

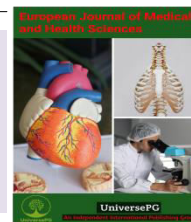


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## Assessment, Monitoring, and Awareness of Garment Workers Regarding the Prevalence of Tuberculosis in Savar, Dhaka

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### ABSTRACT

The research was conducted to assess the awareness regarding Tuberculosis (TB) in the middle of the export oriented garment workers in Savar, Dhaka. Data were collected by face to face interview using a semi-structured questionnaire. A total of 110 garment workers were interviewed, in the middle of them, 51.8% were male and rests of 48.2% were female. Maximum 30.9% respondent's age was between 20-22 years and 28.2% respondent's ages were more than 28 years. 58.2% of respondents had secondary education, 22.7% of respondents had primary education and 14.5% respondents had HSC and above education. Out of 110 respondents, 60.0% were lived in a nuclear family, 39.1% were lived in a joint family, and 34.5 % were at own house, 3.6 % were at slum and 57.3% were at the colony. The majority had heard about TB (72.7%) by listening to Television, Radio, Newspaper, and 27.3% were family member, office, doctors or hospitals. only 25.5% perceived it to be an infectious disease, (30.0%) were did not perceive and highest number 44.5 % were didn't know. The correct mode of transmission i.e. airborne (coughing/sneezing) was known to 66.7% study subjects. The majority (62.4%) knew cough as a symptom. Maximum (71.8%) respondents thought TB to be a preventable disease, in the middle of them majority (52.0 %) were of the opinion to prevent the TB by a cover on the mouth at coughing, 8.1% were said BCG (*Bacillus Calmette-Guérin*) vaccination and 35.8 % was no smoking. Most of the respondent's (96.4%) said TB is a treatable disease, in the middle of them, 75.5% said by Anti TB antibiotics. 62.7% of respondents knew TB is a completely curable disease. This study shows (74.5%) garments workers have poor awareness and (25.5%) have good awareness.

**Keywords:** Awareness, Tuberculosis, Garment Workers, *Mycobacterium*, Assessment, and respondents

### INTRODUCTION

Tuberculosis (TB) is an imaginably fatal contagious disease that can trouble almost any area of the body but is basically an attack of the lungs. It is caused by bacteria, the bacterium *Mycobacterium tuberculosis*. Although TB can be diagnosed and treated, cured, and can be avert if persons at danger take certain types of drugs, researchers have never come close to erase it out, and some diseases have result in so much upset illness for centuries, and declared so

many lives (Beers Mark & Robert Berkow, 2004). TB is caused due to infection with the *M. tuberculosis*, but everyone, who gets contaminated with the germ, does not get the disease (Kim *et al.*, 2002). It is practicable to capture companies in TB prevention activities in Bangladesh, and thereby enlarge case notifications, and upgrade treatment feedbacks (Zafar Ullah *et al.*, 2012). Most of the time, the immune system can prevent you from becoming sick and only about 10% of people

infected with TB go on to develop TB. The popular symptoms of TB include cough for an extended period that is more than 21 days, conscious weight decrease, fatigue, general fondness of tiredness, headache, fever, sweating at night-time, chills, and loss of appetite, etc (Roy *et al.*, 2019). Having these types of signs and symptoms does not denote that have TB (Ellen *et al.*, 2012). Signs and symptoms of active TB may also vary based on the organ that is pretentious. Most of the times, the lungs of the patients are affected. Symptoms of TB of the lungs includes cough for three or more weeks, blood in cough, chest pain or pain while breathing or coughing. TB can also affect organs apart from the lungs. Another organ that is pretentious by TB includes lymph nodes, genitourinary nodes, bone, and joint sites, the backing covering the surface of the GIT. After a steady, the reduced in TB infection, Thailand has skilled a last re-emergence in newly TB cases and pathologically confirmed TB illustrates the increased incidence in Thailand (Amara Soonthorndha *et al.*, 2004).

Tuberculosis is generally visualize in adult persons, and have lain dormant for sometime in elderly persons may be resting and cause illness (Houston *et al.*, 2002). TB also is furthermore ordinary in blacks, who are more likely to live under situations that enlarge infection. The alcoholics and intravenous drugs abusers are also at increased danger of contracting TB. Until the profitable and social factors that enhance the spread of tubercular attack are remedied, there is no ordinary possibility of completely abolishing the disease (Fielder *et al.*, 2002). TB lay out by droplet infection and basically tissue damage is not caused personally by the pathogen, but by the reaction of the patents tissues to its existence. Cells infect the bacterium, allow the preliminary destroy to heal, and avert future disease forever (Su, W. J., 2002). On rare occasions, a previously attacked person gets ill again after a later emit to the pathogen (Stauffer *et al.*, 2002). Mycobacteria harvest in water drum, swimming pools, and causes skin attack. Some of the pathogen attack wound, and artificial parts of the body include implant of breast or mechanical valve in heart (Kim *et al.*, 2002). Disparate many other variety of bacteria, this pathogen can attach certain dyes even when emitted to acid. This regard acid-fast feature is properties of the tubercle *Bacillus* (Stauffer *et al.*, 2002). PCR is used to detect *pathogen* DNA in

