

Relation of Pneumonia with Some Socioeconomic Factors in Children Under Five Years Old in Al-Najaf Governorate.

علاقة ذات الرئة مع بعض العوامل الاجتماعية والاقتصادية عند الأطفال دون الخمس سنوات في محافظة النجف الاشرف.

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الخلاصة:

خلفية البحث : تبقى ذات الرئة السبب المؤدي الى قتل صغار الاطفال على الرغم من توفر: السهولة، الامان، الفعالية، وعدم تكلفة التدخل للتقليل من حدة قدرتها على القتل

الهدف:- تهدف الدراسة للتقصي عن مرضى ذات الرئة والعلاقة المتبادلة مع بعض العوامل الاقتصادية والاجتماعية عند الاطفال دون الخمس سنوات من العمر.

المنهجية:- دراسة وصفية اقيمت في مستشفى الزهراء ومستشفى الحكيم من الفترة 2012/10/1 الى 2013/3/28. وشملت عينة البحث (100) مريض اختيرت بطريقة غرضيه (غير احتمالية). صممت استبانة البحث لغرض تحقيق اهداف الدراسة، وجمعت المعلومات من خلال هذه الاستبانة وبطريقة المقابلة. تم تحليل البيانات من خلال تطبيق اسلوب الاحصاء الوصفي (الدائرة و الاشرطة البيانية) والاسلوب الاحصائي الاستنتاجي (اختبار- t) باستخدام حقيبة التحليل الاحصائي (SPSS الإصدار 17).

النتائج:- اظهرت نتائج الدراسة ان اعلى نسبة مئوية لمرضى ذات الرئة كانت في الفترة العمرية (0-1 سنة)، (83%) و اعطت فرق احصائي معنوي عالي ($HS=P<0.001$). ان اعلى نسبة مئوية (86%) لمرضى ذات الرئة كانت عند محدود الدخل اكثر من بقية المدخولات والتي اعطت فرق احصائي معنوي عالي ($HS=P<0.001$). ان اعلى نسبة من مسببات ذات الرئة كانت البكتيريا (90%)، بالمقارنة مع بقية المسببات والتي اعطت فروق احصائية معنوية عالية ($HS=P<0.001$). ان اعلى نسبة مئوية للإصابة بذات الرئة كانت في الذكور (62%)، عنها في الاناث (38%) والتي اعطت فرق احصائي معنوي ($H=P<0.05$). ان اعلى نسبة مئوية لانتشار ذات الرئة كان في المناطق الحضرية (91%)، اكثر من المناطق الريفية (9%)، والتي اعطت فرق احصائي معنوي عالي ($HS=P<0.001$). ان اعلى نسبة مئوية لحصول ذات الرئة كان لأصحاب التاريخ العائلي للتدخين (30%)، وبالتتابع ، اكثر من غير المدخنين (32%) والتي اعطت فروق احصائية معنوية ($H=P<0.05$).

الاستنتاجات:- كانت ذات الرئة اكثر شيوعا في الحالات التالية:- الفئة العمرية بين (0-1 سنة)، في الدخل الواطئ، في الإصابة البكتيرية، وكذلك في المناطق الحضرية. بينما كانت ذات الرئة اقل شيوعا في الحالات التالية:- بين الجنس و عند تأثير تدخين السكان. **التوصيات:-** تفعيل العناية الصحية بذات الرئة وجعلها تصل الى غالبية الامهات العراقية من خلال الحالات التالية:- تدريب الأطباء والكادر الطبي واستخدام وسائل الاعلام كوسيلة للتثقيف الصحي حول المرض.

Abstract

Aim of the study : Pneumonia remains the leading killer of young children despite the availability of: simple, safe, effective and inexpensive interventions to reduce its capacity to kill.

Objective:- The aim of the study is to tracing of pneumonia disease in relation with some socioeconomic factors in children under five years.

