

## EDUCATIONAL SURVEY ABOUT AWARENESS OF TONSILLITIS IN BABYLON PROVINCE

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Received 6/ 12/ 2020, Accepted 2/ 6/ 2021, Published 30/ 6/ 2021

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### ABSTRACT

Tonsillitis is an infection or inflammation of the tonsils. Tonsillitis classified as acute, chronic (recurrent) and complication. Most often it is caused by a virus, but it may also be caused by the same bacteria that cause strep throat. According to numbers that data shows, the virus is more common, about 77.49% than bacterial which about 71.45% then fungal about 9.6%. The principal symptom of tonsillitis is a sore throat fever, swollen lymph nodes, nasal congestion, difficulty in swallowing and headache may also occur, according to if symptoms of tonsillitis are known or not, data show that they know about (119 of people) (79.3) this result is greater than unknown which was about 31 (20.7).

**Keywords:** Educational survey, awareness, tonsillitis.



## مسح تثقيفي حول التوعية بالتهاب اللوزتين في محافظة بابل

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Received 6/ 12/ 2020, Accepted 2/ 6/ 2020, Published 30/ 6/ 2021

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## الخلاصة

يصنف التهاب اللوزتين على أنه التهاب حاد ومزمن (متكرر) غالباً ما يكون سببه فيروسي وأحياناً يحدث بفعل البكتيريا التي تسبب التهاب الحلق، ووفقاً للأرقام التي تظهرها البيانات فإن النوع الفيروسي أكثر شيوعاً بنحو (77.49%) من النوع البكتيري الذي يبلغ حوالي (45.71%) ثم النوع الفطري بنحو (9.6%)، ومن أهم أعراض التهاب اللوزتين هي التهاب الحلق والحمى وتضخم الغدد الليمفاوية واحتقان الأنف وصعوبة في البلع وصداع، ووفقاً للنتائج التي خرجت بها هذه الدراسة لوحظ بأن (119 شخصاً) (79.3) من العينة يعرفون هذه الأعراض، بينما بين 31 (20.7) من العينة عدم معرفتهم بها.

الكلمات المفتاحية: مسح تثقيفي، توعية، التهاب اللوزتين.

## INTRODUCTION

Tonsils are palatine or facial in the lateral oropharynx. They are found between the palatoglossal arch anteriorly and the palatopharyngeal arch posterior, known as the palatine arches or pillars. The tonsils are composed of lymphatic tissue and are a component of way layer's ring along with the adenoids (nasopharyngeal tonsil), tubal tonsil and lingual tonsil (Meegalla, 2019; Masters *et al.*, 2020)

Tonsillitis is an inflammation or infection of tonsil is occur directly when exposed to an pathogen or secondary to an disease, under normal circumstances, as viruses and bacteria enter the body through the nose and mouth, they are filtered in the tonsils. Within the tonsils, white blood cells of the immune system destroy the viruses or bacteria by producing inflammatory cytokines like phosphor lipase A2, which also lead to fever (Masters *et al.*, 2020)

Follicular tonsillitis, have white spots all over tonsils due to pus being expelled from the crypts of tonsil, usually bacterial etiology. Acute membranous tonsillitis: more advanced stage of follicular where the membrane is completely formed over the tonsils. Acute parenchymatous, they associated with infection of the parenchymal area rather than crypts. Acute tonsillitis is more common among school age children, but also can be seen in adults (Georgalas *et al.*, 2014).

Tonsillitis inflammation caused by many pathogens like viral, bacterial and fungal, viral infection considered the most common cause. It accounts for 50 to 80% of tonsillitis cases. It most often includes adenovirus, rhinovirus, influenza, parainfluenza, corona virus, and respiratory syncytial virus. It is occasionally caused by Epstein-Barr virus, herpes simplex virus, cytomegalovirus, or HIV. About 1 to 10% of the cases are caused by Epstein-Barr virus (Bartlett *et al.*, 2015). Anaerobic bacteria have been implicated in tonsillitis and a possible role in the acute inflammatory process is supported by several clinical and scientific observations (Georgalas & Tolley, 2009). Sometimes, tonsillitis is caused by an infection of spirochaete and treponema, in this case called Vincent's angina or Plaut-Vincent angina. While tonsillitis itself isn't always contagious, the germs that can cause it are (Wang *et al.*, 2017).