collected specimens; nucleic acid probes is also used to recognize *Mycobacteria* in the culture; RFLP scanning used to the comparison of various strains of TB for epidemiological research; and molecular based susceptibility testing used to recognize drug-resistant varieties of *Mycobacteria* (Moua *et al.*, 2002). Both gender of TB patients, quantitative study of male, and female TB patients, monitoring of patient provider interconnections at labs, monitoring of patient provider interactions throughout treatment begin at the society, and key informant viva with health servants, and the Country research forms a area of this multi-country analysis (Fazlul Karim *et al.*, 2003; Sharif *et al.*, 2019). Till now there is no investigation in the middle of the garment workers of Dhaka city has been executed as yet concerning the prevalence of TB. The present research was managed in choose 30 garment industries of Dhaka zone to investigate the provenance ratio of PT in the middle of garments labors (MR Hassant *et al.*, 2005).

Formerly, the treatment of TB was initially supportive and patients were stay in isolation, inspired to full rest, and fed properly. Five drugs are most popularly used to the treatment of TB: isoniazid; rifampin; pyrazinamide; streptomycin; and ethambutol. Immunization is one of the major controlling measures against TB. A vaccine named BCG is build from a weakened *Mycobacterium* that attacks cattle. The high-risk groups for whom isoniazid stop may be declared such as close contacts of TB patients, including health care nurses, peoples with positive PPD results, and proof of ancient disease on the chest x-ray who have never been control for TB, persons from states with high ratio of TB who have positive PPD results, and peoples with a positive PPD reaction who be part of to higher risk ethnic entities (Beers Mark & Robert Berkow, 2004; and Pelletier & Kenneth, 2002). A 26 year aged Bangladeshi male was revealed in the Lung wing section, Bangabandhu Sheikh Mujib Medical University Hospital, Shahbag, Dhaka in June 2007 with the complaints of different hurting swelling in the chest. Computerized tomography (CT) scan represented lytic lesions in the anterior part of left second rib and anterolateral outlook of the right six rib with affiliated increasing lesion having both intra and extra thoracic elements redolent of chest surface cysts; no parenchymal injury or mediastinal lymphadenopathy was well

known and FNAC of anterior chest surface swelling represented scanty (Mosharraf Hossain *et al.*, 2010)

Background in spite of vast efforts, our country has one of the major burdens of TB in the globally. Treatment in the private area is ordinary, and amateur in the middle of TB patients in South Asian states, including Bangladesh, even though the standard of diagnosis, and treatment of TB patients has been represent to be tiny in various countries. The Bangladesh National Tuberculosis Programme (NTP) has recent time represent extent interest in focusing approach choice to mark this complication. Over one-third of the world populations are infected with *M. tuberculosis* (WHO, 2009), and they may turn into active TB cases at any time of their life cycle. In activities related to controlling TB, many healthcare workers come into close contact with the disease. The underlying hypothesis of our study was that an appropriate public-private partnership model involving garment factories would significantly reduce the TB burden in this workforce, and presented both the approach of developing the partnership model and its impact on TB control activities (Zafar Ullah *et al.*, 2012). The major objectives of the research to assess the present level of awareness and misconceptions of TB in the middle of the garments workers in Savar, and to determine the socio-economic status of the respondents, and also to assess the awareness level of the respondents regarding causes prevention of TB.

#### Research Question:

What is the level of awareness on Tuberculosis among the garments workers in Savar?

#### List of Key Variables:

**A. Dependent Variables** - Awareness of TB, and Misconception of TB.

**B. Independent Variables** - Age, Sex, Religion, Educational status, Monthly income, Family members, Housing status, Prevention and control of infection, Treatment of TB, and Causes of TB.

#### Operational Definition:

**Age:** At first the age of the cases was taken in actual full years. Smallest value and largest value were taken and after compilation of data collection, all the cases were grouped in four groups.

#### Educational Status:

- Illiterate: received no formal education from any institute.
- Primary education from class I group to class V.
- SSS: Secondary education levels from class VI to class X.
- HSC: passed higher secondary school certification (HSC) examination.

**Monthly Income:** It is the monthly income of the patient or the total income of the head of the family and as well as the income of the other members. Monthly income was recorded in terms of Taka as stated by the respondents and/or their responsible family members.

