattern of Khandsari sugar

Data in Table 2 depict that for duration of usage (chi-square value 17.055), purchase location (chi-square value 19.312) and source of information (chi-square value 27.975) of Khandsari sugar wrt to age there was no significant correlation between the two factors hence these were not dependent on each other.

For purchasing frequency (chi-square value 34.995), quantity purchased (chi-square value 51.329) and purpose of consumption (chi-square value 33.415) of Khandsari sugar vs age both factors were having an association with each other.

Constraints in purchase and consumption of Khandsari sugar

Garrett's ranking technique was used to rank the constraints and the results are given in Table 3. It was found that packing (Rank I, Garrett's score 77.11) was the major problem in purchasing the Khandsari sugar. Due to ban of plastic bags it could be the main problem in purchase. The second important problem was impurities in the product (Rank II, Garrett's score 69.24) that was followed by higher price (Rank III, Garrett's score 63.77).

Table 3. Constraints faced by respondents in purchase and consumption of Khandsari sugar

Aspect	Garrett's score	Rank
Packing	77.11	I
Impurities	69.24	II
More expensive	63.77	III
Availability	56.30	IV
Store accessibility	54.96	V
Others	39.35	VI

CONCLUSION

The study showed that the females, young people between the age of 21 to 40 years, graduates, earning between Rs 21,000 to 40,000 and leaving in nuclear families of 3-5 members were more involved in purchase and consumption of Khandsari sugar. The duration of usage, purchase location and source of information of Khandsari sugar wrt to age there was no significant correlation between the two factors hence these were not dependent on each other whereas purchasing frequency, quantity purchased and purpose of consumption of Khandsari sugar vs age both factors were having an association with each other. The packing of the product was the major problem in purchasing the Khandsari sugar followed by impurities and higher price.

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