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To assess prevalences of URTI and associated symptoms amoung university students

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Abstract
To assess prevalences of URTI and associated symptoms amoung Isra university students.It was Randomized study with closed Questionnare
A group of 110 students, between age 19 and 24 were were selected, and questionnaire were filled by the students, being suffered from upper respiratory tract infections and associated symptoms last year. Of 110 students 59 were male students and 51 were female.

Keywords: Infections, Symptoms, prevalence

Introduction

(URTIs) are defined as acute febrile illnesses presenting with cough, coryza, sore throat, or hoarseness, which are very common in the community and are one of the major reasons for visiting primary care physicians, particularly during the winter season (Macfarlane et al., 1993). Upper respiratory tract infection (URTI) or "the common cold" is a symptom complex usually caused by several families of virus; these are the rhinovirus, coronavirus, parainfluenza, respiratory syncytial virus (RSV), adenovirus, human metapneumovirus and influenza. Occasionally the enterovirus is implicated in summer. Recently, the newly discovered bocavirus (related to the parvovirus) has also been linked to URTI. The term "URTI" is probably a misnomer as it incorrectly implies an absence of lower respiratory tract symptoms. URTI occurs commonly in both children and adults and is a major cause of mild morbidity. (1) In industrial United States of America (USA), adults have two to four, and children have between six and eight URTIs a year. (2,3) There is little data from developing countries.Upper respiratory tract infection (URI) is a nonspecific term used to describe acute infections involving the nose, paranasal sinuses, pharynx, larynx, trachea, and bronchi. The prototype is the illness known as the common cold, which is discussed here, in addition to pharyngitis, sinusitis, and tracheobronchitis. Influenza is a systemic illness that involves the upper respiratory tract and should be differentiated from other URIs. According to the findings of Meneghetti (2006) and Abed and Boivin (2006), URTIs are the most common acute illness found in an outpatient setting which have a wide range of clinical manifestation that may vary from the common cold (mild and self-limiting) to a life threatening disease, such as epiglottitis.

Both viral and bacterial pathogens are considered to play an important role in the etiology of URTIs. Fungi, other microorganisms, and chemicals (such as powder or oil that accidentally penetrate into the lungs) could also function as causative agents for URTIs (Pray and Pray, 2004; Karevold et al., 2006).

Upper respiratory tract infection (URTI) is caused by more than 200 different viruses, especially rhinoviruses and coronaviruses.(4,5,6) Along with parainfluenza virus , adenovirus, respiratory syncytial virus, coxsackievirus, and influenza virus accounting for most cases. (7) Human metapneumovirus is a newly discovered agent causing URIs. Group A beta-hemolytic streptococci (GABHS) cause 5% to 10% of cases of pharyngitis in adults. (8) Other less common causes of bacterial pharyngitis include group C beta-hemolytic streptococci, Corynebacterium diphtheriae,Neisseria gonorrhoeae, Arcanobacterium haemolyticum, Chlamydia pneumoniae, Mycoplasma pneumoniae, and herpes simplex virus. Streptococcus pneumoniae, Haemophilus influenzae, and Moraxella catarrhalis are the most common organisms that cause the bacterial superinfection of viral acute sinusitis. (9) Less than 10% of cases of acute tracheobronchitis are caused by Bordetella pertussis, B. parapertussis, M. pneumoniae, or C. pneumoniae. (10)

Most URIs occur more frequently during the cold winter months, because of overcrowding. Adults develop an average of two to four colds annually. Antigenic variation of hundreds of respiratory viruses result in repeated circulation in the community. A coryza syndrome is by far the most common cause of physician visits in the United States. (7) Acute pharyngitis accounts for 1% to 2% of all visits to outpatient and emergency departments, resulting in 7 million annual visits by adults alone(7)Acute bacterial sinusitis develops in 0.5% to 2% of cases of viral URIs.(9)Approximately 20 million cases of acute sinusitis occur annually in the United States. About 12 million cases of acute tracheobronchitis are diagnosed annually, accounting for one third of patients presenting with acute cough. (10) Transmission of organisms causing URIs occurs by aerosol, droplet, or direct hand-to-hand contact with infected secretions, with subsequent passage to the nares or eyes. (11) Thus, transmission occurs more commonly in crowded conditions. Direct invasion of the respiratory epithelium results in symptoms corresponding to the area(s) involved.