#### Type of Family:

**Nuclear Family:** It consists of the married couple and their children while they are still regarded as dependents.

**Joint Family:** It consists of a number of married couples and their children who live together in the same household and share the same food prepared in the same pot.

**Number of the Member in the Family:** The number of persons who live in the same house and who have their male prepared in the same pot is constituted the family member.

#### Type of Housing:

- 🚧 **Kacha:** Mudd wall and floor with Bamboo or Hayshed.
- 🚧 **Sami-Pakka:** Brick made a floor with Tin on the roof.
- 🚧 **Tin made:** Muddy floor with Tin made wall and roof.
- 🚧 **Pakka:** Brick made building.

**Limitations of the Study:** It was an urban garments workers study. During this study, various types of limitations were faced by which may have influenced the quality of the study. The limitations are: It was conducted on small sample size and the study place was selected purposively due to time constraint and it does not necessarily reflect the situation of the whole country, and study population got 20 to 32 years old. But verities age were not available due to their garments workers.

**METHODOLOGY:**

**Study Design and Place:** This was a cross-sectional study and areas were selected purposively for collecting the sample. The area was purposively selected in Ashulia, Savar, Dhaka.

**Study Period and Population:** The study was conducted for a period from January-May 2014, when literature review, questionnaire preparation, data collection, and works related to the dissertation was complete. Garments workers who live and works in different garments in Ashulia, Savar, Dhaka.

**Inclusion and Exclusion Criteria:** Those who gave consent, and those who willing to the participant and those whose residence is not in Ashulia, Savar, Dhaka.

**Sample Size and Sampling Technique:** The sample size was 110, and purposive sampling.

**Data Collection Instrument and Technique:** Data collection tool was a combination of a semi-structured questionnaire and used as data collection. Data was collected from the respondent’s face-to-face interview by using semi-structured questionnaire.

**Data Processing and Analysis:** All interviewed questionnaires were checked for completeness and correctness before data entry. Data were checked, cleaned and edited properly before analysis. Data were entered into statistical software SPSS 19 programs.

**Ethical Consideration:** All ethical issues related to reaching were addressed according to the guideline. Permission was taken from the needed (ASA University, Bangladesh) authority. Prior permission was taken from the Director who belongs to study areas. Informed oral consent was taken before the interview from Hospital staff. Participant’s had the right to refuse and withdraw from study any time. Confidentially was maintained strictly.

**RESULT and FINDINGS:**

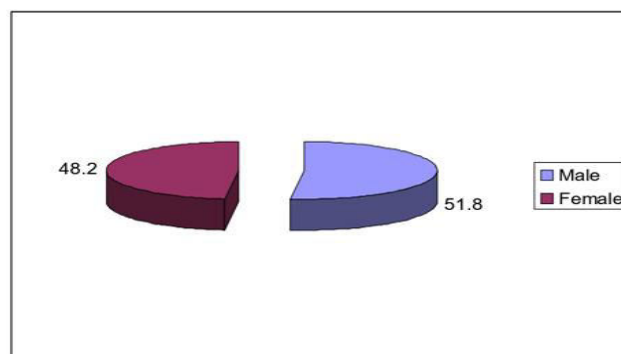
**Findings of the Study:** To assess awareness of garments workers with their disease and misconceptions regarding TB. Total of 110 garments workers was selected purposively according to

inclusion, exclusion criteria. Data were collected interviewed with a specific pre-designed and pre-tested questionnaire and some information was gathered by document review. Collected data were cleaned edited and analyzed with the help of software SPSS windows version 19. The analyzed data have been presented in this chapter through tables and appropriate graphs. The results of the study have been described as follows:

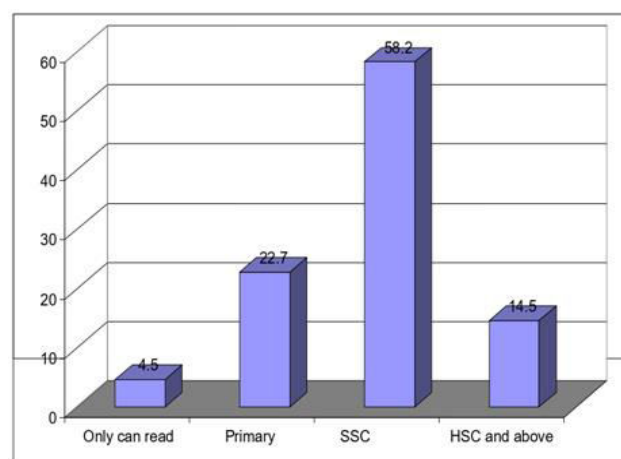
**Table 1:** Distribution of the respondents by age.

| Age          | Number of respondents | Percent      |
|--------------|-----------------------|--------------|
| 20-22 years  | 34                    | 30.9         |
| 23-25 years  | 23                    | 20.9         |
| 25-28 years  | 22                    | 20.0         |
| >28 years    | 31                    | 28.2         |
| <b>Total</b> | <b>110</b>            | <b>100.0</b> |

**Table 1** shows the age distribution of the garments workers, out of 110 respondents, in the middle of them 30.9 % were in 20-22 years age group, followed by 20.9 % were in 23-25 years age group, 20.0 % were in 25-28 years age group and the last number of 28.2 % were >28 years age group. Their mean was 26.15; (SD ± 4.301).



