



RESEARCH ARTICLE

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## A DESCRIPTIVE STUDY ON ETIOLOGICAL FACTORS OF PEENISAM (SINUSITIS) AMONG PATIENTS ATTENDING OUT PATIENT DEPARTMENT IN GOVERNMENT SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI

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Sinusitis, Rhinosinusitis,  
Descriptive Cross Sectional Study.

### ABSTRACT

In India 40% of people are living below the poverty line. People under the poverty line are exposed to various problems. As we are Health people, we are they very much worried about their health conditions, they face in their continue life- style. Peenisam are one of the common disorder seen by the general practitioners, which are troubling the mankind. Although peenisam is create physical and psychological discomfort. I am very much worried and a thought of carrying art and my research process. Being a student of Govt. Siddha Medical College, Palayamkottai, I made my research involving 50 members diagnosed as peenisam patients. Questionnaire was text book. Made on the basis of Siddha concept of etiological factors of Peenisam said in Siddha text book. At the end of the study, I have really realized that "Prevention is better than cure" because the people who were exposed to the etiological factors of Peenisam with out awareness were gotten the asthmatic episodes. If we make awareness about the etiological factors of Peenisam, the patient will take care of their own health. From this study results and observation, I found that the patient having H/O, exposure to dust and other allergiens was 44 members (88%); H/O, exposures to cool air and intake of cold water was 40 members (80%); H/O, patients with nasal septal deviation/nasal polyps was 28 members (56%); H/O, allergic to cosmetics was 22 members (44%). This study will be essential role of siddha physicians to early diagnosis, prognosis and preventive of the disease. Further literary and clinical studies are necessary in future.

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### INTRODUCTION

Siddha system is well founded under the basic principles of nature and its elements. Treatment and prevention is the basic aim of the siddha system of medicine. Siddha insists to lead a healthy life both physically and mentally. They classified the disease under Thridosya theory. Peenisam (it could be correlated with Sinusitis in allopathic view) is a very common disease in the society due to increasing exposure to air

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pollution, dust allergy and western life style often starts in childhood. It is a disease characterized by recurrent attacks of runny nose and sneezing, which vary in severity and frequency from person to person. Sinusitis is characterized by reversible airway obstruction, mucosal oedema, excessive secretion of mucus, causing mucous plugs. Over 75% of the patients had incidence of sinusitis in the age group of 16 – 45 years. Etiological factors of sinusitis is easily avoidable one. If we concentrate on making awareness about the precaution of this disease, it will reduce the occurrence of the sinusitis. With my study, I am trying to convey how should we take precaution to prevent Peenisam occurrence in people. I have wish to make

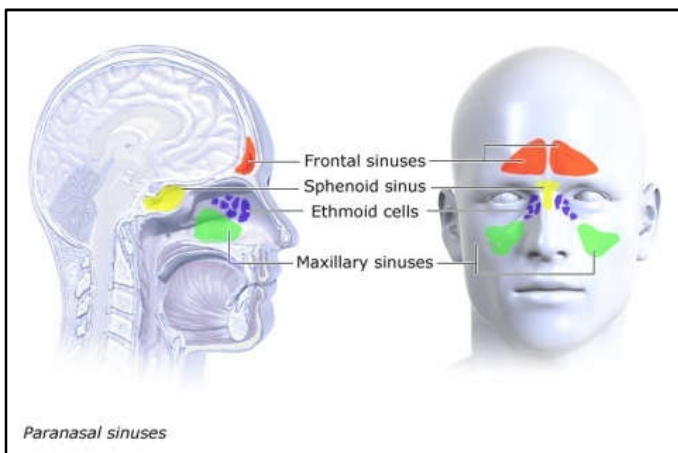
awareness about avoiding of etiological factors of Peenisam in patients and upcoming generation.

### Aim and Objectives

To evaluate the etiological factors of PEENISAM (SINUSITIS) in patients attending Out Patient Department In Govt Siddha Medical College, Palayamkottai.

