Knowledge, Attitudes And Practices Of Secondary Schools Students Towards Tuberculosis, Tendelti Town ,White Nile State, Sudan

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Abstract: **A descriptive school based study was conducted at Tendelti Town in White Nile State, aims to study Knowledge, attitudes and practices (KAPs) among senior secondary school students (third class) towards pulmonary tuberculosis. The study considered the whole population (intact group) those were 476 students .The students were interviewed, by using structured questionnaires to collect information about (KAPs) of TB .The data obtained were analyzed by Statistical Package for Social Sciences (SPSS) ,and Excel .The study revealed that all of target (100%) knew TB as disease, (86.6%) said TB caused by microbes, two quarters (63%) knew the mode of transmission,(97.3%) indicated cough as the main symptoms of TB . The study recognized negative attitudes towards the disease stigma that the majority (78.7%) agrees with patient stigma and (88.4%) agreed with patient's isolation. The study indicated that (98.1%) of students agree that taking patients to the hospital when recognized signs and symptoms of the disease. The study recommended that the future researches to be concentrate on disease stigma.**

Keywords: **Attitudes, Knowledge, Pulmonary, Practices, Schools, Students, Tendelti, Tuberculosis.**

1. INTRODUCTION AND BACKGROUND

Tuberculosis, or TB, is an infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease [1]

1.1 TB Disease:

The risk of Developing TB Disease over a Lifetime Without treatment, approximately 5% of persons who have been infected with M. tuberculosis will develop disease in the first year or 2 after infection, and another 5% will develop disease sometime later in life. Thus, without treatment, approximately 10% of persons with normal immune systems who are infected with M. tuberculosis will develop TB disease at some point in their lives [2].

1.2 Types of TB:

1.2.1 Pulmonary TB:

Is most commonly affects the lungs; this is referred to as pulmonary TB. Patients with pulmonary TB usually have a cough and an abnormal chest radiograph, and may be infectious. Although the majority of TB cases are pulmonary, TB can occur in almost any anatomical site or as disseminated disease [1].

1.2.2 Extra pulmonary TB:

It occurs in organs other than the lungs, including the larynx, the lymph nodes, the pleura, the brain, the kidneys, or the bones and joints. Anyone who has LTBI can develop TB disease, but some people are at higher risk than others HIV infection is the greatest risk factor for the development of TB disease in persons with LTBI, due to a weakened immune system[2] .Tuberculosis is asocial disease with medical aspects; it has been also described as a parameter of social welfare .The social factors that contribute to the occurrence of TB includes many non-medical factors such as, poor quality of life, poor housing, and overcrowding, population explosion, malnutrition, lack of education, large families, early marriages, lack of awareness of illness causes [1].

WHO has declared TB as a global emergency in 1993, and estimated that one third of the world population's were infected by Mycobacterium tuberculosis worldwide, Tuberculosis remains a world-wide public health problem despite the fact causative organism was discovered more than 100 years ago [4]. The World Health Organization (WHO) estimates that one-third of the world's population is infected with the bacteria that cause TB [5]. Every year there were about 8 million developed TB worldwide. TB can be controlled, in principle, by three methods: preventing transmission and infection (e.g. vaccination, isolation), stopping the progression from latent infection to active TB (e.g. vaccination, drug treatment), and treating active disease (presently, with a combination of drugs) [6]. In 2011, there were 8.7 million new cases of active tuberculosis worldwide (13% of which involved coinfection with the human immunodeficiency virus [HIV]) and 1.4 million deaths, including 430,000 deaths among HIV-infected patients current concepts Tuberculosis [7]. Worldwide, TB incidence fell at an average rate of about 1.5% per year between 2000 and 2013. Of these, 5.7 million were people newly diagnosed and another 0.4 million were already on treatment, major efforts are needed to close this gap. In 2013, 48% of TB patients globally had a documented HIV test result, In the African Region, 76% of TB patients knew their HIV status [6]. Despite notable progress in the past decade, tuberculosis (TB) is still a public health concern in most of the country's [8]. WHO estimated that 9.6 million people fell ill with TB in 2014 In 2014, 1.5 million people died from TB, including 0.4 million among people who were HIV-positive ,one in three people in the world is infected with latent TB. People infected with TB bacteria have a 10% lifetime risk of falling ill with TB. However, persons with compromised immune systems, such as people living with HIV, malnutrition or diabetes, or people who use tobacco, have a much higher risk of falling ill [1] .