Onset of symptoms occurs 1 to 3 days after exposure to the infectious agent. Nasal congestion, sneezing, and sore throat are the hallmarks of the common cold.Conjunctivitis is characteristically seen with adenovirus infections. Sudden onset of sore throat, fever, absence of cough, and exposure to a person with known streptococcal pharyngitis in the preceding 2 weeks suggest the diagnosis of GABHS-related pharyngitis.(12)

Patients with acute sinusitis experience symptoms for more than 1 to 2 weeks after a common cold, including unilateral facial pain, maxillary toothache, headache, and excessive purulent nasal discharge.(13,14)Acute tracheobronchitis is an illness characterized by cough, with or without sputum production, or wheezing, lasting 1 to 3 weeks. (10) Pertussis in adults with waning immunity caused by previous illness or immunization may not manifest with the typical whooping cough seen in children with primary infection. Influenza is a sudden illness characterized by high fever, severe headache, myalgia, and dry cough, followed by significant fatigue and malaise.(15)

On physical examination, patients with common colds may have a low-grade fever, nasal vocal tone, macerated skin over the nostrils, and inflamed nasal mucosa.(16) Patients with GABHS-related pharyngitis may have pharyngeal erythema and exudate, palatal petechiae (doughnut lesions), tender anterior cervical lymphadenopathy, and occasionally a scarlatiniform rash.(12) Swelling, redness, and tenderness overlying the affected sinuses and abnormal transillumination are specific for, but not commonly seen, in patients with acute sinusitis.(13) Generalized lymphadenopathy associated with sore throat, fever, and rash should raise the possibility of a systemic viral infection, such as Epstein-Barr virus, cytomegalovirus, or human immunodeficiency virus. Patients with acute tracheobronchitis may also have audible respiratory wheezes. Patients with influenza appear toxic and may have pulmonary rhonchi and diffuse muscle tenderness. Mainly done on the basis of clinical suspect and aided by certain investigations, Viral culture, rapid antigen detection, or polymerase chain reaction (PCR) assay of influenza virus on a nasopharyngeal swab is indicated in patients for whom specific antiviral therapy is recommended.Serologic tests, C-reactive protein, Increased antistreptolysin O titer and pharyngeal swab for rapid antigen detection of GABHS is 90% sensitive and 95% specific in adults.(17,18) Plain radiography if patient can't tolerate CT but has been largely replaced by computed tomography (CT) in the evaluation of sinusitis, particularly in preparation for corrective surgery.(19) Ultrasonography may also be useful in the intensive care unit to evaluate nosocomial sinusitis.(20)

The main stay remains to find Prevalance of URTI, what are its common daily symptoms and treatment preferred and taken by our people.

Methods and Material

- Study Design:
  Observational
- Place:
  This project was conducted within the boundaries of Isra University & Hospital (IUH).
- Duration:
  The project started from 2nd Oct'2012; and was completed on 23rd Oct'2012.
- Number of Participants:
  We interviewed 120 Male and Female students.
- Data Collection Procedure:
  Closed Questionnaires were filled after verbal consent.
- Data Analysis:
  We worked on SPSS Version 16
  - Frequencies
  - Percentages
  - Pie charts
  - Bar Charts

Results

The total number of participants were 110 among them 51 were females and 59 were male.Among 59 males 34 suffered from upper respiratory tract infection while 25 were unaffected. In females 35 were affected while 16 were not. 44.4% people complained of having sneezing associated with Upper Respiratory Tract Infection and 50% people had sore throat along with URTI (According to figure 6).The most common chest symptom associated with URTI was cough (70%) followed by sputum (23.6%) and 6.3% people had no chest symptoms associated.When asked about the treatment that they opted for 86% of people responded that they got better with treatment as compared to 14% who did not take any treatment. 55 people preferred to take both pharmacological and non-pharmacological treatment for their URTI while 25 people stuck to pharmacological only treatment whilst 24 opted for non-pharmacological routines such as rest, steam and avoiding cold stuff.

Discussion

This study analyzed the prevalence of students affected from upper respiratory tract infections last year and common symptoms. There are few studies in the literature relating a heterogeneous population with viral and
bacterial etiology. However, several studies associate these infections in a restrict manner, not favoring a full understanding of the epidemiology of these infections.

Data collection performed only in two weeks, considering a short period to analyze seasonality of infections, as already described in the literature.

The total number of participants were 110 among them 51 were females and 59 were male, as shown in Fig 1.Among 59 males 34 suffered from upper respiratory tract infection while 25 were unaffected. In females 35 were affected while 16 were not, as shown in Fig 2, which shows the prevalence of the URTI that is 62% which is similar to literature (21).

Fig 3 shows that out of the 69 people affected by URTI, 40 complained of nasal discharge while 29 people did not have this symptom. According to figure 4, out of the 69 affected, 48 people had nasal obstruction. According to figure 5, 44.4% people complained of having sneezing associated with Upper Respiratory Tract Infection and 50% people had sore throat along with URTI (According to figure 6).