**Fig 1:** Distribution of the respondents by sex.

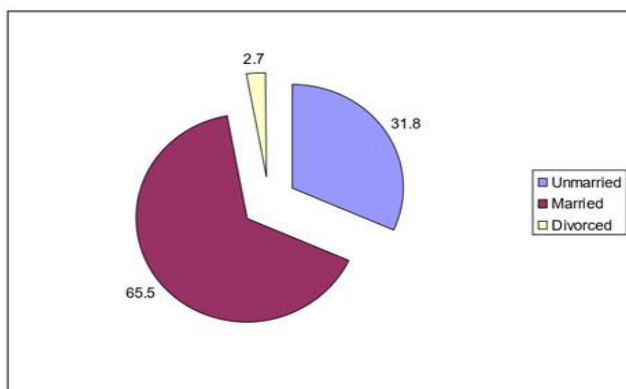


**Fig 2:** Distribution of the respondents by educational qualification level.



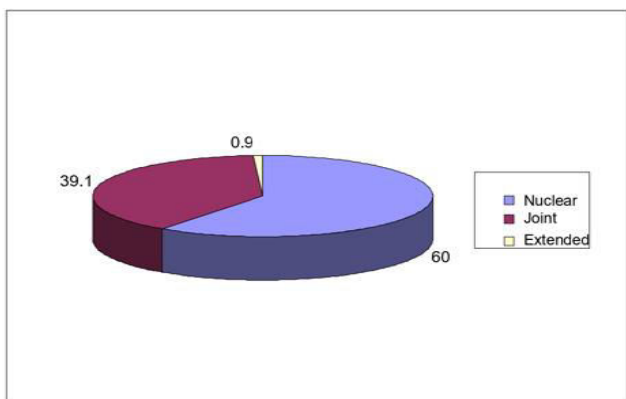
From **Fig 1** found that the sex distribution of the garments workers. More than two-fifth (51.8%) was male and 48.2 % were female garments workers.

The distribution of respondents by their educational status is shown in **fig 2**. Out of 110 respondents, a minimum of 4.5 % were only can read according to 22.7 percent were educated up to primary level, 58.2 % were SSC level and 14.5 % were HSC and above their educational level.



**Fig 3:** Distribution of the respondents by marital status.

**Fig 3** reveals that the majority 65.5 % belonged to married person, 31.8 percent belonged to unmarried and the least number of 2.7 % were divorced.



**Fig 4:** Distribution of the respondents by type of family.

**Table 2:** Respondents by number of family members.

| Number of family member | Number of respondents | Percent      |
|-------------------------|-----------------------|--------------|
| 1 member                | 17                    | 15.5         |
| 2 members               | 47                    | 42.7         |
| 3 members               | 38                    | 34.5         |
| ≥ 4 members             | 8                     | 7.3          |
| <b>Total</b>            | <b>110</b>            | <b>100.0</b> |

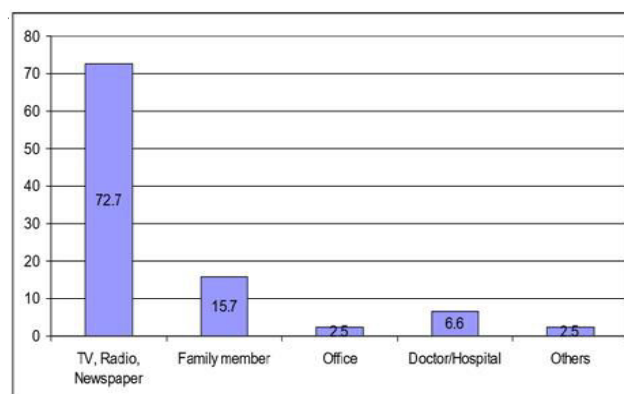
**Table 2** shows that regarding the number of family member's maximum of 42.7 % were two members

followed by 15.5% was one member, 34.5 % were three members and only 7.3 % were four or more than four members.