1.3 Situations in Sudan:

The country has a high burden of tuberculosis (TB) with an estimated according to WHO annual report 2015 the prevalence of TB is (1.7%) ,including (0.3 -0.31 new cases) which give an incidence of 90/ 100.000 smear positive cases, that put the Sudan among the highest prevalence countries of TB in the East Mediterranean Region , all cases in Sudan are estimated about 240000 , (42000-44000) new cases [1], [9]

2. METHODOLOGY

2.1 Study Area:

This study conducted in Tendelti town, which located in White Nile State in the southern of Sudan [10].

2.1.1 Location:

Ten delti is a small town in White Nile State, southern. It is located between 13degrees 01 minutes North and 31 degrees 52 minutes east. Ten delti is an administrative Locality in the White Nile State and it is on the borders Between White Nile State and Northern Kordo fan State. Ten delti is of a population of an almost 750,000 people [10].

2.1.2 Educational Services:

There are 29 basic schools, and five secondary schools [11]..

2.2 Study populations:

The target populations of this study were secondary schools, at Assalaya administrative unit, those are 2000 students.

2.3 Sample size:

This study covered senior secondary school students (third class) the total numbers of them were 476 students.

2.3.1Study Design:

Across sectional descriptive study

2.3.2 Methods of data collection:

The students were interviewed, using structured questionnaires to collect information about (KAPs) of TB.

2.3.3 Data Analysis:

Data was analyzed by Statistical Package for Social Sciences (SPSS) and Excel, and the result presented in tables and figures.
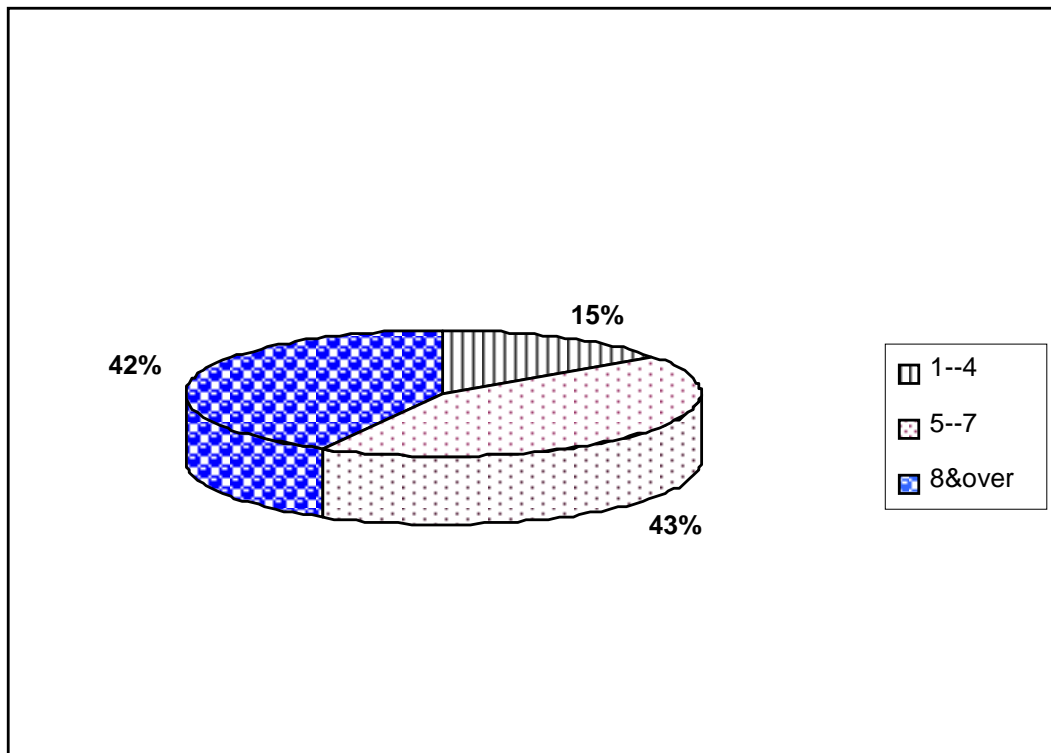
3. RESULTS AND DISCUSSION