According to figure 7, the most common chest symptom associated with URTI was cough (70%) followed by sputum (23.6%) and 6.3% people had no chest symptoms associated, similar to previous studies. (22)

When asked about the treatment that they opted for 86% of people responded that they got better with treatment as compared to 14% who did not take any treatment (Figure 8).

55 people preferred to take both pharmacological and non-pharmacological treatment for their URTI while 25 people stuck to pharmacological only treatment whilst 24 opted for non-pharmacological routines such as rest, steam and avoiding cold stuff.

Results

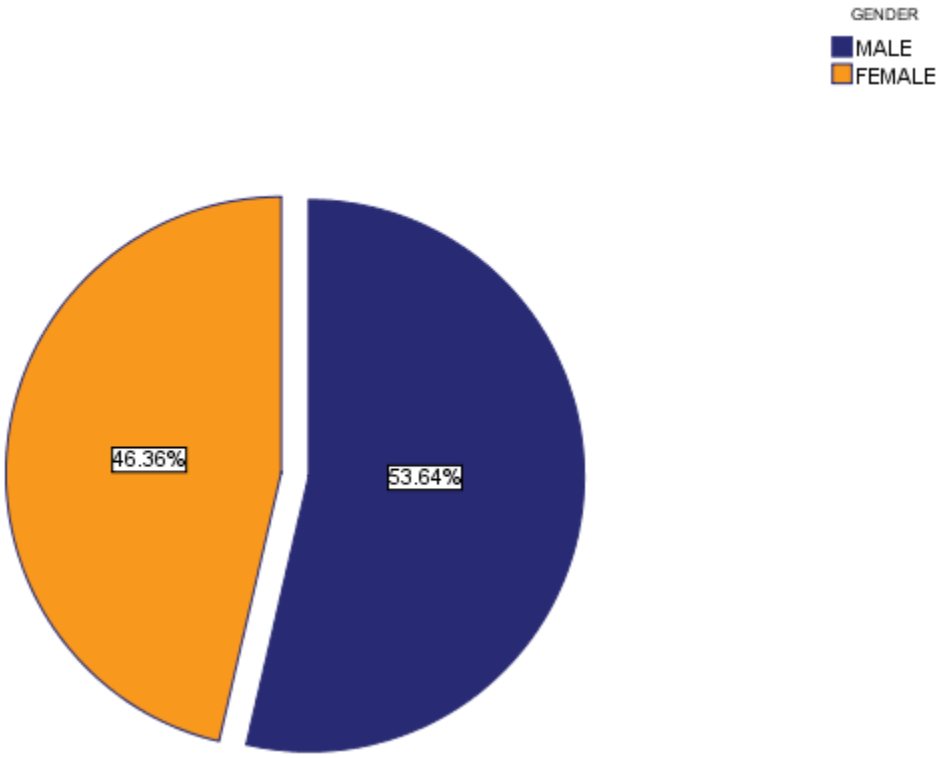

Fig 1: Male to female Ratio

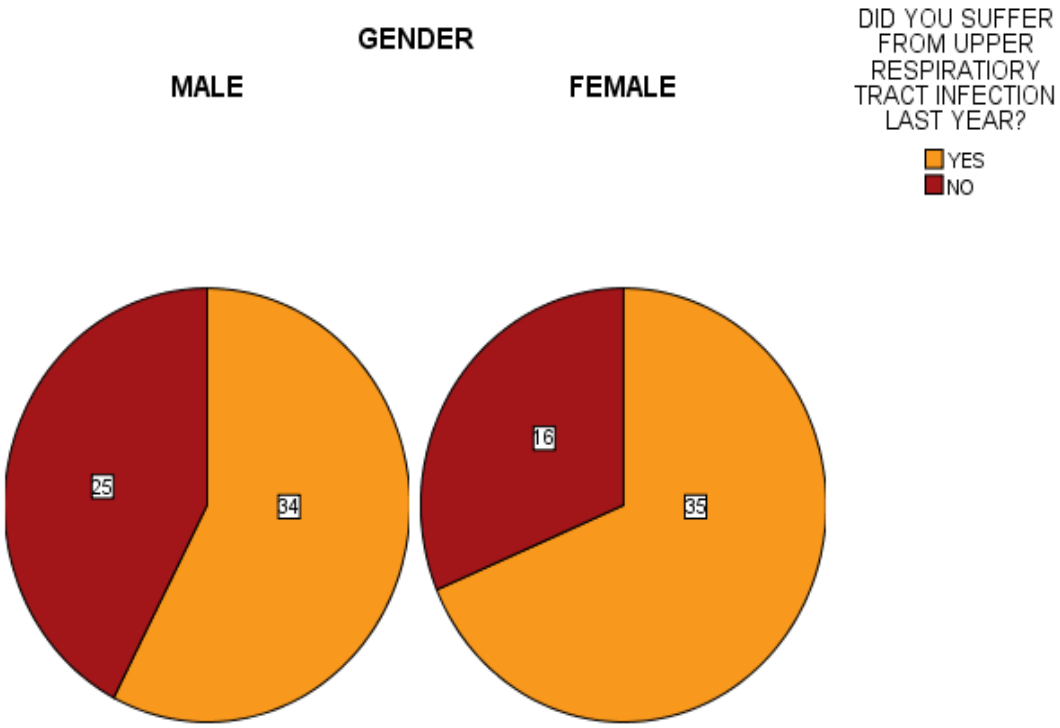

Fig 2: Prevalence of Male and female affected by Upper respiratory Infections last year