**Table 3:** Respondents by place of residential area.

| Variables      | Number of respondents | Percent      |
|----------------|-----------------------|--------------|
| Personal house | 38                    | 34.5         |
| At slum        | 4                     | 3.6          |
| At colony      | 63                    | 57.3         |
| Others         | 5                     | 4.5          |
| <b>Total</b>   | <b>110</b>            | <b>100.0</b> |

**Table 3** represents the distribution of the present in life. in the middle of them, 34.5 % were live personal house according to 3.6 % were living at the slum, 57.3 % were living in colony and only 4.5 %



**Fig 5:** Distribution of the respondents by source of information about TB (Multiple responses).

**Fig 4** shows that regarding the type of family maximum (60.0%) were lived in a nuclear family, 39.1 % were living in a joint family and the lowest number of 0.9 % was lived in extended family. **Fig 6** showed that regarding the source of information about the TB maximum 72.7 % were listening to Television, Radio, Newspaper, 15.7 % were family member, 2.5 % were Office, 6.6 % were Doctor/Hospital and only 2.5 % other sources of information about TB.

**Table 4:** Respondents by conception about TB.

| Conception about tuberculosis | Number of respondents | Percent      |
|-------------------------------|-----------------------|--------------|
| Yes                           | 91                    | 82.7         |
| No                            | 19                    | 17.3         |
| <b>Total</b>                  | <b>110</b>            | <b>100.0</b> |

**Table 4** found that regarding on TB highest of 82.7 % had conception and 17.3% had no conception about TB.

**Table 5:** Respondents idea level by causes of TB.

| Causes of tuberculosis | Number of respondents | Percent      |
|------------------------|-----------------------|--------------|
| Virus                  | 19                    | 11.1         |
| Bacteria               | 7                     | 4.1          |
| Dust                   | 66                    | 38.6         |
| Cold                   | 66                    | 38.6         |
| Others                 | 13                    | 7.6          |
| <b>Total</b>           | <b>171</b>            | <b>100.0</b> |

**Table 5** shows that the highest 38.6 % were same responses regarding causes of TB, 11.1 % were told virus and only 7.6 % were told others.

**Table 6:** Respondents by the history of suffering TB.

| History of previous suffering of tuberculosis | Number of respondents | Percent      |
|---|-----------------------|--------------|
| Yes   | 9                     | 8.2          |
| No  | 101                   | 91.8         |
| <b>Total</b>                                  | <b>110</b>            | <b>100.0</b> |

In regards to the history of the previous suffering of TB, 8.2 % yes and the majority of 91.8 % were no history of previous suffering of TB (**Table 6**).

**Table 7:** Respondents by the place affected TB.

| Affected place of tuberculosis | Number of respondents | Percent      |
|--------------------------------|-----------------------|--------------|
| Village                        | 6                     | 66.7         |
| Garments                       | 3                     | 33.3         |
| <b>Total</b>                   | <b>9</b>              | <b>100.0</b> |

**Table 8:** Respondents by duration of suffering TB.

| Duration of suffering | Number of respondents | Valid Percent |
|-----------------------|-----------------------|---------------|
| One year              | 2                     | 22.2          |
| Two years             | 4                     | 44.4          |
| Three years           | 2                     | 22.2          |
| Four years            | 1                     | 11.1          |
| <b>Total</b>          | <b>9</b>              | <b>100.0</b>  |

in the middle of the affected from a place of TB shows in **Table 7** and More than two third (66.7%) were affected by the village and 33.3 % were affected garments sectors. Based on sputum examination, demonstrated that, 0.87% of adult population, which was 0.46% of the total population, was suffering from infectious pulmonary TB. **Table 8** reveals that the maximum 44.4 % garments workers said their affected TB before from two

years, 22.2 % were before one & two years and only 11.1 % were said four years and the most common forms of knowledge on symptoms of TB the study population.

**Table 9:** Respondents by knowledge on sign and symptoms of TB.

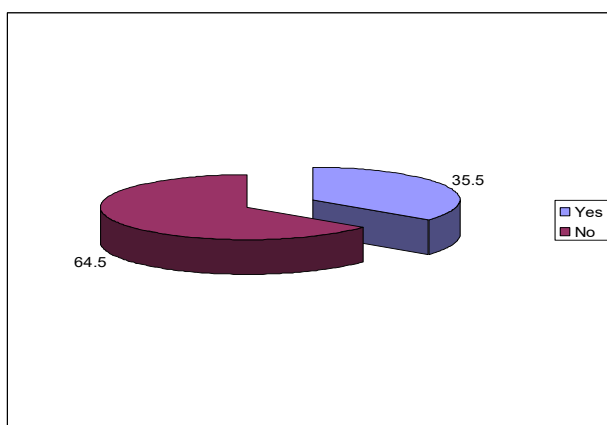
| Knowledge on symptoms of TB | Frequency  | Percent      |
|-----------------------------|------------|--------------|
| Fever                       | 9          | 6.8          |
| More than two weeks cough   | 83         | 62.4         |
| Diarrhea with vomiting      | 3          | 2.3          |
| Weight loss                 | 9          | 6.8          |
| Chest pain with Asphyxia    | 20         | 15.0         |
| Pain of nerve               | 1          | 0.8          |
| Cough with bleeding         | 5          | 3.8          |
| Others                      | 3          | 2.3          |
| <b>Total</b>                | <b>133</b> | <b>100.0</b> |