## REVIEW OF LITERATURES

**Modern Aspect:** Sinusitis can be broadly defined as inflammation of one or more of the para nasal sinuses. A sinus is a hollow space in the body. There are many types of sinus, but sinusitis affects the paranasal sinuses, the spaces behind the face that lead to the nasal cavity. The paranasal sinuses are part of the upper airways, and are connected to the nasal cavity. They are made up of several cavities in the skull found from the forehead down to the teeth of the upper jaw. Depending on where they are, these cavities are known as the frontal sinuses, the sphenoid sinus, the ethmoid cells and the maxillary sinuses. The paranasal sinuses are lined with mucous membranes that have tiny hairs on them (ciliated epithelium). These mucous membranes produce a secretion that runs down through the nose and throat.



### Types

Sinusitis always involves nasal swelling and a buildup of mucus, but there are different types, and they can last for different lengths of time.

#### The different types are

- Acute rhinosinusitis: Sudden onset, lasting less than 4 weeks with complete resolution.
- Subacute rhinosinusitis: A continuum of acute rhinosinusitis but less than 12 weeks.
- Recurrent acute rhinosinusitis: Four or more episodes of acute, lasting at least 7 days each, in any 1-year period.
- Chronic rhinosinusitis: Signs of symptoms persist 12 weeks or longer.

### Symptoms

Symptoms vary, depending on the length and severity of the infection. If the patient has two or more of the following

symptoms and thick, green or yellow nasal discharge, they may be diagnosed with acute sinusitis.

- facial pain and pressure
- blocked nose
- nasal discharge
- reduced sense of smell
- congestion
- cough

In more advanced cases, the following symptoms may also be present:

- fever
- halitosis, or foul-smelling breath
- tiredness
- toothache
- headache

If these symptoms continue for 12 weeks or longer, the doctor may diagnose chronic sinusitis.

### Causes

Sinusitis can stem from various factors, but it always results from fluid becoming trapped in the sinuses. This fuels the growth of germs.

- **Viruses:** In adults, 90 percent cases of sinusitis result from a virus
- **Bacteria:** In adults, 1 case in 10 is caused by bacteria
- **Pollutants:** Chemicals or irritants in the air can trigger a buildup of mucus
- **Fungi:** The sinuses either react to fungi in the air, as in allergic fungal sinusitis (AFS), or they are invaded by fungi, as in chronic indolent sinusitis. This is rare in the U.S.

### Risk factors

The following may increase a person's risk of developing sinusitis:

- previous respiratory tract infections, such as the common cold
- nasal polyps, or small growths in the nasal passage that can lead to inflammation
- weakened immunity, due, for example, to a health condition or some kinds of treatment
- an allergic reaction to substances such as dust, pollen, and animal hair
- structural problems in the nose, for example, a deviated septum. The septum is the bone and cartilage that divides the nose into two nostrils. When this is bent to one side, either through injury or growth, it can lead to repeated infections and inflammation.

### Pathophysiology

Most commonly a viral upper respiratory infection causes rhinosinusitis secondary to oedema and inflammation of the nasal lining and production of thick mucus that obstructs the paranasal sinuses and allows a secondary bacterial overgrowth.

There are frontal, maxillary, sphenoid, and ethmoid sinuses. Allergic rhinitis can lead to sinusitis also due to ostial obstruction. Ciliary immobility can lead to increased mucus viscosity, further blocking drainage. Bacteria are introduced into the sinuses by coughing and nose blowing. Bacterial sinusitis usually occurs after a viral upper respiratory infection and worsening symptoms after 5 days, or persistent symptoms after 10 days.

## MATERIALS AND METHODS

### Proposed Methods

**Study Population:** The research work is carried out in patients with complaints of Peenisam attending OPD, GSMC, Palayamkottai.