Approximately 2% of patient visits in the United States are due to a sore throat. Though it is more common in winter and early spring, the disease can occur at any time during the year (Wald *et al.*, 1998).

Recurrent tonsillitis is arbitrarily defined but generally identified as five or more tonsillitis episodes in one year (Georgalas & Tolley, 2009). Special consideration should be given to cause, and, while rare, primary immunodeficiency requires consideration (Ickrath *et al.*, 2019). Treatment may be surgical, including tonsillectomy. The American academy of otolaryngology, head, and neck surgery outlines the criteria for surgical management decision making. Tonsillectomy provides mostly short term benefits reflected in studies as a decrease in absence from school, sore throat days, and diagnosed infections with limited long term benefits (Morad *et al.*, 2017).

## MATERIAL & METHODS

The search included data collected from October 2019 to January 2020. It included a questionnaire containing short questions answered by 150 Iraqi people educated of different ages and from different areas between urban and rural about their awareness about tonsillitis. The questions were about taking their answers about the cause of tonsillitis, how to treat it, how this inflammation is transmitted between patients and other questions. Short-form was constructed to survey tonsillitis awareness status in educating Iraqi citizens. The short-form was designed to record the personal information of the study sample as age(10-15,20-30,40-50,and above 60 yr) gender (male or female), educated level (BSc, MSc and PhD) and schools (primary, secondary).

## RESULTS AND DISCUSSION

The study shows (Table 1) that tonsils were occurrence in male at (92)(61.3%) greater than in females at (58)(38.7%), it may be due to that the physiology of masculinity and hyperactivity in comparison with female, inclusive smoking and age has a role in tonsillitis occurrence. Smoking has greater effect on depletion of beneficial bacteria, resulting in many risks for both gingival disease and tooth decay (Dan *et al.*, 2019).

**Table (1):** Distribution of tonsillitis disease according to gender.

Gender	Study groups	
	No.	(%)
Male	92	61.3
Female	58	38.7
Total	150	100

The result shows (Table 2) that tonsils have a greater degree in urban region at (88)(58.7%) than in rural (62)(41.3%). This result due, the concentrations of these air pollutants in the urban site was about 1.5 times than those in the rural site. This implicated that anthropogenic activity, which is the essential cause of air pollutants, influenced the similarity of airborne bacteria and fungi in the urban are air pollutants were positively with similarity with bacteria and fungi (Foki *et al.*, 2017).

**Table (2):** Distribution of tonsillitis disease, according to the region.

region	Study groups	
	No.	(%)
urban	88	58.7
Rural	62	41.3
Total	150	100

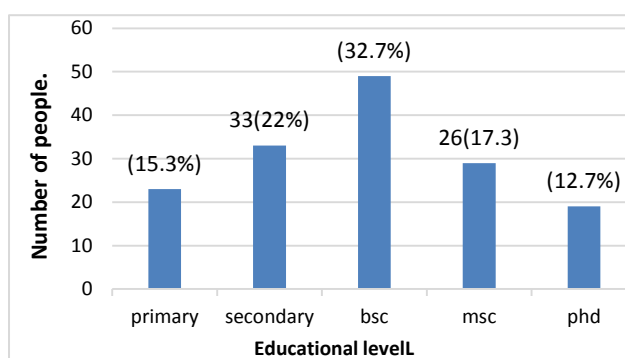
The results show (Table 3) that the incidence of tonsillitis in relation population was found to be different between reported age groups. Maximum groups noted in age (26-35) at

(47)(31.3%) and age of (16-25) at (34-22.7%) this result in this age because people are more active in this age than others. They come out very much and are in places of busy and direct contact with people where the airborne in great degree caused by infection transmission between them while people at age of 65 and more have lowest degree at (5-3.3%) cause they are more calm and rest at home usual time, also, they avoid any disease because they already have the disease. People at the age of (36-45) at (26-17.3%) and in the age of (46-55) at (15-10%). While the result of schoolchildren (>15) was at (23)(15.3%) this associated with the increased activity of children at this age (Roose, 1985).