Methodology:- A descriptive study was carried out in Al-Zahraa and Al-Hakeem Hospital for the period of 1/10/2012 to 28/3/2013. A purposive (non probability) sample of (100) patients was included. Questionnaire was constructed for the purpose of the study, data were collected through the application of the questionnaire and interview technique. Data were analyzed through descriptive statistical approach (pie and bar chart) and inferential statistical approach (t-Test) by using of (SPSS version 17).

Results: The study results indicated that the highly percentage of pneumonia patients was in age group of (0-1 year), (83 %) and it gave a highly statistical significant deference ($HS=P<0.001$). The highly percentage of pneumonia patients (86%) was in low income more than another incomes and it gave a highly statistical significant deference ($HS=P<0.001$). The highly percentage of causes of pneumonia was bacteria (90%), in comparison with another causes and it gave a highly statistical significant deference ($HS=P<0.001$). The highly percentage of pneumonia patients was in male (62%), than female (38%), and it gave a statistical significant deference ($H=P<0.05$). The highly percentage in distribution of pneumonia patients was in urban area (91%), than rural area (9%), and it gave a highly statistical significant deference ($HS=P<0.001$). The highly percentage of pneumonia occurrence was in a history of family smoker (30%, 38%) respectively, than non smoker (32%) and it gave a statistical significant deference ($H=P<0.05$).

Conclusions: pneumonia was common in the following statuses:- age group of (0-1 year), in low income, in bacterial infection, and urban area. While pneumonia was less common in the following statuses:- between gender and effect of cigarette smoking.

Recommendation: Strengthening of pneumonia health care to make its reaches to the majority of Iraqi mothers through the following : Training of doctors and medical workers and use the mass media as a health education about the disease.

Key word: pneumonia, children under five years, socioeconomic factor .

INTRODUCTION:

Pneumonia is an infection of the lungs that can cause mild to severe illness in people of all ages. Signs of pneumonia can include coughing, fever, fatigue, nausea, vomiting, rapid breathing or shortness of breath, chills, or chest pain. Certain people are more likely to become ill with pneumonia. This includes adults 65 years of age or older and children younger than 5 years of age. People up through 64 years of age who have underlying medical conditions (like diabetes or HIV/AIDS) and people 19 through 64 who smoke cigarettes or have asthma are also at increased risk for getting pneumonia. It can be caused by microbes, including bacteria, viruses, or fungi. It is the-leading-infection cause of hospitalization and death in the United States and exacts an enormous cost in economic and human terms. Healthy individuals can develop pneumonia.(1).

Pneumonia remains the leading killer of young children despite the availability of simple, safe, effective and inexpensive interventions to reduce its capacity to kill. Childhood pneumonia is mainly a disease of poverty and results from sub-optimal child rearing and care seeking practices compounded by lack of access to healthcare. Pneumonia in adults is no less a public health problem and also requires effective interventions. Active and passive smoking, underlying chronic cardio-pulmonary and neurological illnesses, heavy alcohol intake, major trauma or surgery, long periods of recumbence, indoor air pollution, crowding, poor dental health, old age and institutional habitat or care are recognized risk factors for high incidence and mortality from the disease. Preventive and control interventions can be implemented at all levels of healthcare but are not available in areas where these are most needed. Ongoing measures have been insufficient.(2). Pneumonia and other lower respiratory tract infections are the leading cause of death. Approximately 150 million new cases of pneumonia occur annually among children younger than 5 years worldwide, accounting for approximately 10-20 million hospitalizations.(3). Although the diagnosis is usually made on the basis of radiographic findings in developed countries, the World Health Organization (W H O) has defined pneumonia solely on the basis of clinical findings obtained by visual inspection and timing of the respiratory rate.(4).

Pneumonia results from inflammation of the alveolar space and may compromise air exchange. Pneumonia may occur via hematogenous spread or aspiration. Most

commonly, this inflammation is the result of invasion by bacteria, viruses, or fungi, but it can occur as a result of chemical injury or may follow direct lung injury.(5).