The most common forms of knowledge on symptoms of TB the study population. Highest (62.4%) were said on symptoms of TB more than two weeks cough, 15.0 % were said chest pain with asphyxia of symptoms of TB. A considerable percentage was found to weight loss i.e. 6.8% (**Table 9**). The four most commonly recognized symptoms of TB were thought to be cough (83.5%), fever (54.7%), chest pain (24.7%) and bloody sputum (24.7%). Twenty-eight (17%) responders thought that TB occurred only once in a life-time and did not recur for a second time after treatment. Thirty-one (19%) patients believed that the total duration of treatment was less than 6 months; while 31(18%) were of the view that treatment should be stopped following control of symptoms (Rizvi *et al.*, 2006).

From **Table 10** shows that total of 110 garments workers interviewed which sex and age affected on TB. Maximum respondents 79.1 % were told male, 7.3 % were female and 13.6 % were child responses.

**Table 10:** Respondents by the sex & age who are more affected.

| Person affected | Number of respondents | Percent      |
|-----------------|-----------------------|--------------|
| Male            | 87                    | 79.1         |
| Female          | 8                     | 7.3          |
| Child           | 15                    | 13.6         |
| <b>Total</b>    | <b>110</b>            | <b>100.0</b> |



**Fig 6:** Distribution of the respondents by smoking habit.

**Fig 6** found that the majority of 64.5 % were no smoking habit and only 35.5 % were smoking habit.

**Table 11:** Knowledge of respondents by duration of the smoking habit.

| Duration of smoking habit | Number o respondents | Percent      |
|---------------------------|----------------------|--------------|
| 1 year                    | 12                   | 30.8         |
| 2 years                   | 11                   | 28.2         |
| 3 years                   | 13                   | 33.3         |
| 4 years                   | 3                    | 7.7          |
| <b>Total</b>              | <b>39</b>            | <b>100.0</b> |

**Table 12:** Respondents idea by the transmission of TB pathogens.

| Variables                                 | Number of respondents | Percent      |
|---|-----------------------|--------------|
| Through the air by droplet of TB patients | 80                    | 66.7         |
| To eating with TB patient                 | 13                    | 10.8         |
| With intercourse                          | 3                     | 2.5          |
| With touch                                | 5                     | 4.2          |
| Don't know                                | 19                    | 15.8         |
| <b>Total</b>                              | <b>120</b>            | <b>100.0</b> |

**Table 11** states that the distribution of duration of the smoking habit. in the middle of them one third (30.8%) were the duration of one year according to 28.2 % were two years, 33.3 % were three years and only the least number 7.7 % was four years.

**Table 12** found that distribution of the garments workers respondents, maximum respondents were multiple responses of transmission of TB. in the middle of the majority of more than two third (66.7%) were opinion source through the air by a droplet of TB patients germ, according to 10.8 %

were opinion to eating with TB patient, 2.5 % were opinion with intercourse with TB patients and 4.2% with touch, 15.8 % were don't know about transmission of TB.

**Table 13:** Idea of the Respondents by TB is an infectious disease.

| TB is a infectious disease | Number of respondents | Percent      |
|----------------------------|-----------------------|--------------|
| Yes                        | 28                    | 25.5         |
| No                         | 33                    | 30.0         |
| Don't know                 | 49                    | 44.5         |
| <b>Total</b>               | <b>110</b>            | <b>100.0</b> |

**Table 13** shows that the 25.5% were told TB is an infectious disease, (30.0%) were TB is not an infectious disease and highest number of 44.5 % was don't know about TB disease.

**Table 14:** Respondents idea by TB is a preventable disease.

| TB is a preventable disease | Number of respondents | Percent      |
|-----------------------------|-----------------------|--------------|
| Yes                         | 79                    | 71.8         |
| No                          | 11                    | 10.0         |
| Don't know                  | 20                    | 18.2         |
| <b>Total</b>                | <b>110</b>            | <b>100.0</b> |

**Table 15:** Respondents by methods of TB prevention.

| Methods of TB prevention         | Number of respondents | Percent       |
|----------------------------------|-----------------------|---------------|
| BCG vaccination                  | 10                    | 8.1           |
| Cover on mouth at cough          | 64                    | 52.0          |
| No smoking                       | 44                    | 35.8          |
| Increase of personal cleanliness | 1                     | 0.8           |
| Don't know                       | 4                     | 3.3           |
| <b>Total</b>                     | <b>123</b>            | <b>100.0%</b> |

**Table 14** found that the majority of 71.8 % garments workers were response TB is a preventable disease but 10.0 % were not a preventable diseases and 18.2 % were don't know. **Table 15** reveals that the distribution of the garments workers respondents, maximum respondents were multiple responses by the methods of TB prevent. in the middle of them majority of 52.0 % were opinion cover on the mouth at cough, followed by 8.1 % were said BCG vaccination, 35.8 % were no smoking and 3.3 % were don't know how to prevent it.