**Table (3):** Tonsillitis disease rate among age groups.

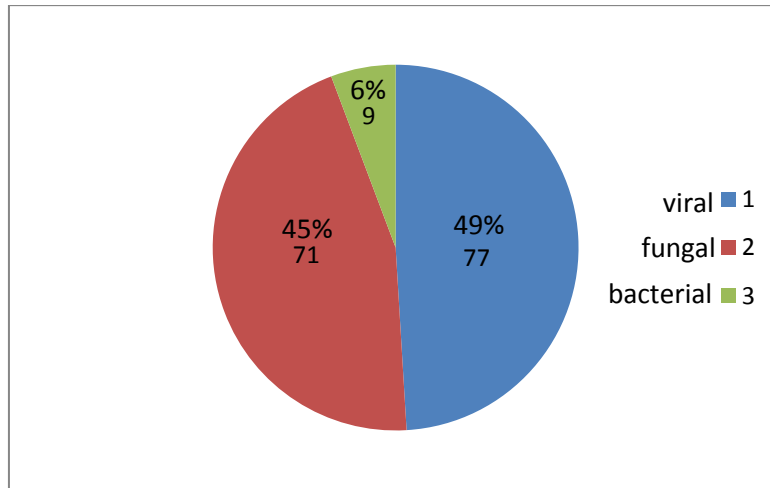
region	Study groups	
	No.	(%)
15<	23	15.3
16-25	34	22.7
26-35	47	31.3
36-45	26	17.3
46-55	15	10
>56	5	3.3
Total	150	100

The relationship of tonsillitis with educational level results show that (Figure 1), the greatest degree goes to baccalaureus student at (49-32.7%) followed by secondary student at (33)(22%), this high degree due to this groups of people have active life, more work, under continuous stress and most of work out, so they be contact with others so more exposure to various airborne causes infection for them. While PhD. student have degree in (19)(12.7%) and master student (26)(17.3%) of (23)(15.3%) for primary students (Roose, 1985; Farooqi *et al.*, 2017).



**Figure (1):** Distribution of tonsillitis level.

The result show (Figure, 2) that the distribution of tonsils according to causative agent (viral, bacterial and fungal), high degree goes to a viral infection which it considered the most common cause infection of the tonsils at (77)(.49%), while bacteria of degree at (71)(45%). Fungal at degree (9)(6%) the lowest degree (Roose, 1985).



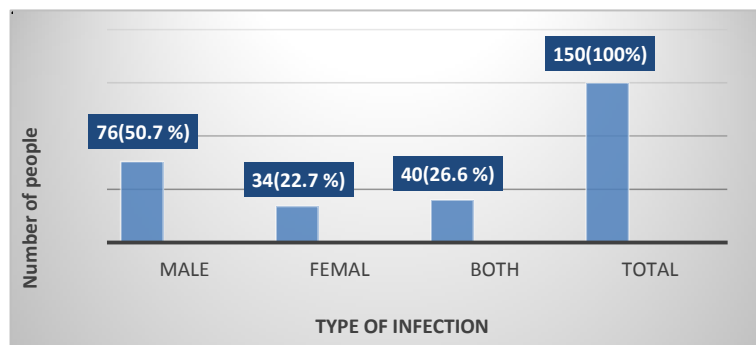
**Figure (2):** Disruption of tonsillitis according to educational causes of infections.

study Show in (Table 4) tonsillitis is inflammation of tonsils at the back of the throat, and it is the part of the immune system. In the current study, the distribution of tonsillitis disease according to the their ability to cause infection, all population 70(46.7%), adult 45(30%), children 35(23.3%), that result due to for people to know that inflammation of the tonsils can affect them in any age group and they can be exposed to inflammation at any time, so the prevailing rate is for all ages, but those who chose children are often children because they believe the only concern that they get sick and the answer without scientific knowledge about this disease for their young ages (**Gorman et al., 2017**).

**Table 4.** Distribution of tonsillitis disease, according to their ability to cause infections.

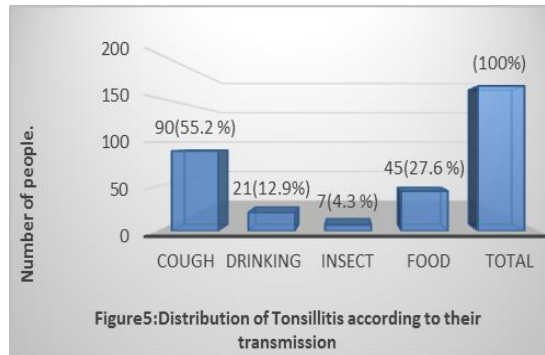
Infections	Study groups	
	No.	(%)
All population	70	46.7
adult	45	30
children	35	23.3
Total	150	100

This study show in (Figure 3), distribution of tonsillitis disease, according to the type of infection total people were 150 person, those who answered that inflammation affects both sexes 40(26.6%) only female 34(22.7%), the largest percentage of male 76(50.7%). Scientifically, the disease does not distinguish between the sexes, It depends on the person's immunity, whether male or females (**Finestone et al., 2019**).