### Inclusion Criteria:

- Sex :Both sex
- Age : Age between 16 - 45 years (Both Sex)
- Sneezing
- Headache
- Peri orbital pain
- Running nose
- Ear pain/fullness
- Nasal blockage
- Eye irritation/swollen/watery

### Exclusion Criteria

- Age below 16 and above 45 years
- Bronchial Asthma
- Tuberculosis
- Patients who are not willing for the study

**Study design:** Descriptive Study

**Study type:** Cross sectional study.

**Study period:** 4 months.

**Operational definitions:** In this research, defined key feature of sample is patients with symptoms of Peenisam.

**Sample size:** 50 patients.

**Sampling procedure:** Convenient sampling.

**Data collection Procedure:** The information will be collected via In-depth interview by using questionnaire.

**Data Analysis:** In research, data analysis includes recording of key exposure / outcome variables; indicators to be calculated for the descriptive analysis (e.g. measures of disease prevalence, incidence), measure central tendency (mean, median).

**Quality Assurance:** Following procedures are conducted in time with good planning by chief investigator. Whole research work himself with time frame schedule

- Protocol development
- Data collection
- Data analysis

### Bias and Limitations

Care will be taken to minimize the impact of the bias / limitation on the quality of the study through questionnaire checking three times before and after data collections and all of the records are included without any selection.

### Practical considerations

**Logistics for data collection:** Chief investigator will make arrangement for the data collection in time schedule manner.

### Ethical issues:

- There will be no infringement on the rights of the patient.
- The data collected from the patient will be kept strictly confidential.
- The patient will be informed about the study.
- After obtaining the written consent of the patient (through consent form in s their understandable language) they will be enrolled in the study.
- The patient will be allowed to withdraw from interviewing if he/she is not satisfied with this study along with ensuring the continuation of required treatment procedures.

### Ethical Review

- Institutional Ethical Committee (IEC) of the participating center will give the clearance certificate before the minor project is initiated.
- Patient's information sheet and informed consent form should be submitted along with project proposal for approval by IEC.

### Expected outcomes

**Primary outcome:** Ensuring the knowledge about various etiological factors of Peenisam (sinusitis) in patients attending OPD, In GSMC, Palayamkottai.

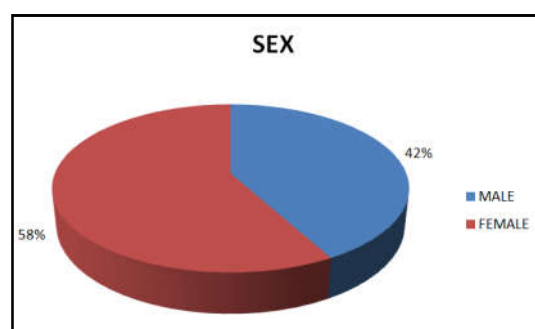
**Secondary outcomes:** Making awareness about etiological factors of Peenisam (sinusitis) in patients attending OPD In GSMC, Palayamkottai.

## RESULTS AND OBSERVATIONS

### 1. SEX

Table 1.

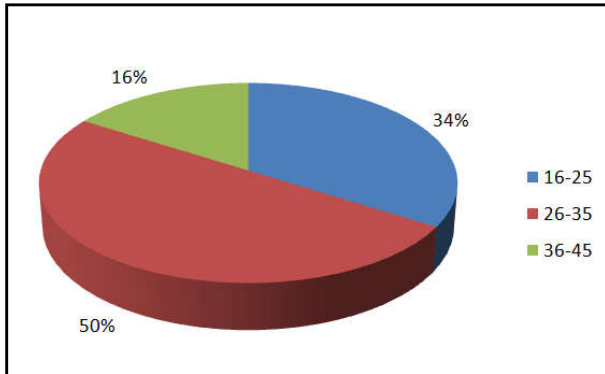
SEX	NUMBER OF MEMBERS	PERCENTAGE
MALE	21	42%
FEMALE	29	58%



2. AGE

Table 2.