**Table 16:** Respondents by TB is a treatable disease.

| TB is a treatable disease | Number of respondents | Percent      |
|---------------------------|-----------------------|--------------|
| Yes                       | 106                   | 96.4         |
| No                        | 1                     | 0.9          |
| Don't know                | 3                     | 2.7          |
| <b>Total</b>              | <b>110</b>            | <b>100.0</b> |

As revealed from **Table 16**, maximum 96.4 % garment worker said it has treatment but 3.6 % there are not idea treatment TB diseases.

**Table 17:** Respondents by duration of TB treatment of the affected persons.

| Duration of TB treatment | Number of respondents | Percent      |
|--------------------------|-----------------------|--------------|
| 1 months                 | 9                     | 8.2          |
| 2 months                 | 17                    | 15.5         |
| 3 months                 | 20                    | 18.2         |
| 6 months                 | 56                    | 50.9         |
| 1 years                  | 8                     | 7.3          |
| <b>Total</b>             | <b>110</b>            | <b>100.0</b> |

**Table 17** reveals that the duration of treatment, more than fifty (50.9%) were said six months, according to 8.2 % were one month, 15.5 % were two months, 18.2 % were three months and the least 7.3 % were one year's duration of treatment of TB disease.

**Table 18** represents that the highest number of 74.5 % were said to cure the TB disease but 21.5 % don't know or no idea about the cure for TB diseases.

**Table 19** found that the highest number of 75.5 % were possible way to cure TB disease followed by

**Table 21:** Relationship between the age of the respondents and level of awareness on TB.

| Age group    | Level of Awareness on Tuberculosis |             |                |             | Total (%)          | χ <sup>2</sup> | P-value |
|--------------|------------------------------------|-------------|----------------|-------------|--------------------|----------------|---------|
|              | Poor Awareness                     |             | Good Awareness |             |                    |                |         |
|              | No                                 | %           | No             | %           |                    |                |         |
| < 25 years   | 42                                 | 73.7        | 15             | 26.3        | 57 (100.0)         |                |         |
| ≥ 25 years   | 40                                 | 75.5        | 13             | 24.5        | 53 (100.0)         | 0.046          | 0.83    |
| <b>Total</b> | <b>82</b>                          | <b>74.5</b> | <b>28</b>      | <b>25.5</b> | <b>110 (100.0)</b> |                |         |

From **Table 21** reveals that, the relationship between the age of respondents and the level of awareness of TB was compared by Pearson's Chi-square test in which the 'P' value is 0.83 which is higher than the expected value that is 0.05. So the relationship is not statistically significant.

14.5 % were TB can't be cured only manage and 6.4 percent were normal antibiotic.

**Table 18:** Respondents by TB is a curable disease.

| Cure of TB   | Number of respondents | Percent      |
|--------------|-----------------------|--------------|
| Yes          | 82                    | 74.5         |
| No           | 6                     | 5.5          |
| Don't know   | 22                    | 20.0         |
| <b>Total</b> | <b>110</b>            | <b>100.0</b> |

**Table 19:** Respondents by possible ways of cure TB.

| Possible way to cure from TB  | Number of respondents | Percent      |
|-------------------------------|-----------------------|--------------|
| Normal antibiotic             | 7                     | 6.4          |
| TB can't be cured only manage | 16                    | 14.5         |
| Total rest without medicine   | 1                     | 0.9          |
| Anti-TB antibiotics/treatment | 83                    | 75.5         |
| Vashoz/Herbal medicine        | 3                     | 2.7          |
| <b>Total</b>                  | <b>110</b>            | <b>100.0</b> |

**Table 20:** Respondents by TB is completely curable.

| TB is a complete curable disease | Number of respondents | Percent      |
|----------------------------------|-----------------------|--------------|
| Yes                              | 69                    | 62.7         |
| No                               | 6                     | 5.5          |
| Don't know                       | 35                    | 31.8         |
| <b>Total</b>                     | <b>110</b>            | <b>100.0</b> |

**Table 20** represents that the more than 62.7% were said TB is a completely curable disease but 5.5 % said TB is not a complete curable disease and 31.8% were don't no idea the complete cure of TB diseases.

