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## Consumption pattern of fruit juices from street vending sites and restaurants in Thrissur district, Kerala, India

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#### Abstract

“Healthy eating” is now perceived to be an important part of every individual’s life. The desirability of a healthy life style has led to an increased consumption of fruit juices. Life style changes and accompanying urbanization together with rising affluence appear to be largely responsible for increased consumption of fruit juices from street vending sites and restaurants. Fresh fruit and fruit juice consumption has a lot of benefits. Juices from fruits are pure and vital liquids of great healing power. They are not only a source of refreshment but also a source of powerful antioxidants. The vitamin rich fruit juices strengthen the body and prevent the degeneration of skin, flesh, glands and organs. Hence, the present study was conducted to study the consumption pattern of fresh fruit juices sold by street vending sites and restaurants among adults in Thrissur district, Kerala.

**Keywords:** Fresh fruit juices, consumption pattern, street vendors, restaurants, adults

#### Introduction

Fruit juices and fruit beverages are becoming popular due to their pleasing flavor, taste and nutritional characteristics. Moreover, they are a source of refreshment too. Fruit juice consumption in many parts of the world has increased in recent years due to the public perception of juices as a natural source of nutrients and increased public interest in health issues. Fresh fruit and fruit juice consumption has a lot of benefits. Juices from fruits are pure and vital liquids of great healing power. They are not only a source of refreshment but also a source of powerful antioxidants (Browne, 2007) [4]. The vitamin rich fruit juices strengthen the body and prevent the degeneration of skin, flesh, glands and organs.

“Healthy eating” is now perceived to be an important part of every individual’s life. The desirability of a healthy life style has led to an increased consumption of fruit juices (Banan and Hegde, 2005) [1]. Life style changes and accompanying urbanization together with rising affluence appear to be largely responsible for increased consumption of fruit juices from street vending sites and restaurants. Street vendors and restaurants allure customers with the variety of beverages they sell. Nearly 95 per cent of the consumers in India purchase fresh fruit juice and fresh fruits from a street vendor, the reason being that it is cheaper and freshly prepared even though they are relatively unhygienic. Indians have a strong preference to freshly prepared foods and juices and most have definite prejudice against packaged, branded or processed foods, believing them to be lower in flavor and nutrients (Gahlawat *et al.*, 2014) [6]. Hence, the present study deals with the preferences and consumption pattern of fresh fruit juices from street vending sites and restaurants of Thrissur district in Kerala.

#### Materials and Methods

##### Selection of area and vendors

Among the 52 divisions in Thrissur Corporation of Kerala, five divisions namely III, XV, XVIII, XXXVI and XXXXi divisions were selected randomly for the study. From each of the selected five wards, seven street vending sites and three restaurants were randomly selected. Thus a total of 35 street vending sites and 15 restaurants were selected for the study.

##### Selection of consumers

From each of the vending sites and restaurants, two adult consumers were selected randomly to study the consumption pattern of fruit juices.

Thus, seventy consumers coming to the street vending sites and thirty consumers coming to the restaurants were selected to study the consumption pattern of fruit juices.

### Conduct of survey among the consumers

A semi-structured interview schedule was prepared to conduct the survey to assess the consumption pattern of fruit juices among the selected consumers. Details on the frequency of consumption, type and quantity of fruit juices consumed, reasons for consumption, frequency of visit to the same vendor and experience in consuming fruit juices by the consumers were collected using the interview method.

### Statistical analysis

The mean values were calculated and percentage out of the total number of consumers were calculated.

### 3. Result and Discussion

Consumption pattern of beverages by the consumers with respect to the type, frequency and experience of consuming

fresh fruit beverages and synthetic beverages, reasons for consumption, preference given and frequency of visits to the same vendor were collected and details are presented in Tables 1 to 5.

### Types of fruit juice consumed

From the street vending sites and restaurants, it was seen that the consumers used to pineapple juice the most from street vending sites (37.14%) and restaurants (36.67%) followed by lime juice, grape juice, musambi and orange juice as seen in Table 1. Mevlüt Gül, (2012) [8] posited that product types (orange, sour cherry etc.) were determined as the most important factor on consumers' fruit juice purchasing preferences with the rate of 28.34%. Other important factors were found as price level (16.83%), having an international quality and food safety certificates (16.14%), being organic or not (15.21%), production methods (13.06%) and containing sugar additive or not (10.43%).

**Table 1:** Types of fruit juices consumed

S. NO	Types of Fresh Fruit juices	Number of respondents	
		Street vending sites N= 70	Restaurants N= 30
1.	Pineapple	26 (37.14)	11(36.67)
2.	Lime	20 (28.57)	8 (26.67)
3.	Grape	14 (20)	5 (16.67)
4.	Musambi	8 (11.42)	4 (13.32)
5.	Orange	2 (2.86)	2 (6.67)

Figures in parenthesis are percentages.

### Cost of Fresh Fruit Juices

The cost of pineapple juice sold in all the street vending sites ranged from Rupees 20-25 for 200 ml of juice while for those sold in restaurants ranged from Rupees 30-35 for 250 ml. In the case of grape juice, the cost was rupees 20 per 200 ml of juice sold by 94 per cent of street vendors and Rupees 30 by the others street vendors while in restaurants, grape juices cost Rupees 35 per 250 ml. Cost of lime juice ranged from Rupees 10-15 sold by 85.71 per cent of street vending sites and Rupees 20-25 for those sold in restaurants. Boga and Khanolkar (2015) [3] observed that minimum amount consumers spent on fresh fruit juices a day was rupees 50.