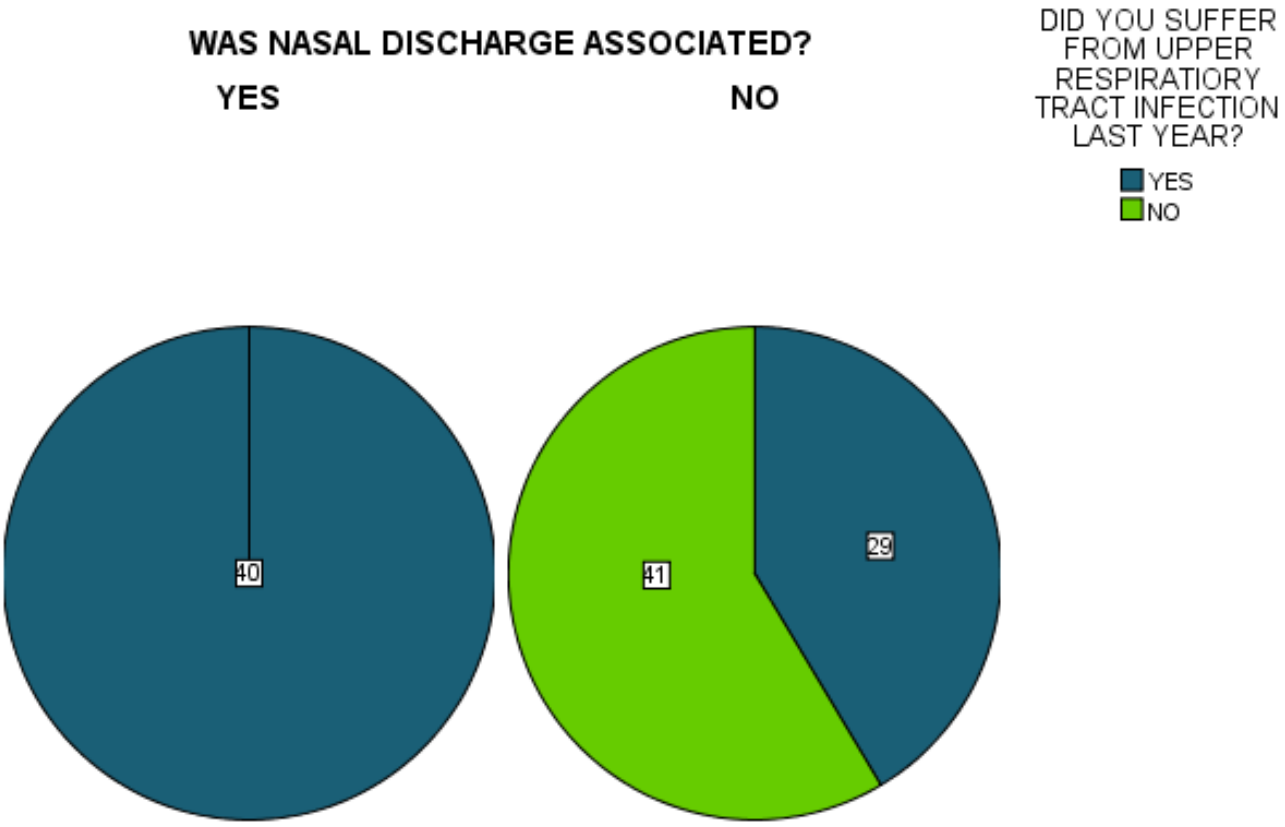

Fig 3: Association of Nasal Discharge

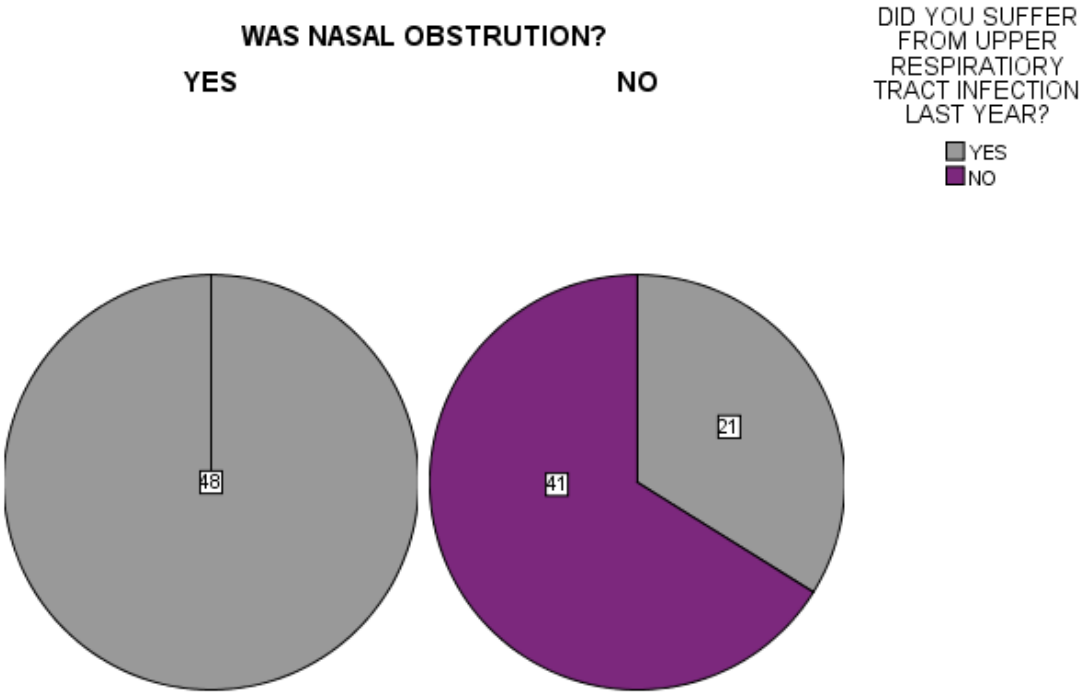

Fig 4: Association of Nasal Obstruction

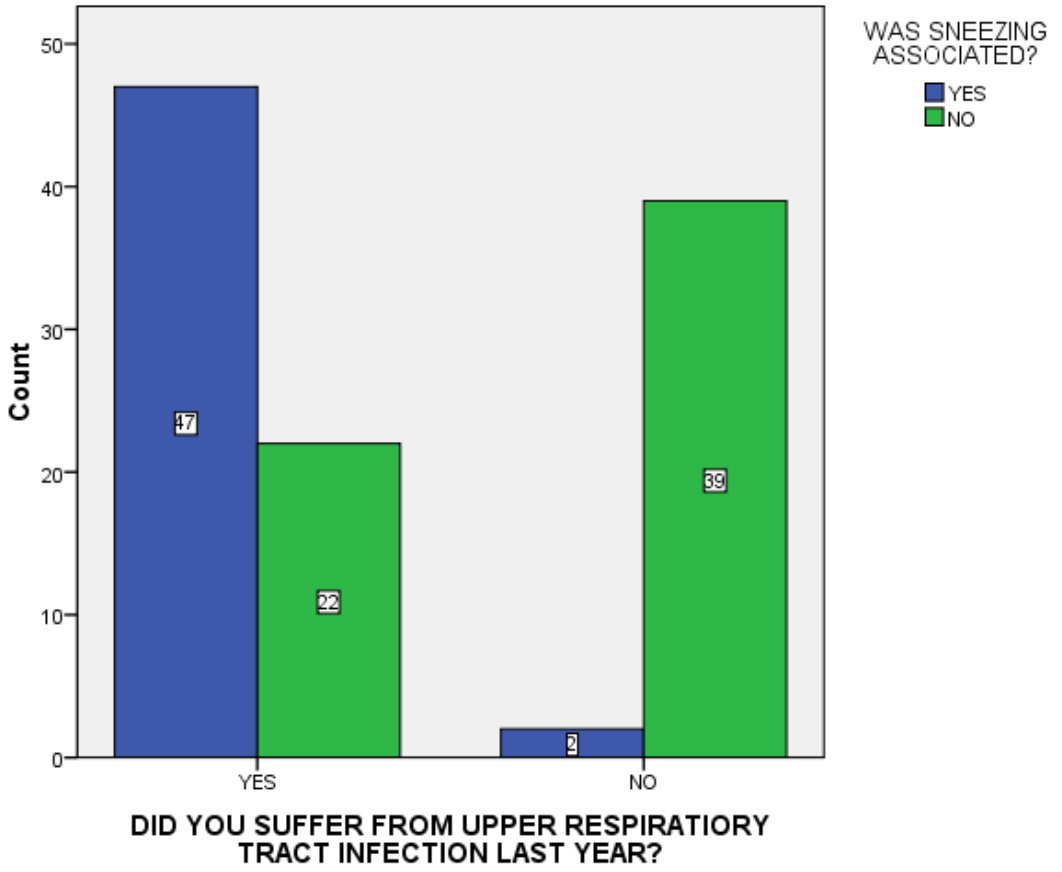