**Table 22** reveals that, the relationship between the education of garments workers and the level of awareness on TB was compared by Pearson's Chi-square test in which the 'P' value is 0.05 which is lower than the expected value that is 0.05. So the relationship is statistically significant.



**Table 22:** Relationship between the educational level of the respondents and level of awareness on TB.

| Education       | Level of Awareness on Tuberculosis |             |                |             | Total (%)          | $\chi^2$ | P-value |
|-----------------|------------------------------------|-------------|----------------|-------------|--------------------|----------|---------|
|                 | Poor Awareness                     |             | Good Awareness |             |                    |          |         |
|                 | No                                 | %           | No             | %           |                    |          |         |
| Lower educated  | 73                                 | 77.7        | 21             | 22.3        | 94 (100.0)         |          |         |
| Higher educated | 9                                  | 56.2        | 7              | 43.8        | 16 (100.0)         | 0.3.32   | 0.05    |
| <b>Total</b>    | <b>82</b>                          | <b>74.5</b> | <b>28</b>      | <b>25.5</b> | <b>110 (100.0)</b> |          |         |

**DISCUSSION:**

This study was conducted to Dhaka based selected awareness of garment workers regarding TB in Savar. The analyzed data have been presented in this chapter through tables and appropriate graphs. The results of the study have been described as TB is a major public health problem in Bangladesh as well as in the whole world. The problem is much greater in poor & developing countries adverse influence on productivity as its prevalence is seen high. Our study people, their taking of awareness about TB were identified. Bangladesh ranked the 6<sup>th</sup> highest for the burden of TB in the middle of 22 high-burden countries in 2007, with 353,000 new cases, 70,000 deaths, and an incidence of 223/100,000 people per year (WHO report 2009).

In this study was conducted on 110 garments workers. The respondents the age of 17 to 37 years and 30.9 percent were in 20-22 years age group, followed by 20.9 percent were in 23-25 years age group, 20.0 percent were in 25-28 years age group and the last number of 28.2 percent were >28 years age group. Their mean was 26.15; (SD ± 4.301). In this study 51.8% were male and 48.2 percent were female garments workers. Another study, 53% were male and 46.4% were female in the study of Portero NJ (2002) 73.6% males and 26.4% females. Forty seven (27.6%) had not heard of TB before they were diagnosed themselves and 16 (9.4%) thought that it was a rare disease in Pakistan. Eleven (7%) did not consider TB as an infectious disease. Inhaled droplets were recognized as the common source of infection but eating contaminated food (47.6%), use of blood products (32.9%) and inheritance (27%) were also considered important modes of transmission. Lung was considered as the only organ affected by TB by 39 (23%) patients and 96 (57%) thought that stress and emotional trauma could lead

to TB (Rizvi *et al.*, 2006). So the relationship is statistically significant and various surveys have been conducted to understand the knowledge, attitudes, and practices regarding TB. One survey in India reported that most (93%) people had heard of TB but only 20.5% of the people demonstrated sufficient knowledge of TB (Devey, 2000, and Shetty *et al.*, 2004).

**CONCLUSION:**

The study of awareness of garment workers regarding TB in Ashulia, Savar, and Dhaka, Bangladesh are relatively higher than in the middle of the general population. The level of education, monthly income increases the chance of awareness of TB in the garment workers. This study was 51.8 % were male workers and 48.2 % were female workers. Most of the workers were between 20 to 37 years of age, 95.5% of workers were literate, of them about 72.7% of workers were educated up to primary or secondary school level. Majority of the garment’s workers (48.20%) had monthly family income in the group of Taka 10000-15000. Maximum (60.0%) garments workers lived in the nuclear family, 39.1 % belonged to joint family, 72.7% respondents heard the information about TB by listening of Radio, seeing of Television, and reading of Newspaper and 27.3% were from a family member, office, doctor/hospitals. Majority of (71.8%) garments workers were response TB is a preventable disease but only 8.1 % were said by BCG vaccination; 21.5 % didn’t know the idea of how TB diseases will be cure, and 31.8 % were didn’t know TB is a completely curable disease. Total of 110 respondents in the middle of them maximum (82.7%) of the respondents had knowledge about tuberculosis but the least number (17.3%) were no knowledge about TB. The study was done in a selected small urban area in the middle of the garments workers of

particularly low socio-economic condition. If it were done in a wide range in urban selected areas then it would be more fruitful. Further research is warranted to improve diagnostics, develop new drugs and vaccines, simple and effective regimen for simultaneous treatment of TB, ways to improve program effectiveness, and a better understanding of the relationship between TB and chronic diseases, e.g. TB and smoking, and identify social and behavioral factors which limit the detection of cases.

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The author (s) declared no potential conflicts of the interest with respect to the present research work.

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