



Original Research Article

# Study on perception of food items as hot or cold in the rural area of Pondicherry

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## Abstract

**Introduction:** It has been observed in our society that the theory of hot and cold is believed in and practiced by almost all section of the society. It is necessary to know the prevalence of such belief in the community from time to time.

**Objectives:** To know the prevalence of perception of hot or cold food items and their impact on the health status of the community.

**Material and methods:** It was a cross sectional study done between the time period of March and April 2015 among 317 families and their members at their doorsteps. Pretested questionnaire was filled with the information given by the subjects after their verbal consent. Descriptive questions regarding the family's perception of hot and cold foods were asked in the categories of cereals, pulses, oils, vegetables, dairy products, non-vegetarian, fruits, beverages, spices and water.

**Results:** Sixty six percent of the families told Brinjal, 84% told chicken and 34.6% told curd are hot foods and produces Gastrointestinal tract (74%) and Genitourinary tract (73%) illnesses. Similarly 15.6% of the families told carrot, 26.33% told grapes, 20% told fish and 58.6% told buttermilk are cold foods leading to development of respiratory tract illnesses. Only one percent of the families did not have any idea about hot or cold food items.

**Conclusion:** The prevalence of misconception of hot or cold foods exist among families and misunderstanding about the nutritive value of food items which are likely to cause deficiency in vitamins, minerals in their family diet.



## Key words

Hot, Cold, Food items, Community, Perception, Pondicherry, Rural.

## Introduction

The theory of hot and cold effects of food has prevailed in our culture since time immemorial. It is a system parallel to modern biomedical sciences [1]. It has been observed in our society that the theory of hot and cold is believed in and practiced by almost all section of the society [2-6]. The concept of hot/cold food items should have been passed probably from generation to generation [2].

This theory is prevalent in almost all parts of the world, irrespective of religion and political etiology [4]. The difference lies in the perception and interpretation of this theory, which varies with different cultures and even within the same culture [1]. Some culture use this theory to define foods and its effects, while in others it is also used to classify herbs, medicines, illnesses, diseases, etc [7-11].

In the more developed countries the modern biomedical paradigm tends to disregard this theory altogether stating it to be 'too variable and inconsistent' [2]. On the contrary in countries of the east including Pakistan even medical practitioners have a firm belief in the effects of food on the body [7, 8]. The points need to be made that variability, disagreement and inconsistencies are not evidence enough to prove that a system is moribund [2]. It does suggest however that the system is less organized and may lead to outgrowth of many myths can be overwhelming, as in many times observed and reported [3]. The study was planned with the objective to know the prevalence of perception of hot or cold food items and their impact on the health status of the rural area of Pondicherry.

## Material and methods

It was a cross sectional, descriptive, quantitative and qualitative study done between the time periods of March – April 2015 in 317 families who were surveyed at their doorstep. Our study area was in the villages of Pillaichavadi and Kalapet in the rural area of Puducherry (Pondicherry) with total population of 11979.

Selections of families were done at random and information given by other family members was also recorded. Pretested questionnaire was filled with the information given by the subjects after their verbal consent. Descriptive questions regarding the family's perception of hot and cold foods were asked in the categories of cereals, pulses, oils, vegetables, dairy products, non-vegetarian, fruits, beverages, spices and water. The hot foods are considered as those which when consumed produces hot effects to the body and cold foods produces cold effects to the body on consumption according to the family's individual perception.

## Results and Discussion

Among 562 male populations, 22.6% were in age group of 21-30 years and 18.7% was in age group of 31-40 years. Among 558 female populations, 24% were in age group of 21-30 years and 19.1% were in age group of 31-40 years as per **Table – 1**.

There were 317 families and the family size of 3-4 were 38.4% and 2-3 were 25.2% as per **Table - 2**.

**Table - 3** depicting in vegetables were perceived as hot, 66% of the families told Brinjal (Egg Plant) and 35% told other vegetables like tamarind, potato etc. Among vegetables some



were perceived as cold, such as 15.66% told carrot, 14% told lady's finger, 52.33% told other vegetables like onion, cabbage, beet root as cold food items.

The fruits were perceived as hot, 46% told mango, 51% told papaya, and 1.33% told other fruits like chikku (Sapota), pomegranate as hot. In fruits perceived as cold 26% told watermelon, 26.33% told grapes, 13.33%, 32.33% told other fruits like banana, apple as cold foods.

The non vegetarian food items, 84% of the family's perceived chicken, 18.33% dry fish and 26.66% perceived other non-vegetarian like crab, prawn as hot. Specifically some foods such as 19% told mutton, 20% told fish and 7.66% told other foods like pork as cold.

Among the beverages, 8.33% families perceived tea as hot beverage and 15.33% families perceived coffee as hot. Among Dairy products perceived as hot, 34.66% told curd, 17% milk and 3.33% said others like buttermilk as hot. In cold, 58.66% told buttermilk, 22.66% told curd as cold dairy product.

Some families considered as cereals also have concept of hot or cold food. 5.33% of families told Raga and 3.33% perceived wheat as hot food. In pulses, 3% said groundnut and 1.33% said cashew nut as hot pulses. 1% of the families did not have any idea about hot or cold food items.

Among oils, 4% said Gingelly oil as hot. 8.33% said Gingelly oil and 9% said castor oil as cold. Among spices, 3% said pepper and said 0.33% chilli as hot spices.

## Conclusion

The misconceptions about hot or cold foods exist among families and misunderstanding about the nutritive value of food items in this

community. Hence the families should be periodically health educated about the myths of hot or cold food items and their impact on the health.

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**Table – 1:** Distribution of family members according to age structure and sex wise.

Age groups (years)	Male No. (%)	Female No. (%)
<6	42 (7.5)	31 (5.5)
7-10	22 (3.9)	33 (5.9)
11-20	93 (16.5)	99 (17.7)
21-30	127 (22.6)	134 (24)
31-40	105 (18.7)	107 (19.1)
41-50	84 (14.9)	93 (16.7)
51-60	68 (12.1)	34 (6.1)
61-70	12 (2.1)	19 (3.4)
>71	9 (1.6)	8 (1.4)

**Table – 2:** Distribution of families and their size in the study area.

Number of family members	No of families (%)
<2	24 (7.5)
2-3	80 (25.2)
3-4	122 (38.4)
4-5	46 (14.5)
5-6	22 (6.9)
>6	23 (7.2)

**Table – 3:** Distribution of perception of hot or cold food items according to some common foods.

Food items	Hot items	No. (%)	Cold items	No. (%)
Vegetarian	Brinjal <sup>^</sup>	198 (66)	Carrot	47 (15.6)
	Others	105 (35)	Ladys' finger* Others	42 (14) 157 (52.3)
Fruits	Mango	138 (46)	Watermelon	78 (26)
	Papaya	153 (51)	Grapes	79 (26.3)
	Others	4 (1.3)	Others	97 (32.3)
Non vegetarian	Chicken	252 (84)	Mutton	57 (19)
	Dry fish	55 (18.3)	Fish	60 (20)
	Others	80 (26.6)		
Dairy Products	Milk	51 (17)	Buttermilk	176 (58.6)
	Curd	104 (34.6)	Curd	68 (22.6)
Cereals	Ragi	16 (5.3)	Black gram	4 (1.3)
	Wheat	10 (3.3)	White gram	2 (0.6)

<sup>^</sup>Egg plant, \*Okra