Fig 5: Sneezing Associated with Infection

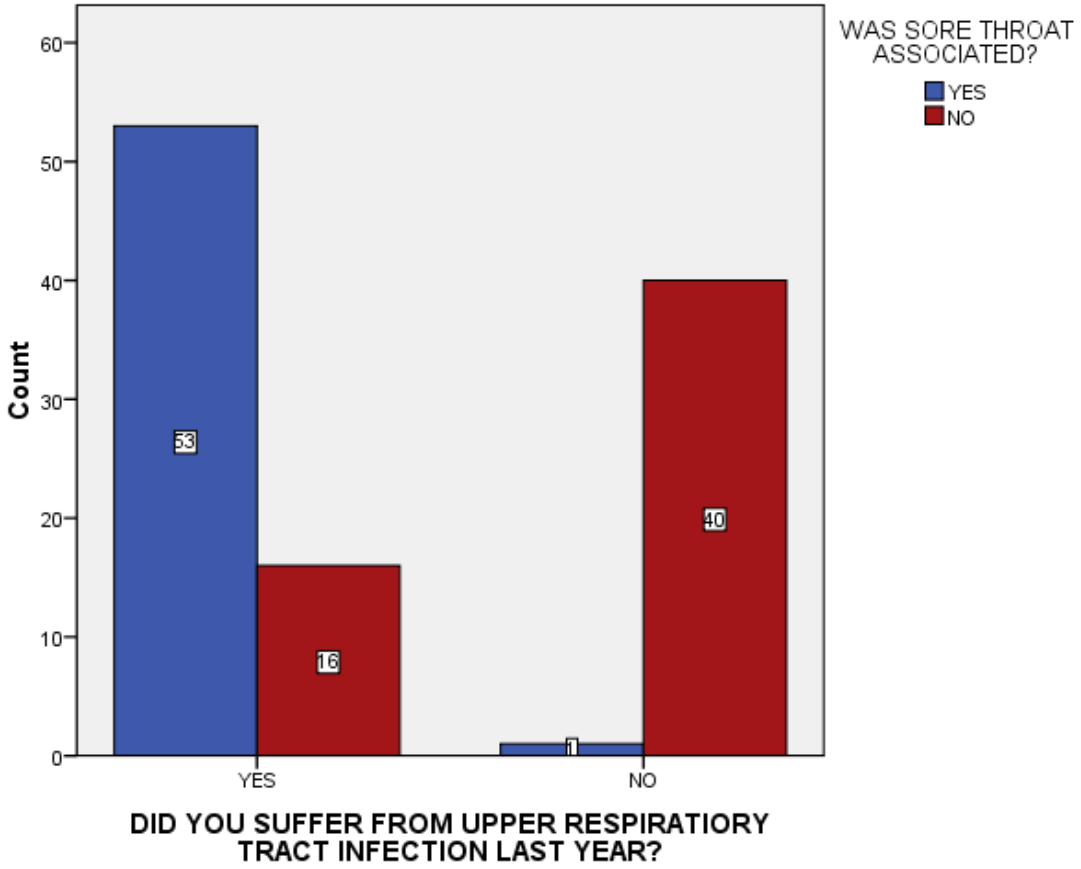

Fig 6: Association of sore throat with URTI

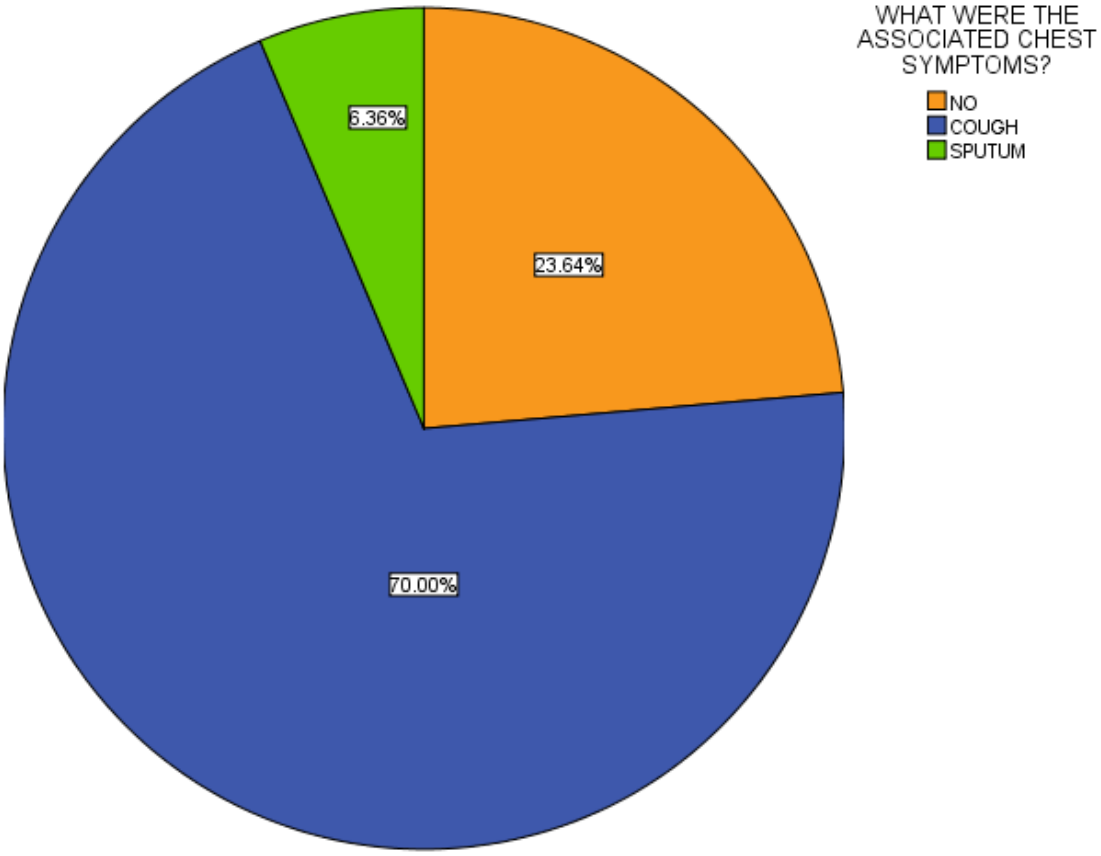

Fig 7: Chest Symptoms Association

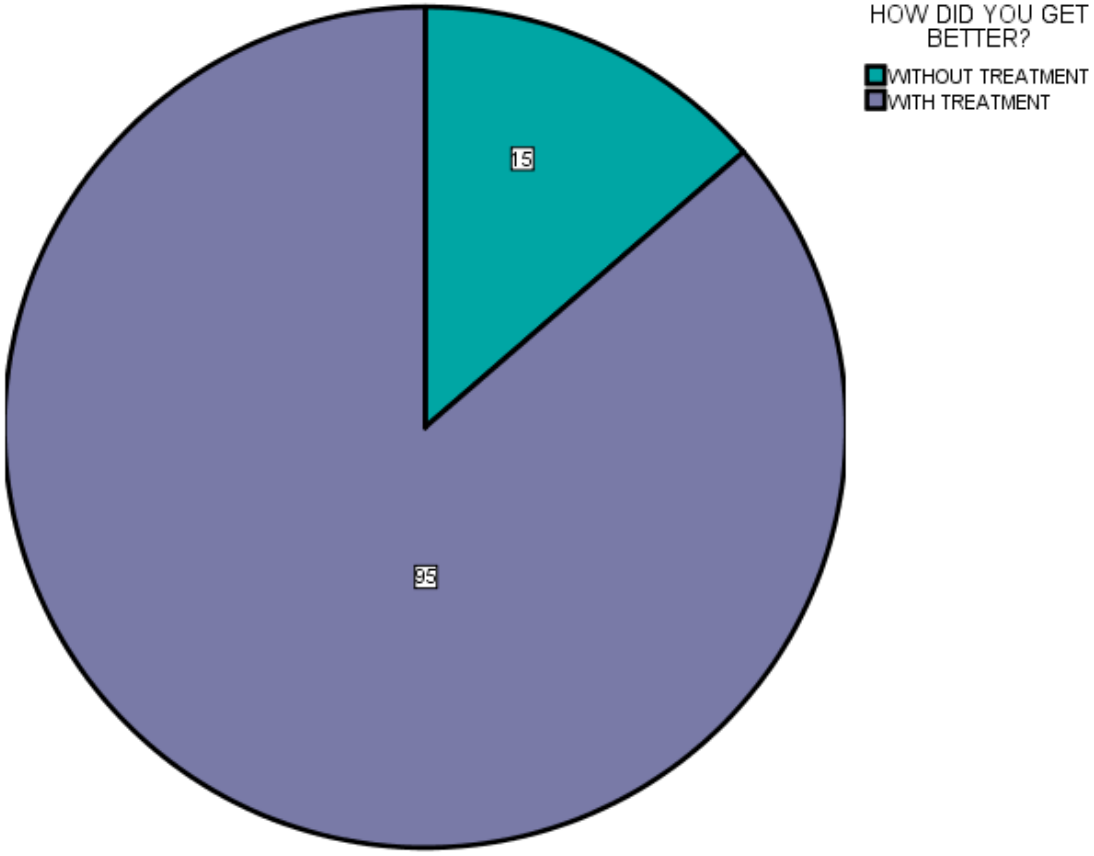