### Frequency and reason of Fresh Fruit Juice consumption

Most of the consumers (45.72%) coming to the street vendors consumed fresh fruit juices once in a month from same

vendor. A few consumers (25.71%) used to come to street vendors for juice once a week and rest consumers consumed very rarely from street vendors. From restaurants, very few consumers visited restaurants to consume fresh fruit juices as presented in Table 2. Most of the consumers visiting the street vending sites as well as the restaurants consumed fruit juice beverages because its refreshing. Duffet (2017) [5] reported in his study in South Africa that respondents commonly drank fruit juice 2 – 4 times a week (29.2%) and the 2 – 4 times a week fruit juice purchase interval category was the most popular (33.7%). Respondents generally drank fruit juice between meals (23.5%) or at no specific times (22.8%). The three main reasons why respondents consumed fruit juice were: it was healthier than other drinks (28.3%); it was refreshing (19.3%); and, they liked the taste (17.8%).

**Table 2:** Frequency and reason for consumption of Fresh fruit juice

S. No	Details	Number of respondents	
		Street vending sites N= 70	Restaurants N= 30
1.	<b>Frequency of consumption</b>		
	Once a month	32 (45.72)	4 (13.33)
	Twice a month	2 (2.86)	8 (26.67)
	Once a week	18 (25.71)	8 (26.67)
	Rarely	18 (25.71)	10 (33.33)
2.	<b>Reason for consumption</b>		
	Refreshment	56 (80)	24 (80)
	Others	14 (20)	6 (20)

Figures in parenthesis are percentages

### Frequency of visit to the same vendor, experience on consumption and consumption of synthetic beverages

With respect to the frequency of visit to the same vendor, only 40 per cent of the consumers visited the same street vending

site while in the case of restaurants, half of the consumers visited the same restaurant as in Table 3. Very few consumers visiting the street vending sites (21.42%) and restaurants (6.67) have had gastro-intestinal problems after consumption

of fresh fruit juices. Among all the consumers, most of them visiting the street vendors and restaurants also consumed synthetic beverages occasionally. Studies conducted by

Knabel (1995) [7] and Beuchat and Ryan (1997) [2] reported that inadequate cleaning of utensils and raw materials were identified to be the reason for food borne illnesses.

**Table 3:** Frequency of visit to same vendor, experience on consumption and consumption of synthetic beverages.

S. No	Details	Number of respondents	
		Street vending sites N= 70	Restaurants N=30
<b>Frequency of visit to same vendor</b>			
1	Every visit	28 (40)	7 (23.33)
	Rarely	40 (57.14)	15 (50)
	Very rarely	2 (2.86)	8 (26.67)
<b>Experience after consumption</b>			
2	Good	55 (78.57)	28 (93.33)
	Bad	15 (21.43)	2 (6.67)
<b>Consumption of synthetic beverages</b>			
3	Consumed	50 (71.43)	22 (73.33)
	Did not consume	20 (28.57)	8 (26.67)

Figures in parenthesis are percentages

### Types of synthetic beverages, Frequency and Experience of synthetic beverage consumption

Street vending sites served sherbet, *nannari* and syrugged beverages. Most consumers visiting the street vending sites preferred *nannari* while the restaurants only served syrugged beverages. Rarely did the consumers consumed synthetic beverages from the street vendors and restaurants as indicated

in Table 4. Most of the consumers had no health issues after the consumption of synthetic beverages. Namasivayam (2003) [10] reported the consumption of carbonated soft drinks in selected urban centres in Tamil Nadu. The study revealed that out of 360 respondents, 20.83 per cent of the respondents had the habit of drinking soft drinks during travel, 16.66 per cent near home and 16.55 per cent in the bus stand.

**Table 4:** Types of synthetic beverages, Frequency and Experience of synthetic beverage consumption

S. No	Details	Number of respondents	
		Street vending sites N= 50	Restaurants N=22
<b>Type of synthetic beverages consumed</b>			
1	Sherbet	20 (40)	
	Nannari	25 (50)	
	Syrugged beverages	5 (10)	22 (100)
<b>Frequency of consumption</b>			
2	Rarely	5 (10)	14 (63.64)
	Very rarely	45 (90)	8 (36.36)
<b>Experience after consumption</b>			
3	Good	42 (84)	22 (100)
	Bad	8 (16)	

Figures in parenthesis are percentages

### Preferences of the consumers between synthetic and fresh fruit beverages with reason.

All the consumers who visited the street vending sites and restaurants preferred fresh fruit juices over synthetic beverages as shown in Table 5. Among them, 74.29 per cent of consumers visiting the street vending sites and 73.33 per cent of consumers visiting the restaurants preferred fresh fruit

juices because they were freshly prepared and the others preferred fresh juices because they are refreshing. Similar observation were observed by Richard and Maureen (2003) [12], Peter (2004) [11] and Must *et al* (2009) [9] where the consumers preferred fresh juices over RTS and milk beverages sold by vendors.

**Table 5:** Preferences of the consumers between synthetic and fresh fruit beverages with reason.

S. No	Details	Number of respondents	
		Street vending sites N= 70	Restaurants N=30
<b>Preferences given for beverages</b>			
1	Preferred Fresh fruit juices	70 (100)	30 (100)
	Preferred synthetic beverages	-	-
<b>Reason for preference</b>			
2	More refreshing	18 (25.71)	8 (26.67)
	Freshly prepared	52 (74.29)	22 (73.33)

Figures in parenthesis are percentages

### Conclusion

Fresh fruits and fruit juices are packed with antioxidants. Fruit juices should be consumed fresh that is just after squeezing because vitamins can get oxidized especially vitamin C which

is abundant in fresh fruit juices. In the present study, fresh fruit juice consumption from street vending sites and restaurants because of lack of time, low cost and refreshing though they are relatively unhygienic. The consumers

preferred fresh fruit juices over synthetic beverages because they are healthier and light while the synthetic beverages may contain some harmful additives and are bulky.

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