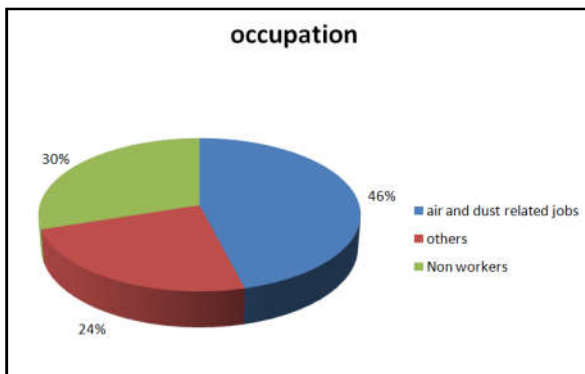
AGE	NUMBER OF PATIENTS	PERCENTAGE
16-25	17	34%
26-35	25	50%
36-45	8	16%



3. OCCUPATION

Table 3.

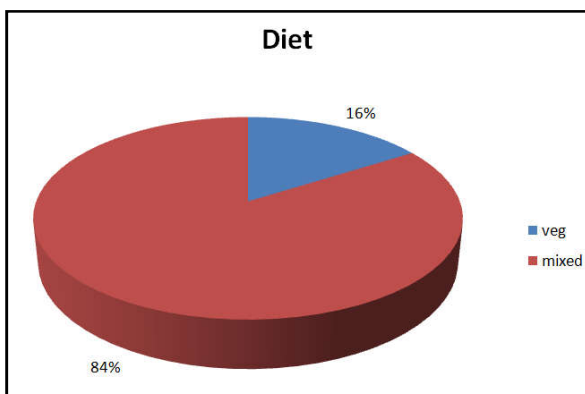
Occupation	Number of patients	Percentage
Air & dust related jobs	23	46%
Others	12	24%
Non workers	15	30%



4. DIET PATTERN

Table 4.

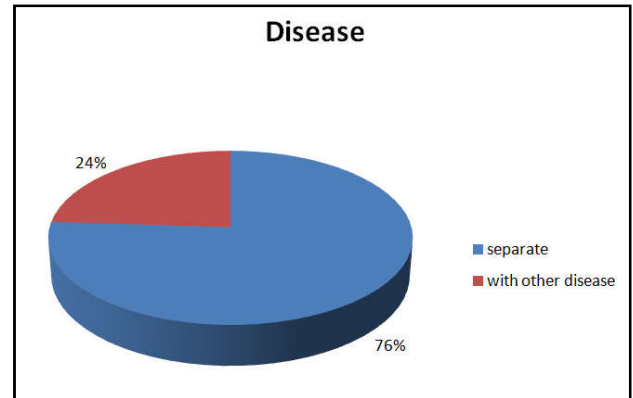
Diet Pattern	Number Of Patients	Percentage
Vegetarian	8	16%
Non Vegetarian	0	0%
Mixed Diet	42	84%



5. H/O DISEASE

Table 5.

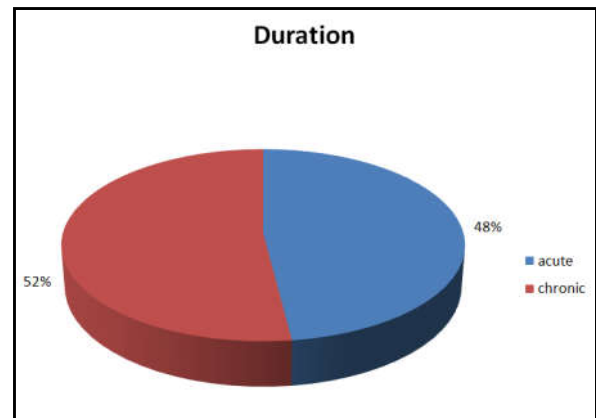
Disease	Number of patients	Percentage
Separate	38	76%
With other diseases	12	24%



6. H/O DISEASE DURATION

Table 6.