Fig.1: distribution of students according to their Family size-Tendelti, 2015

This figure shows that 43% of the targets had between (5-7) family members, these reflects that the majorities of families were overcrowded,
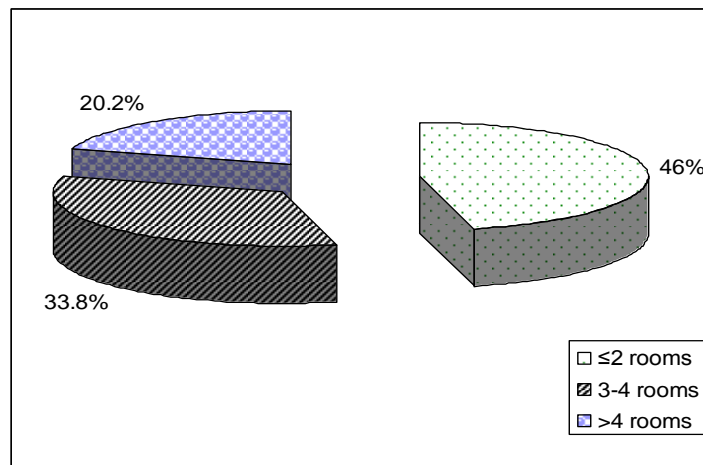
Fig.2: distribution of students according to the number of their houses rooms - Tendelti, 2015.

The above figure and figure 1 shows that the greater numbers of targets houses (46%) had (≤2 rooms The study revealed that a great percentage (53%) of target population had middle family size between (5-8) persons and most of their houses(47%) included an average of (1-3) rooms, this indicate that the average occupants of houses is between (5-8) persons ,which reflects an evidence of overcrowding per house which facilitate the mode of transmission through inspiration. Overcrowding prove to be an important factor in the transmission of the disease .Park (2005) stated that "the social factors such as poor quality of life ,poor housing ,overcrowding …etc are causes of illness.

Table.1: distribution of students according to their haring of TB (as a disease) – Tendelti, 2015

Haired of TB	No	Percentage
Yes	476	100%
No	0 %	0 %

This table shows that all students haired about TB as a disease, these due to the high awareness of the study targets about TB because they study the disease at the basic schools ,but this not mean that all students have full knowledge about the disease unless it's examined with other questions.
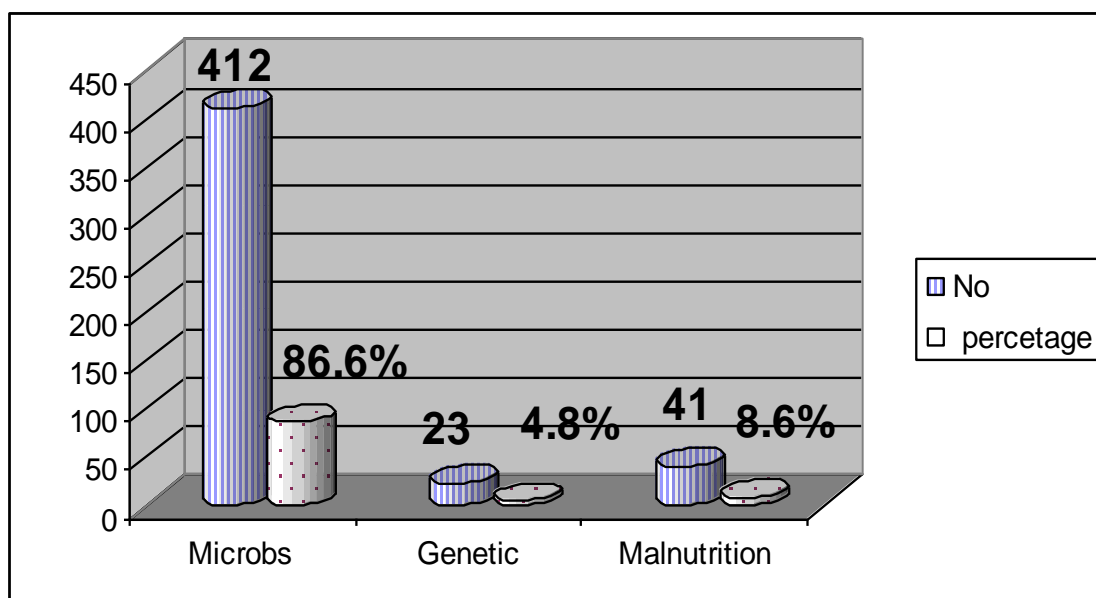

Fig.3: distribution of students according to their knowledge about TB (causative agent)- Tendelti ,2015.

