

# Awareness about Fluorosis—A Survey

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## Abstract:

### **Aim:**

This study is aimed to determine the awareness about fluorosis among Patients visiting saveetha dental college.

### **Objective:**

To make people aware about Fluorosis as it has been recognised as an endemic problem affecting a lot of areas .

### **Background:**

This study was held at saveetha dental college where the patients were given a questionnaire which was filled and later analysed . This study involved a sample of 100 patients. The patients were asked to fill a self administrated questionnaire regarding knowledge and awareness about fluorosis .

### **Reason :**

There are a million of people unaware about the disease fluorosis .This study is done to make awareness about fluorosis among people .

### **Result :**

Study revealed that 30% of the study populations showed mild fluorosis. Awareness and counselling on prevention of dental fluorosis was given.

**Key words :** Awareness , fluoride ,endemic , dental caries , skeletal , fluorosis .

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## INTRODUCTION:

For more than a century, fluorides have been used to prevent dental caries. Although it has been scientifically proven that small concentrations of fluoride can significantly reduce dental caries without any ill effects, the use of fluoride is still regarded as a controversial issue.[1] Fluorosis is a crippling and painful disease caused by excess intake of fluoride . Fluorosis may be classified into Dental fluorosis and skeletal fluorosis. Dental fluorosis in teeth exhibit the first sign of fluoride toxicity in the form of “mottled enamel”. Spots and chalk white, yellowish brown and brownish black, horizontal streaks over teeth’s. Mild, moderate and severe classification of dental fluorosis in the field was not done.Skeletal Fluorosis is characterised as Genu valgum , Genu varum , Kyphosis:The clinical features are . In Genu valgum: -Legs are bowed inwards in the standing position. The bowing usually occurs at or around the knee, so that a standing with knees together, the feet are far apart.In Genu varum: - Legs are bowed outwards in the standing position. The bowing usually occurs at or around the knee. Standing with the feet together, the knees are far apart.In Kyphosis: - Forward bending of spine Fixed and rigid thoracic cage as well as spinal cord compression occurs. Fluorosis has attained an alarming dimension all over the world.It has been identified as an endemic disease among which Andhra Pradesh is facing serious health problems.The need for improving levels of awareness among people about the harmful effects of excessive fluorides in the body was undertaken at a continuing medical education programme on fluorosis

conducted by the Fluorosis Research and Rural Development Foundation, Andhra Pradesh. Beside the health hazards there are other adverse effects of dental fluorosis such as high costs of other medical and dental problems and the effect on the victims and their loss of time.Intake of fluorides greater than one part per million led to weakening of teeth due to loss of calcium.Avoiding a sugary diet and maintaining proper oral hygiene could easily prevent dental caries. Different studies have found very low knowledge on risk factors of fluorosis . There are a million of people unaware about the disease fluorosis .This study was conducted to create awareness about fluorosis among people and to evaluate the prevalence of fluorosis .

## MATERIALS AND METHODS :

A descriptive study was conducted among the patients of saveetha dental college. Study was conducted in the month of April to May , 2016 by using a self administered questionnaire regarding awareness of fluorosis, followed by a counselling .

This study involved a sample of 100 patients. (50 male and 50 female ) The study was conducted by means of a questionnaire .

After the survey was conducted the patients who participated in the study were asked to attend the counselling which was held by the professional doctors of saveetha dental college . Each patient was questioned about their health . Counselling on how to maintain or prevent Dental and skeletal fluorosis was given . They were also

asked about their chief complaint which helped them diagnose better. The patient were asked about all details regarding the past medical and dental history. The patients were also asked about the oral habits and were advised about the negative effects of any forms of tobacco . This survey was also used to raise awareness about various aspects of the subject. The patients were informed about:

- The causes and harmful effects of fluorosis
- Nutritional interventions
- Certain precautions in fighting the disease
- Safe drinking water, a fundamental right
- Alternative sources of safe drinking water in respect to fluoride concentration.

The patients were asked to fill the following questionnaire ;