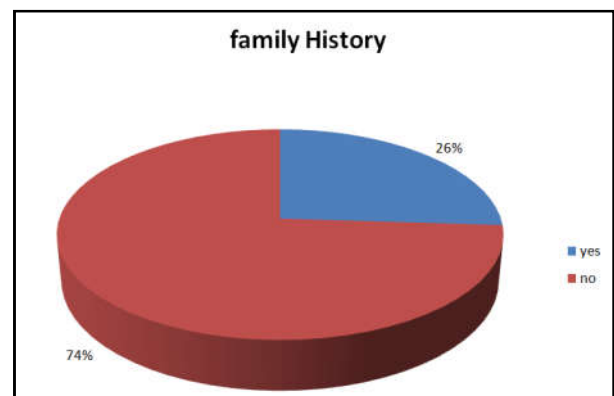
Duration	Number of patients	percentage
Acute	24	48%
Chronic	26	52%



7. FAMILY HISTORY

Table 7.

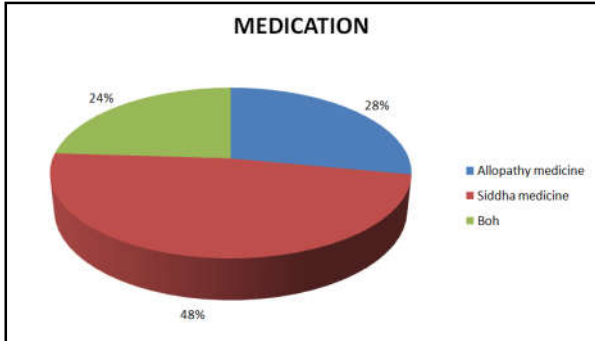
History	Number of patients	percentage
Yes	13	26%
No	37	74%



**8. MEDICATION**

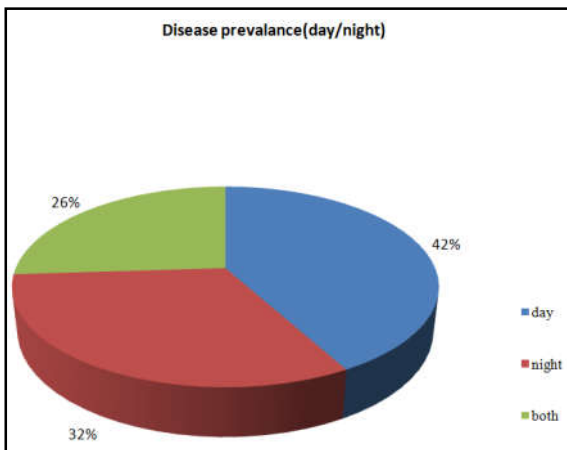
**Table 8.**

Medication	Number of patients	percentage
Allopathy medicine	14	28%
Siddha medicine	24	48%
Both	12	24%



**9. DISEASE PREVALENCE (DAY/NIGHT)**

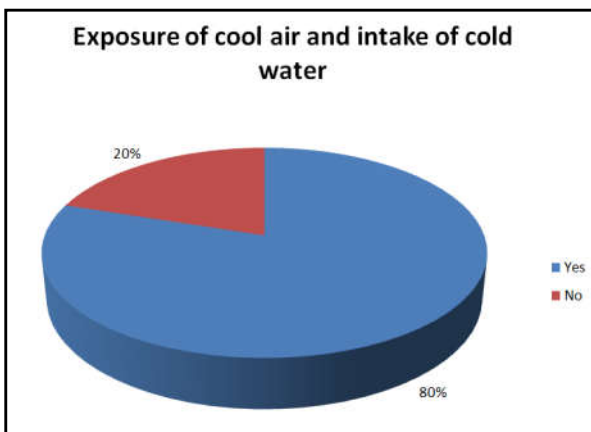
Disease prevalence	Number of patients	Percentage
Day	21	42%
Night	16	32%
Both	13	26%