Pneumonia affect children of all races; however, certain conditions that may predispose to pneumonia have racial predilections. For example, cystic fibrosis is far more common in white children. Children with sickle cell anemia are at increased risk for pneumonia as a result of sickling within the pulmonary vasculature and functional asplenia. Pneumonia in the pediatric population is most common in infants and toddlers and least common in adolescents and young adults.(6).

With annual deaths from pneumonia in children under 5 years old exceeding 2 million and scant evidence of a decline in this number in the last 5–10 years, prevention remains a critical component of control strategy. In 1995, Kirkwood et al. identified indoor air pollution (IAP) from household use of solid fuels (wood, animal dung, crop wastes and coal) as one of several modifiable risk factors requiring evaluation. Solid fuels remain the principal household fuel for around 3 billion people, and since their use is closely linked to poverty, this is also a population with generally poor access to health care .(7).

AIM OF THE STUDY :

To tracing of pneumonia disease among children under five years in relation with some socioeconomic factors.

PATIENTS AND METHODS:

Study Design: A cross sectional study.

Period of the Study: The samples collection lasted from 1st of October 2012 to 28th March 2013, according to recommendation of the WHO (8).

Place of the Study:

The study was conducted in Al-Najaf city, the center of Al-Najaf governorate about 165Km to the south of Baghdad, and 60km to the south of Babylon governorate. Al-Najaf governorate was established in 1976 from parts of Al-Qadisiyah and Karbala governorates. Al-Najaf governorate has an area of 28,824 sq km (6.6% of Iraq area), and the highest point in a Najaf City is about 56m above the sea level. In 2010, it has an estimated population of 1,05,0000 peoples. (9).

Sampling Design and Collections :

100 patients was included in current study, a simple random sample technique was the method that chosen in this study, through selection all patients that admitted to

pediatric ward in Al-zahraa and Al-hakeem teaching hospital by used of well designed questionnaire.

Diagnosis:- In hospital depend on taken the case history and x-ray or using the main laboratory.

Statistical Analysis:

Descriptive and analytical statistics were carried out by utilizing the statistical package for social science (S.P.S.S) version 17. t-Test was applied to obtain any significant statistical differences at level of $P<0.05$ and $P<0.001$.

RESULTS:

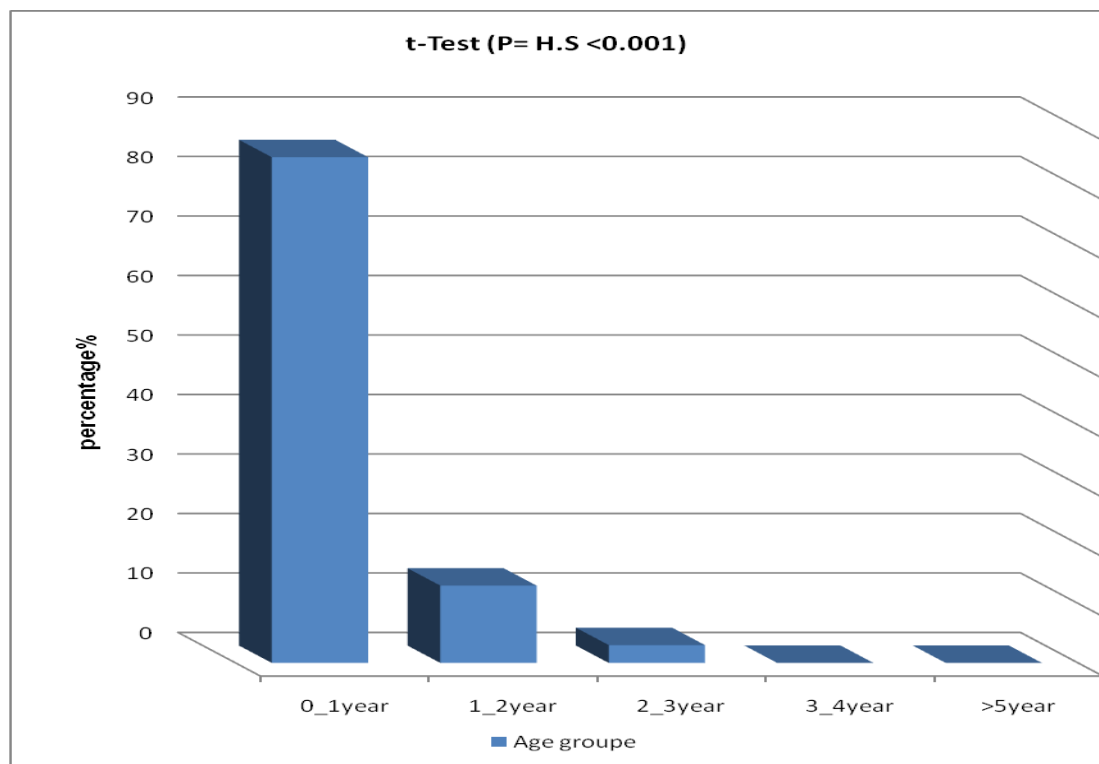


Figure (1): Distribution of pneumonia patients according to age group.

This figure shows that the highly percentage of pneumonia patients was in age group of (0-1 year), (83 %) and gave a highly statistical significant deference.

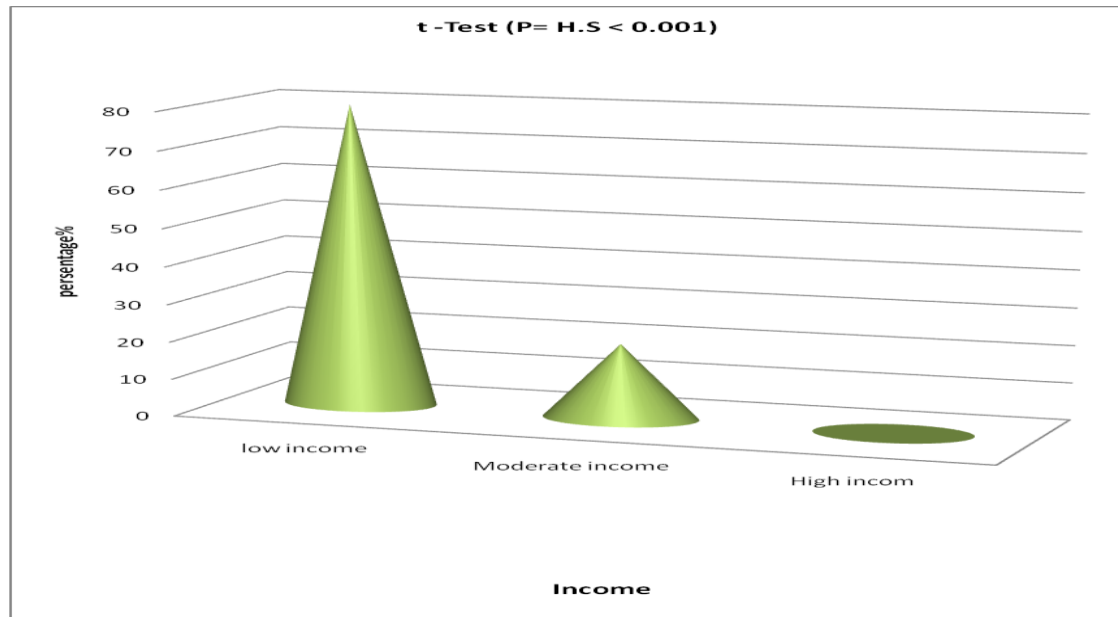


Figure (2): Distribution of pneumonia patients according to income.

This figure shows that the highly percentage of pneumonia patients (86%) was gave a highly statistical significant deference in low income more than another.