This figure shows that majority of students (86.6%) said TB caused by microbes fortunately this knowledge did not affect the behavior of targets because this is professional knowledge WHO (1988) explained that "TB is an infectious disease caused by microorganism called Mycobacterium tuberculosis".

Table.2: distribution of students according to their knowledge about TB (mode of transmission) - Tendelti, 2015.

Spread by	No	Percentages
Air droplets	300	63%
Drinking/eating	43	9.0%
Milk	65	13.7%
Sputum	63	13.2%
Others	5	1.1%
Totals	476	100.0%

In above table the majority of respondents(63%) knew the mode of transmissions of TB (air droplets) who stated that " Mycobacterium tuberculosis is transmitted between infectious patients &susceptible contacts via air droplet nuclei" these good standards of targets knowledge prove the expected healthy behavior towards prevention of the disease such as using handkerchief during coughing& talking and avoiding overcrowding places.
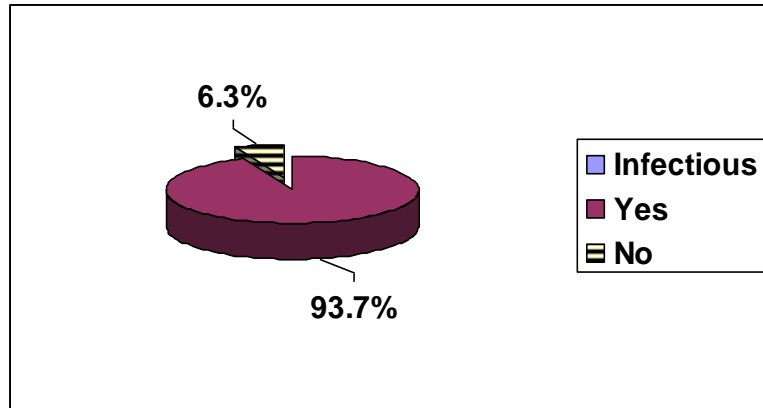
Fig.4: respondents Knowledge about TB infectious, Tendelti, 2015.

This figure shows that the majority of respondents (97.7%) knew that TB is an infectious disease which is matching by WHO (1998) said "TB is an infectious disease caused by Mycobacterium tuberculosis" these knowledge of students about TB infection helps them to behave preventive health actions to avoid the disease.
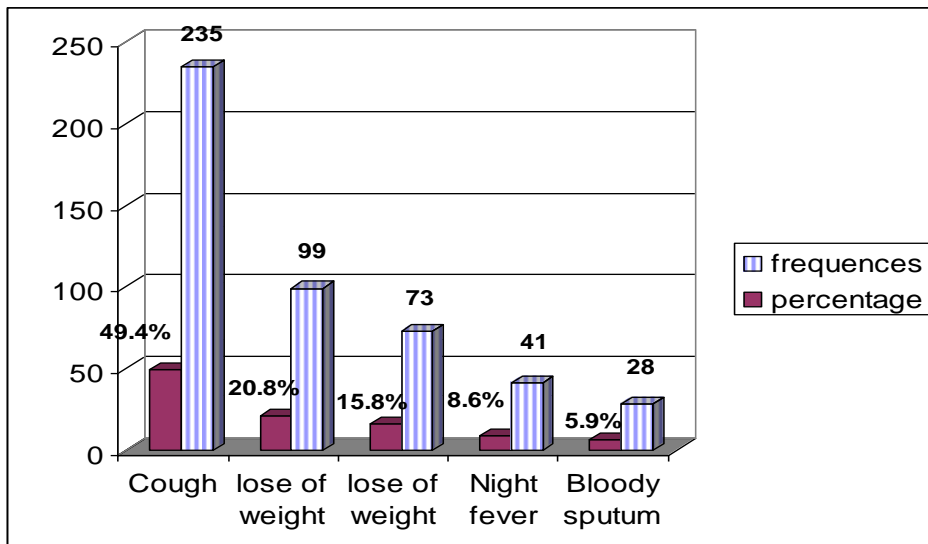

Fig.5: distribution of targets according to their knowledge about TB (symptoms and signs) - Tendelti, 2015.