**10. ETIOLOGICAL FACTORS OF SINUSITIS ACCORDING TO SIDDHA ASPECT**

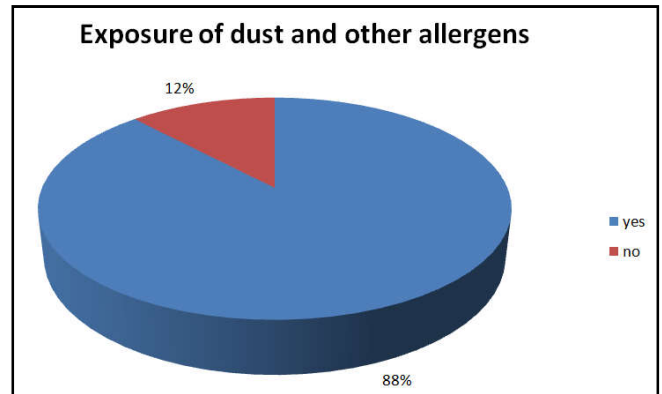
**10.1 EXPOSURE OF COOL AIR AND INTAKE OF COLD WATER**

Exposure	Number of patients	percentage
Yes	40	80%
No	10	20%



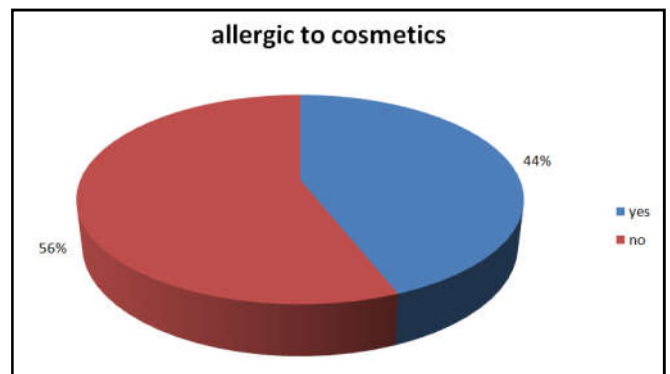
**10.2. EXPOSURE OF DUST AND OTHER ALLERGENS**

Exposure	Number of patients	Percentage
Yes	44	88%
No	6	12%



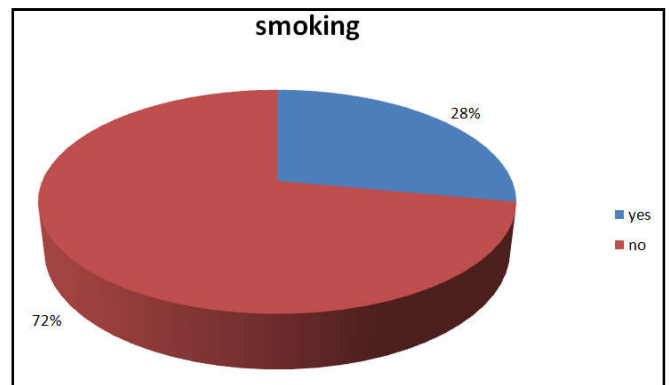
**10.3. ALLERGIC TO COSMETICS**

Allergy	Number of patients	percentage
Yes	22	44%
No	28	56%



**10.4. SMOKING**

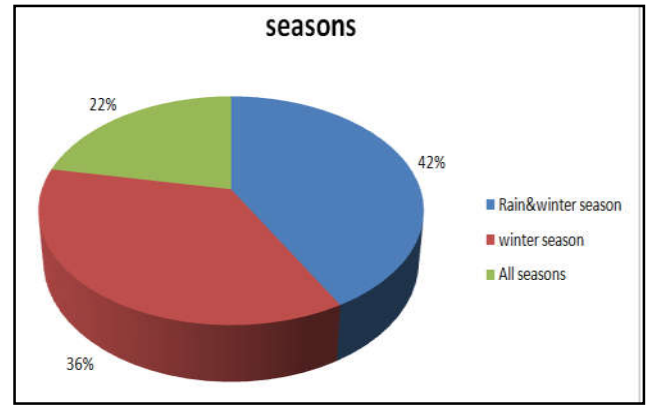
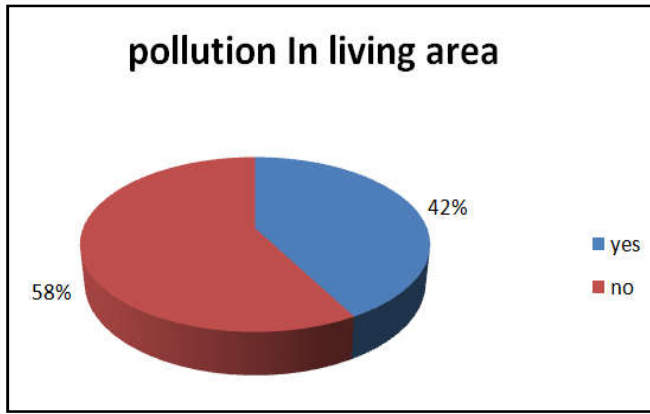
Smoking	Number of patients	Percentage
Yes	14	28%
No	36	72%