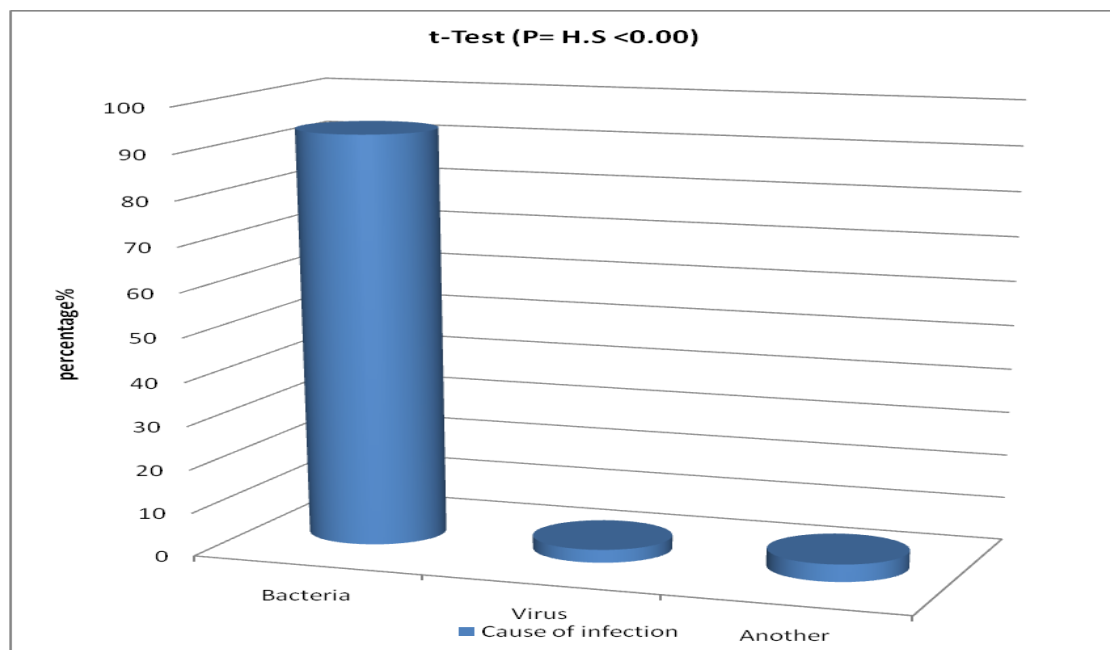


Figure (3): Distribution of pneumonia patients according to cause of infection.

This figure shows that the highly percentage of pneumonia patients was causes by bacteria (90%), than another causes and it gave a highly statistical significant deference.