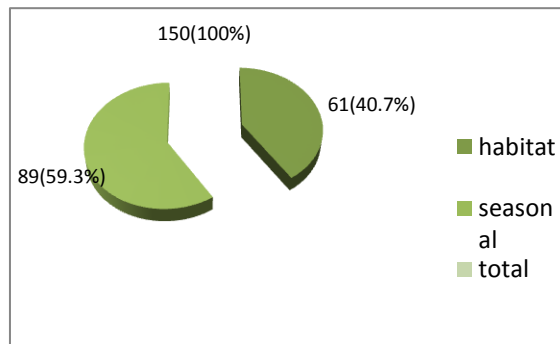
**Figure (3):** Distribution of tonsillitis disease, according to the type of infection.

In (Figure 4) distribution of tonsillitis according to symptoms a grand total of samples were 150 person, 31(20.7%) unknown the symptoms 119(79.3%) known the symptoms, this means that people are aware of the symptoms of the disease and the percentage is considered a large proportion often those who are not on children ,we need more awareness about young age groups (**Roose, 1985**).



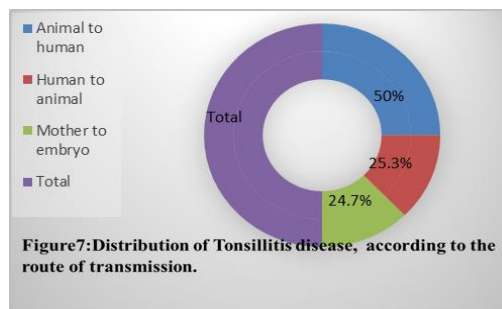
**Figure (4):** Distribution of tonsillitis according to transmission.

In (Figure 5) relationship between tonsillitis transmission, the total samples were 150 person, 89(59.3%) answered seasonal and 61(40.7%) answered habitat, both habitat and seasonal has effect on tonsillitis transitions (**Finestone et al., 2019; Dan et al., 2019**).



**Figure (5):** Relationship between tonsillitis transmission.

In (Figure 6) distribution of tonsillitis disease, according to the route of transmission the total people was 150, 75(50%) of them, they answered the transmission from animal to human, during the research, we did not find a case recorded with this disease, but in general, viruses can be transmitted from animals to humans, but the virus that causes tonsillitis disease is not mentioned the answer for people was not based on scientific knowledge due to lack of awareness in this field (**Roos, 1985; Farooqi et al., 2017**).



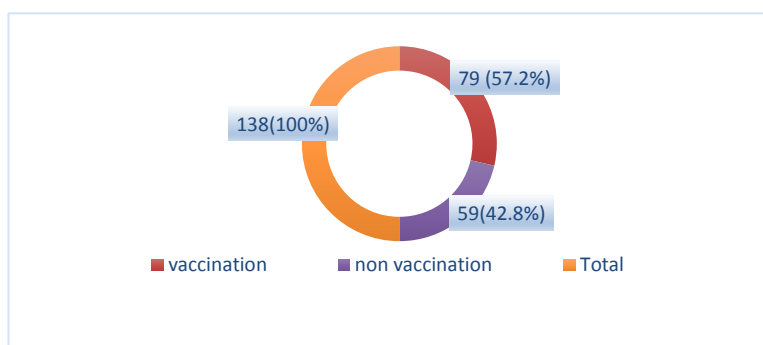
**Figure (6):** Distribution of tonsillitis disease, according to the route of transmission.

In (Table 5) type of tonsillitis disease treatment whether tonsillitis is caused by a viral or bacterial infection, we can make home care strategies more comfortable and lead to better recovery. However, the highest answer was 64(42.6%) to drugs, and without any prior analysis or knowledge of a bacterial or viral infection, they would take antibacterial (penicillin) and others, and we noticed children answer, don't know (Georgalas *et al.*, 2014).