**10.5. POLLUTION IN LIVING AREA**

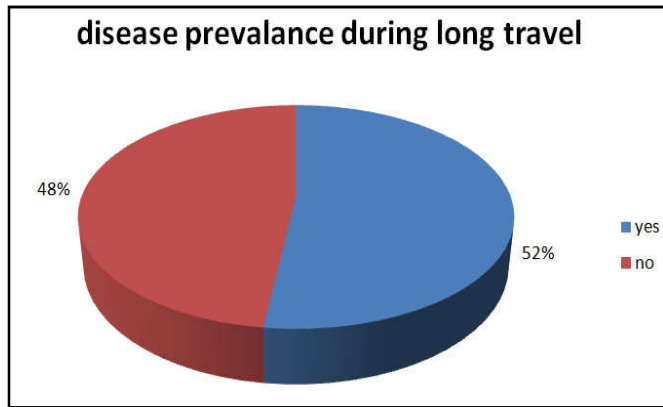
Pollution	Number of patients	percentage
Yes	21	42%
No	29	58%





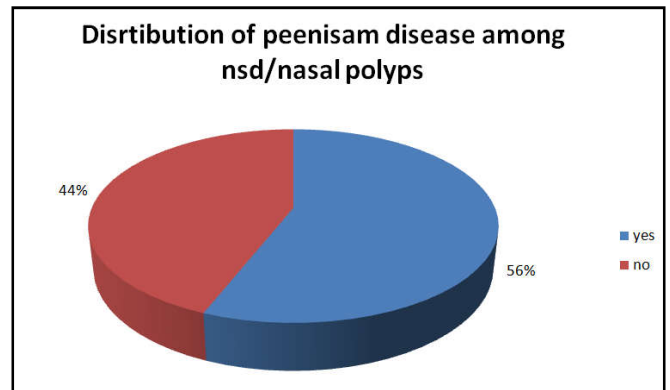
**10.6. DISEASE PREVALENCE DURING LONG TRAVEL**

Long travel	Number of patients	percentage
Yes	26	52%
No	24	48%



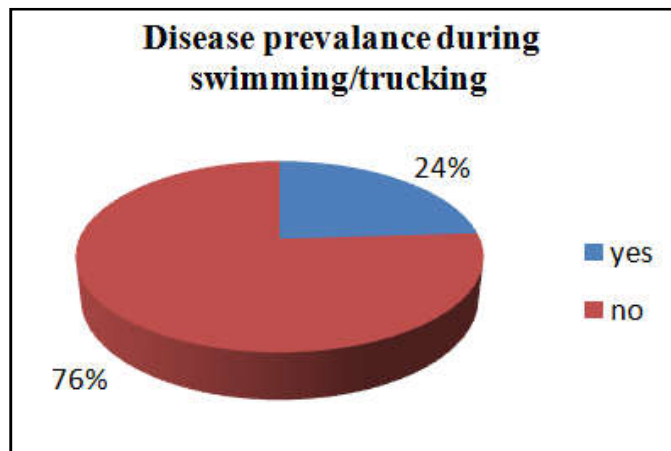
**10.9. DISTRIBUTION OF PEENISAM DISEASE AMONG NASAL SEPTAL DEVIATION/ NASAL POLYPS**