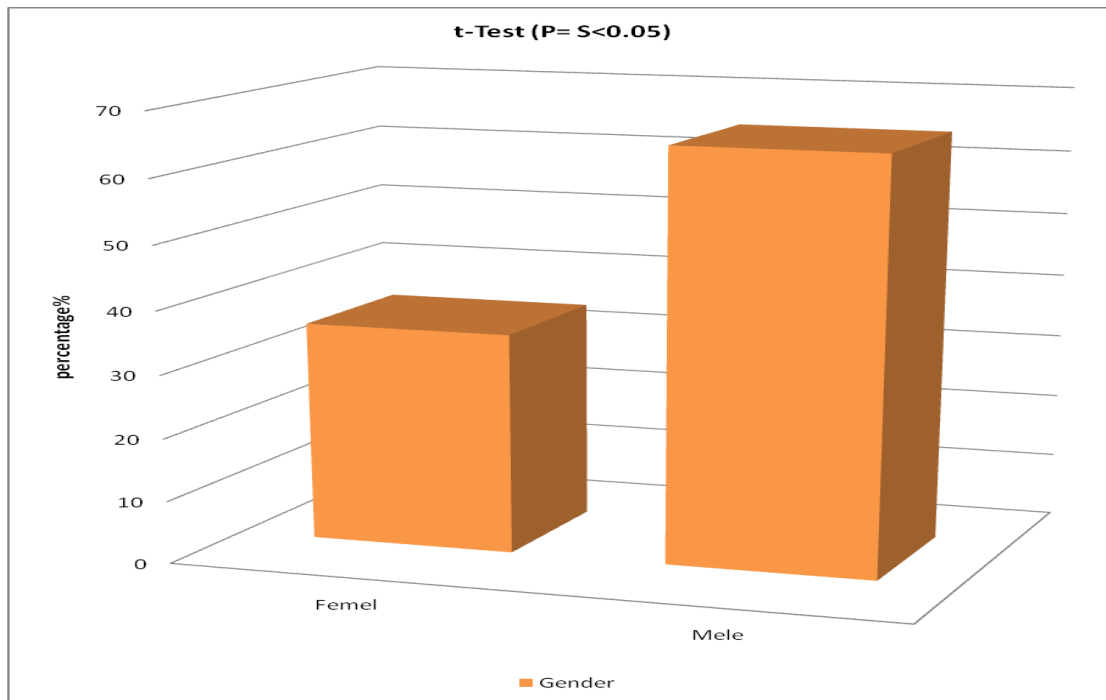


Figure (4): Distribution of pneumonia patients according to gender.

This figure shows that the highly percentage of pneumonia patients was in male (62%), than female (38%), and it gave a statistical significant deference.

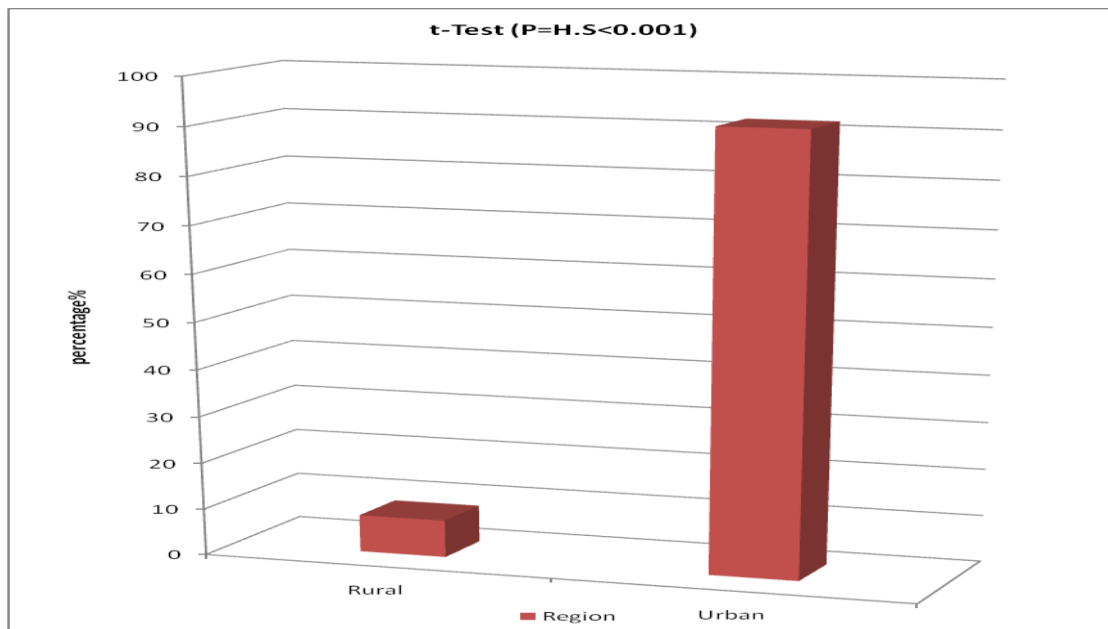


Figure (5): Distribution of pneumonia patients according to region . This figure shows that the highly percentage of pneumonia patients was in urban area (91%), than rural area (9%), and it gave a highly statistical significant deference.