Fig 8: How did the sufferer get better

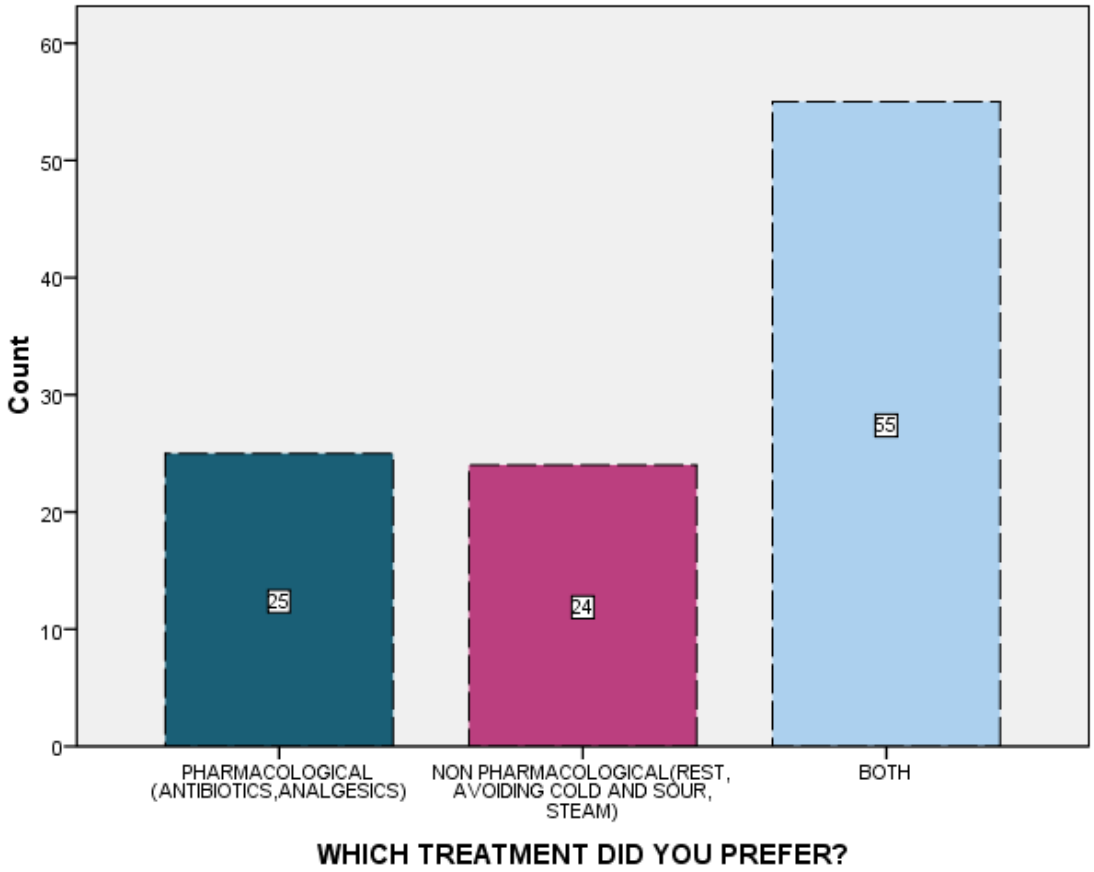

Fig 9: Treatment preferred by students

Conclusion

Our study shows that Upper Respiratory Tract Infections are a common nuisance and can affect everybody at any age group. We found that there were various symptoms associated with this problem such as sneezing, headache, nasal obstruction and nasal discharge and people took various steps to cure their disease taking pharmacological as well as non-pharmacological such as bed rest and avoiding cold food and beverages.We must take necessary measures to reduce the spread of the infections.

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