Most of the study targets had a sufficient knowledge regarding TB signs and symptoms, they mentioned cough, lose of weight, and lose of appetites, night sweat fever and bloody sputum. The matter confirms that the disease is common and recognized in the study area.
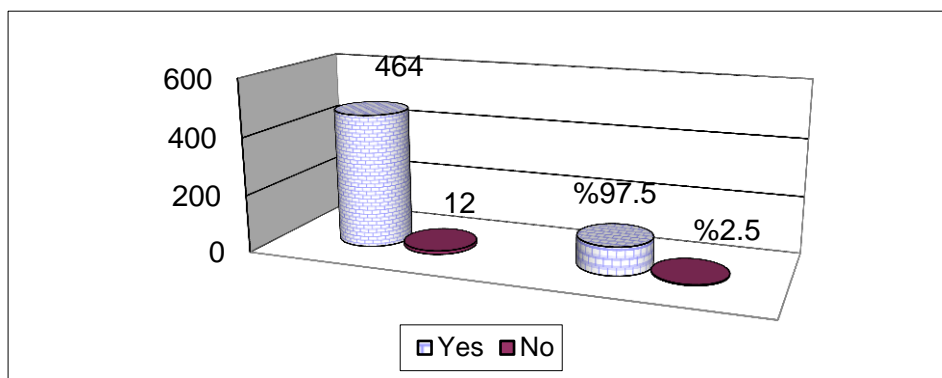

Fig.6: distribution of targets according to their knowledge about TB (prevention methods) – Tendelti , 2015.

This figure shows that the majority of targets (97.5%) knew that TB was preventable disease. TB is an airborne disease and transmission essentially can be prevented through adequate ventilation and limited contact with patients.
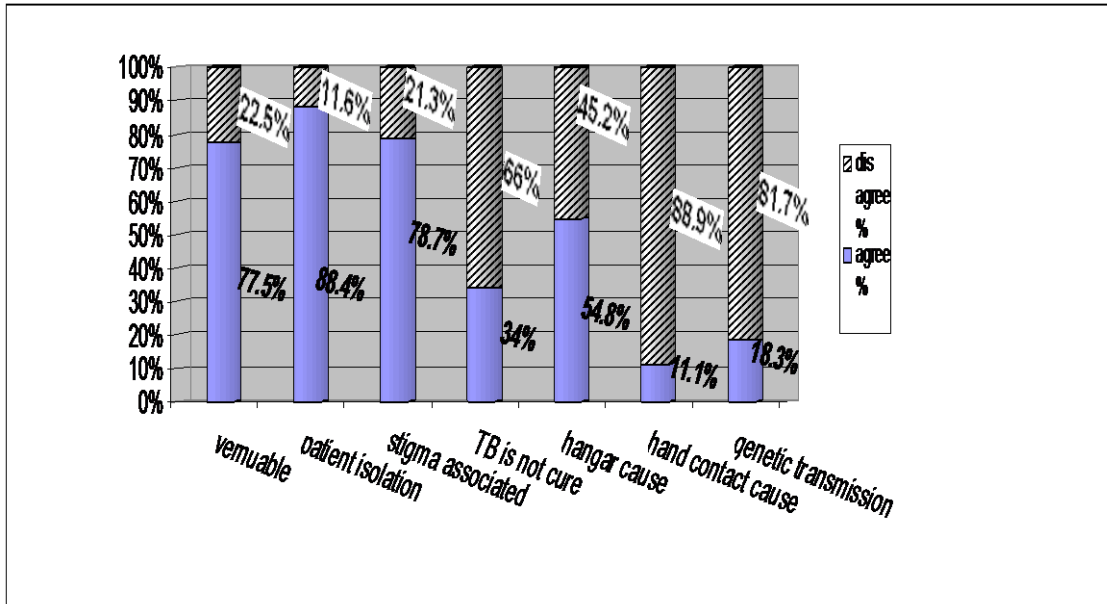
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Fig.7: distribution of students according to their general attitudes towards TB- Tendelti ,2015