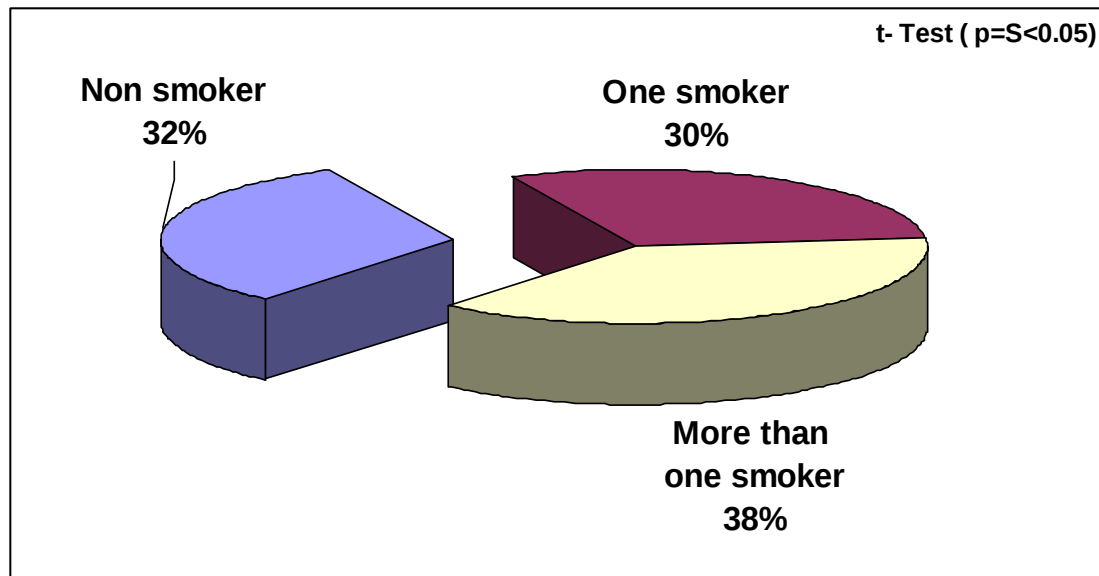


Figure (6): Distribution of pneumonia patients according to history a family smoker.

This figure shows that the highly percentage of pneumonia patients was in a history of family smoker (30%, 38%) respectively, than non smoker (32%) and it gave a statistical significant deference.

DISCUSSION:

Pneumonia is one of the most common causes of health problems with high morbidity and mortality among children under five years old.

In the present study, there was an elevation of pneumonia patients in age group of (0-1year) more than another age group. This might be due to, that the infant had decreased immunity and more applicable to gate infection.

In the present study, there was increased of the pneumonia patients in low income more than another. This result was agreed with that mentioned by smith et al. 2008, in united kingdom (10).

In the present study, there was increase of the pneumonia patients in bacterial infection more than another causes of infection. This result was disagreed with that mentioned by kugerate et al. in longitudinal study in India 2007 (11).

In the present study, there was increase of pneumonia patients in male more than female. This might be due to, under reporting of female patients due to, that the parents more interested in seeking of medical care for male than female in oriental nations.

In the present study, there was increase of pneumonia patients in urban region more than rural. This result was agreed with that mentioned by Mahmood in Cairo, Egypt in 2010 (12).

In the present study, there was increase of pneumonia patients in when find a smoker more in family member than non smoker. This might be due to, that the

indoor pollution of cigarette smoke had great role in effect of respiratory air way tract of the children and consider of one of risk factors of respiratory tract infection.

CONCLUSIONS:

The following conclusions can be derived from this study:

1- Pneumonia was common in the following statuses:-

- a- In the age group of (0-1 year).
- b- In low income.
- c- In bacterial infection. and
- d- In urban area.

2- Pneumonia was less common in the following statuses:-

- a- In comparison of gender. and
- b- In present of smoker or not in family member.

RECOMMENDATIONS:

Strengthening of pneumonia health care to make its reaches to the majority of Iraqi mothers through the following :

1. Mass media.
2. Training of doctors and medical workers.
3. Pediatricians and general practitioners should take their role in the process of education of families and particularly the mothers about the following :
 - a- Causes of acute respiratory illness especially pneumonia.
 - b- Risk factors of pneumonia.
 - c. Dangerous signs of pneumonia and the importance of simple supportive therapy as well as the early referral of child with severe illness.

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