Nsd/nasal polyps	Number of patients	Percentage
Yes	28	56%
No	22	44%



**10.7 DISEASE PREVALENCE DURING SWIMMING/ TREKKING**

Swimming/trekking	Number of patients	percentage
Yes	12	24%
No	38	76%

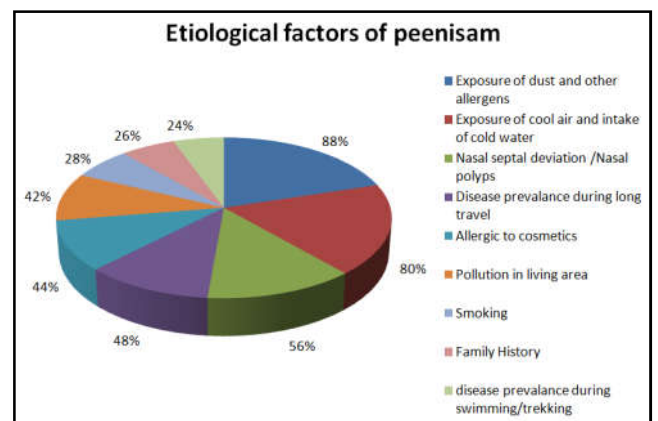


**10.8 DISEASE PREVALENCE ACCORDING TO SEASONS**

Seasons	Number of patients	Percentage
Rain & winter season	21	42%
Winter season	18	36%
All seasons	11	22%

**11. OVER ALL DISTRIBUTION OF ETIOLOGICAL FACTORS OF PEENISAM IN PATIENTS**

Etiological factors of peeniam	Members saying positive response	Percentage
1.Exposure of dust and other allergens	44	88%
2.Exposure of cool air and usage of cold water	40	80%
3.Nasal septal deviation/nasal polyps	28	56%
4. disease prevalence during long travel	24	48%
5.allergic to cosmetics	22	44%
6.Pollution in Living area	21	42%
7. Smoking	14	28%
8..family history	13	26%
9. disease prevalence during swimming/trekking	12	24%



## DISCUSSION

According to this study, the majority of the people who are working in the dust and polluted area are mostly affected by sinusitis. 46% of the people are affected due to the dusty jobs and 80% of the people are affected due to the exposure of cool air and intake of cold water. The people with dust and other allergens are nearly 88%. In 2001 the ARIA (Allergic Rhinitis and its Impact on Asthma) Group published a document establishing the link between the upper and lower airways. Evidence suggests that allergic inflammation affects the entire respiratory tract as a continuum, with a high proportion of asthmatic individuals having comorbid allergic rhinitis. The existence of a relation between rhinitis and asthma is supported by evidence that control of rhinitis improves asthma control; this has led to phrases such as "one airway, one disease." Other studies, however, suggest that the incidence of infective rhinosinusitis does not rise during the hay fever season in pollen sensitive patients. Some facts about sinusitis, in today's modern, urbanized living conditions we are in constant touch with different kinds of pollutants. This ultimately leads to allergic conditions, some of which become chronic due to various factors like sinusitis. They interfere with day to day living. In managing chronic diseases, Ayurveda has a noteworthy role. However these days physicians do not rely completely on Ayurvedic texts, so numerous research programs and clinical trials are performed on a large scale. Over the past few years many research studies have been done on '*peenasaroga*' (sinusitis) and still much research is going on. Some of them are mentioned below which gives a brief insight into the Ayurvedic management of sinusitis as practiced by Ayurvedic practitioners in India. Dental etiologies are responsible for about 10 - 40% of maxillary sinusitis, Dentists and maxillofacial surgeons must consider dental factors as important causes of maxillary sinusitis and must be aware of various treatment approaches. So there are many studies proved that sinusitis main causes are dusty jobs, polluted area, high exposure to cold air and intake of cold water etc.

## Conclusion

The results and observation were analyzed to various aspects showed that patients with H/O exposures to dust and other allergens, exposure to cool air and intake of cold water were caused peenisam commonly. So we should make awareness of various etiological factors of peenisam to the patients first then only management of peenisam can be easily avoided. From this study observations and analysis, we will create the knowledge about prevention and management peenisam to the patients.

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- Sinusitis questionnaire-AWS

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