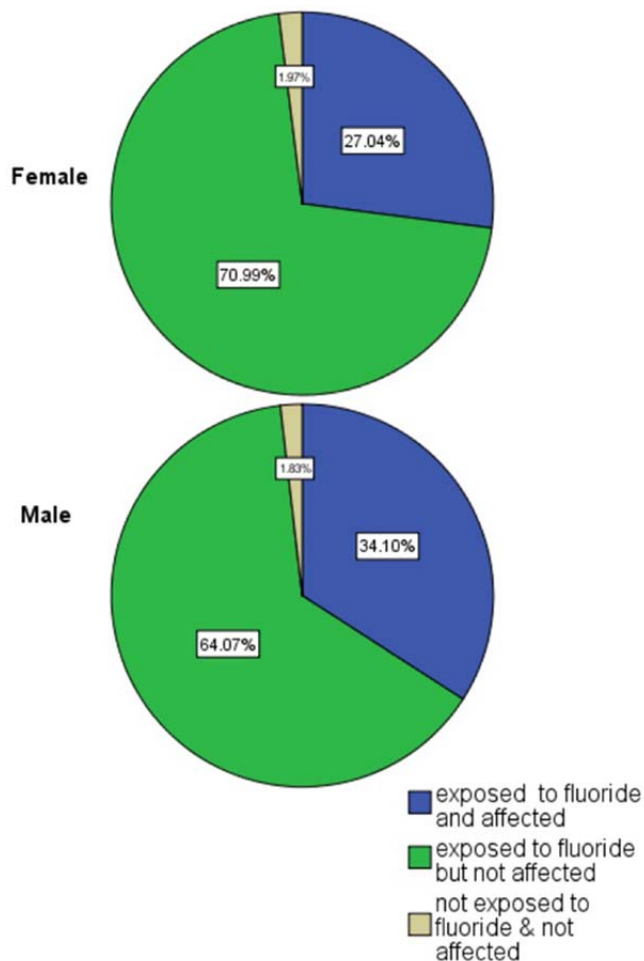
<b>Name:</b>
<b>Age:</b>
<b>Sex:</b>
<b>Questionnaire on Fluorosis</b>
1. Do you have frequent tooth ache or gum bleeding? A. Yes B. No
2. Do you get motion sickness easily? A. Yes B. No
3. Do you flavour fluoridation (fluoridation is the controlled addition of fluoride to a public water)? A. Yes B. No
4. Do you or did you have sensitive teeth? A. Yes B. No
5. Do you have gum disease? A. Yes B. No
6. Did you stop using fluoride in toothpaste because it made you sick? A. Yes B. No
7. As a child were you given prescription fluoride supplements (pill, drops, etc)? A. Yes B. No
8. Did you consume bottled water for any more than 20% of your water needs? A. Yes B. No
9. Do your teeth appear dis-figured? A. Yes B. No
10. Do you use mouth rinsers as a substitute for toothpaste? A. Yes B. No

**Table 1 : Measurement Of Dental Fluorosis :**

Category	Description
Normal	Enamel surface is smooth , glossy and appear white in colour
Questionable	The enamel shows slight aberrations , occasional spots might be seen
Very mild	It might appear as opaque white areas
Mild	White opacity of the enamel is more extensive
Moderate	It might show brown stains

**Table 2: Fluorosis Score**

	Gender	
	Male	Female
Normal	43%	32 %
Questionable	0.91%	0.23%
Very mild	9.13%	14.73%



**Measurement of Fluorosis :**

Based on table 1 and 2 it was analysed as following ;  
Counselling on how to prevent flurosis was also given . It included the following ,

1. Counsel caregivers to follow the proper use of dental products such as toothpaste and to avoid mouthwash/rinse by children under the age of 6.
2. Be aware of the fluoridation status in your community. This information contributes to the oral health risk assessment and your guidance to caregivers.
3. Perform an oral health risk assessment and apply fluoride varnish if needed. If the family has one established, defer to the dental home. If not, suggest beginning regular dental visit .

**RESULTS AND DISCUSSION :**

Based on table 1 and table 2 it was analysed that The 100% of the surveyed population exposed to water fluoride level above normal limit but 30.57% affected with fluorosis. The rest of the population ie 70% were neither exposed nor affected after mapping. An individual dietary habits and general state of health as well as the body's ability to dispose of fluoride all affect how the exposure to fluoride manifests itself.

The overall prevalence of fluorosis was 30.57 among the surveyed population. Males are affected more as compared to females. The observation in the present study were quite rewarding. The purpose of this study was to make people aware about fluorosis as it has been recognised as an endemic problem affecting a lot of areas . Although the effects of the most prevalent forms of dental fluorosis are primarily aesthetic, health professionals should identify all possible sources of fluoride before considering the addition of fluoride supplements. The American Dental Association (ADA) recommends that these children also be identified as at high risk for caries. This is due to the increased availability of fluoride and ingestion by young children from multiple sources, including: Beverages, including fluoridated tap water, Foods processed with fluoridated water, Toothpaste and other oral care products, Topical fluoride and dietary supplements. This shows a need to educate people about fluorosis and about its prevention so as to find ways of combating the problem.

**CONCLUSION:**

Even though the prevalence of dental fluorosis is high, most of them are unaware of fluorosis stains on their teeth. This study suggests that dental fluorosis is a major public health problem in and is related to the high fluoride content of drinking water. Strategies must develop to reduce the fluoride levels in supplying drinking water to reduce the morbidity of dental fluorosis.

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