This figure shows that the majority of students (78.7%) and (88.4%) have negative attitudes towards patient stigma & patient's isolation.
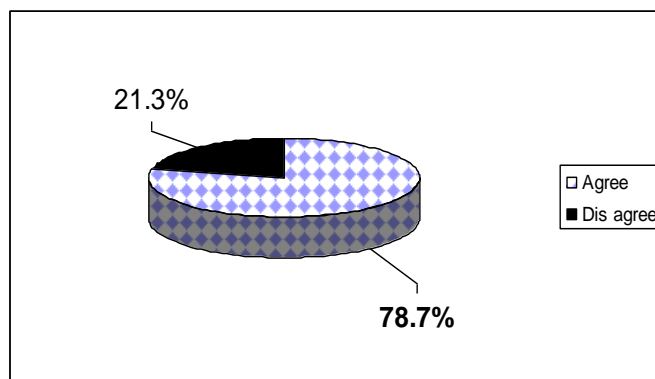

Fig.8: distributions of students according to their attitudes towards TB patient's stigma- Tendelti, 2015

This figure shows that the majority of students (78.7%) believed that TB as stigmatic disease. It's common that TB patients and their families suffer from discrimination exactly on the developing countries as a result of the stigma and myths that surround the illness. In some cultures, TB is associated with witchcraft. TB can be considered a 'curse' on a family, as the illness often affects multiple generations – we know that this is simply because TB is an airborne illness, which is more likely to be spread among people living in close proximity. TB is often associated with factors that can themselves create stigma: HIV, poverty, drug and alcohol misuse, homelessness, a history of prison and refugee status.
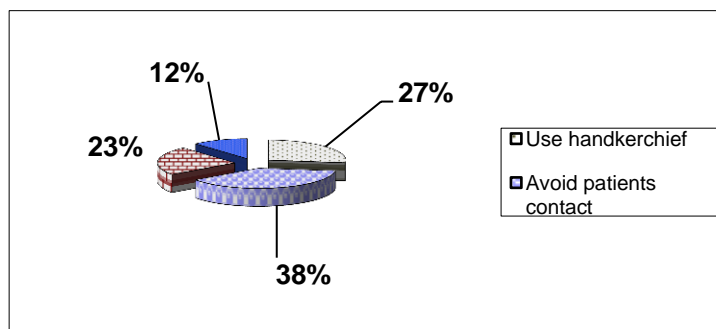

Fig.9: distributions of targets according to their practices and behaviors to avoid TB infection- Tendelti, 2015.

This figure shows that the quarter and over of targets (38.8%) avoid patient contact.

Table.3: distribution of students according to their practices and behaviors if TB signs symptoms manifest - Tendelti, 2015

Practice if TB signs symptoms manifest	No	Percentage
Provide him to the hospital	467	98.1%
Advised him to take traditional medicine	4	0.8%
Consult the pharmacists	5	1.1%
Total	476	100.0%

These table shows that the majority of targets (98.1%) had good practice and behavior (take the patients to the hospital), and fewer (1.9%) represented non-health practices, appositive health action which conducted by students help the health care provider to detect the disease at early stage to provide prompt treatment, which help in the treatment, elimination and control of disease and preventing the families and community members from the infectious of TB.

4. CONCLUSION

1. The study revealed that all students (100%) knew TB as disease,(86.6%) said TB caused by microbes,(63%) knew that it transmitted by an air droplet ,and the majority (94.1%) .

2. Unfortunately the study revealed negative attitudes such as; patients isolation and disease stigma associated, hence (88.4%) of targets agree with patients isolation and (78.8%) were agree with patients stigma associated..

3. The study found that best health practices and behaviors conduced by students like (98.1%)of targets taking the clients to the hospitals or TB centres onset recognition of any TB symptoms and signs ,and (91.2%) complied with the physician treatment & advices .

ACKNOWLEDGEMENT

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