**Table (5):** Type of tonsillitis disease treatment.

Tonsillitis treatment	Study groups	
	NO	(%)
Do not know	40	26.7
protection	46	30.7
drugs	64	42.6
Total	150	100

In (Figure 7), protection from tonsillitis disease by vaccination, the total number of samples was 150, some people did not answer because they did not know whether or not there was a vaccine. Those who answered the existence of a vaccine to know that there are vaccines for some types of bacteria and some types of viruses (Ericsson *et al.*, 2006).



**Figure (7):** Protection from tonsillitis disease by vaccination.

In (Figure 8) cases of tonsillitis disease, the total number of samples was 96(63.6%) answered the social status (36.4%) answered the economic, the economic and social status has effect on most disease (Harris & Crawford, 2007).



**Figure (8):** Causes of tonsillitis.

In (Figure 9) relationship between tonsillitis disease with personality, he total number of samples was 150 The environment is 83(55.3%), and hygiene is 67(44.7%) personal hygiene and the environment are common factors in most diseases and immune diseases in particular,

there are environments that are epidemic with a specific disease and this affects the residents of that region. It may be a person in an infected area, but personal hygiene is good that can protect from many transitional diseases including transitions virus and bacteria (Dan *et al.*, 2019; Soni-Jaiswal *et al.*, 2014).

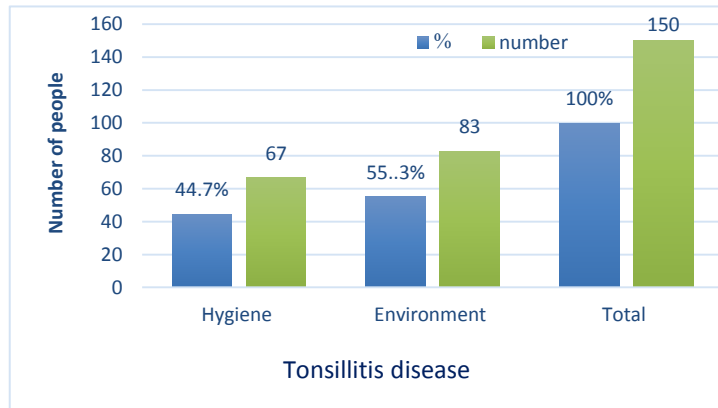


Figure (9): Relationship between tonsillitis disease with personality.

In this (Figure, 10),controlling of tonsillitis disease, the total number of samples was 150, some answers were repeated, people believed there are common things to control the disease, the largest percentage went to the medical sector to be responsible for the safety of people in societies, (School) most of the chosen school are children, because they spend most of their time in school, and they believe that the school is responsible for directing them in a healthy way and spreading health awareness among students. As for society and government, it is their responsibility to spread awareness and posters regarding the disease (Farooqi *et al.*, 2017).

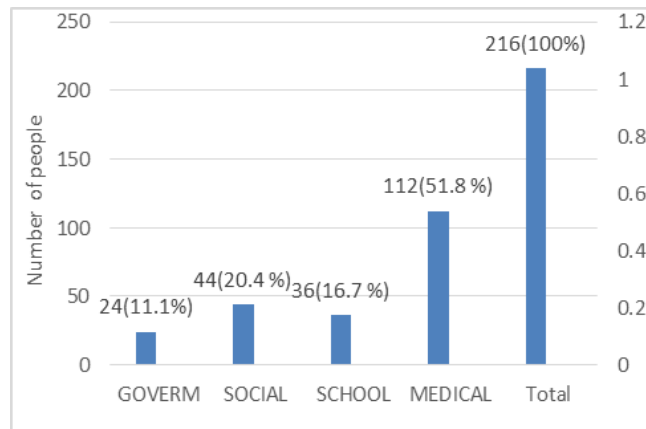


Figure (10): Controlling of tonsillitis disease.

## CONCLUSION

Tonsillitis may be caused by viruses or bacteria all over the world. Accordingly, the aim of this descriptive min-review, generally, was to shed light on the on people's awareness, do they have information about tonsillitis or not, and the results are good in places and not good in other places and while we asked questions, we tried to give them simple information to raise their awareness. The total number of samples that we took was 150 from rural and urban people distributed in Babylon governorate, Iraq.



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