

**KNOWLEDGE, AWARENESS, PERCEPTION TOWARDS TUBERCULOSIS DISEASE  
AMONG ADULT GENERAL POPULATION OF EITHER GENDER**Akanksha Patil<sup>1</sup>, Vivek Pamula<sup>2\*</sup> and Dr. Srabani Bhattacharya<sup>3</sup><sup>1,2</sup>Medical Student, Rajiv Gandhi Medical College and CSM Hospital, Maharashtra, India.<sup>3</sup>Former Professor and HOD of Physiology, Rajiv Gandhi Medical College and CSM Hospital, Maharashtra, India.**\*Corresponding Author: Vivek Pamula**

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**ABSTRACT**

It is a cross-sectional study. Total number of participants were 108. Female participant were 65.7% & Male 34.3%. Their age group were between 18-60 Years. Among them 79.6% of participants were from Urban Population. Regarding the Occupation of the participants 66.6% were students, service 27.8%, housewife 0.9%, Retired 0.9% & others 3.4%. 85.2% of the participants knew about Tuberculosis.

**KEYWORDS:** Awareness, Knowledge, Tuberculosis.**INTRODUCTION**

Tuberculosis (TB) remains of the major global health threats leading to morbidity & mortality.<sup>[1]</sup> TB is the most ancient disease of mankind & has co-evolved with humans for many thousands of years.<sup>[2]</sup> Tuberculosis is one of the major infectious disease & health concern in th world.<sup>[3]</sup>

**MATERIALS AND METHODS**

It is a cross-sectional study which was conducted among adult general population age group between 18-60 years. Total number of respondants were 108. The questionnaire was prevalidated & uploaded via google form. Those who agreed to take part in this study were

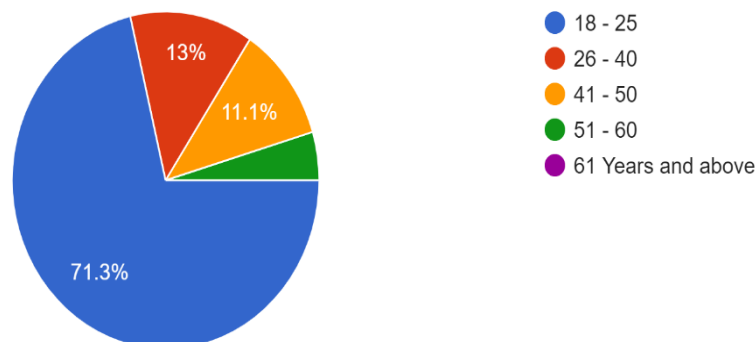
included. Statistical analysis were done as per the responses received.

**RESULTS AND DISCUSSION****Table 1: Age of the participants.**

Age	No. of Participants	Percentage (%)
18-25 years	77	71.3%
26-40 years	14	13% %
41-50 years	12	11.1%
51-60 years	5	4.6%
61 years and above	0	0%

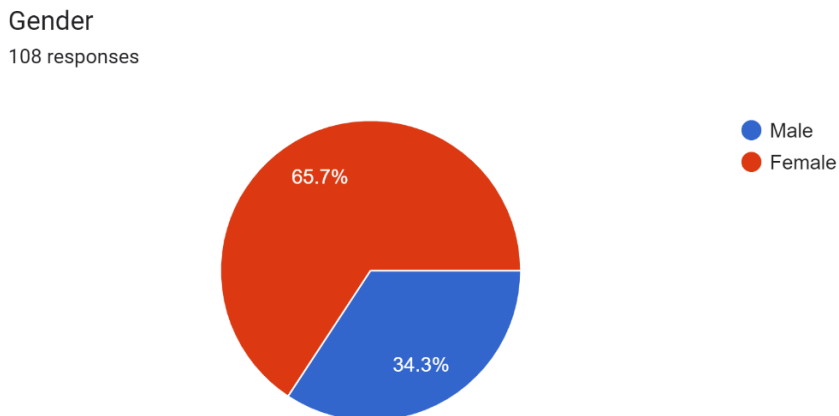
Age in Years

108 responses

**Fig. 1: pie chart depicting relative distribution of participants of different ages.**

**Table 2: Gender distribution of participants.**

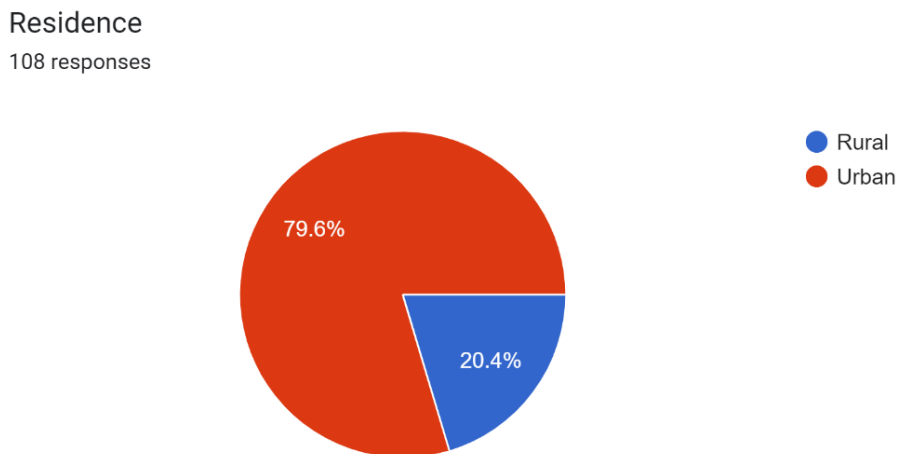
GENDER	NO. OF PARICIPANTS	PERCENTAGE
Male	37	34.3%
Female	71	65.7%



**Fig. 2: pie chart depicting relative distribution of participants of different genders.**

**Table 3: Residence Of participants.**

RESIDENCE	NO. OF PARTICIPANTS	PERCENTAGE (%)
Rural	22	20.4%
Urban	86	79.6%



**Fig. 3: pie chart depicting relative distribution of participants of different residences.**

**Table 4: Occupation of participants.**

OCCUPATION	NO OF PARTICIPANTS	PERCENTAGE (%)
Student	72	66.6%
Service	30	27.8%
Housewife	1	0.9%
Retired	1	0.9%
Other	4	3.4%

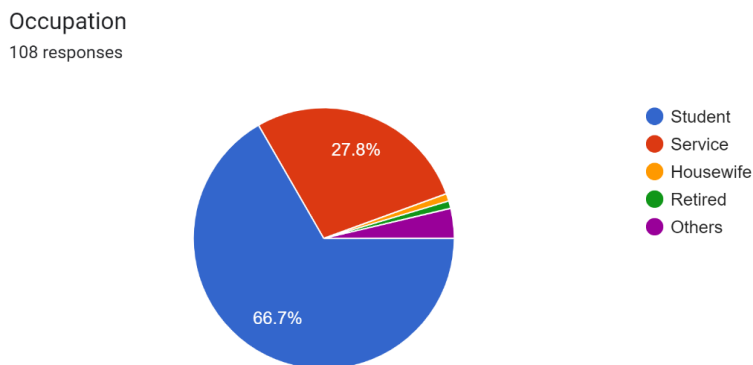


Fig. 4: pie chart depicting the relative distribution of participants of different occupation.

Table 5: Response of participants to whether they are aware about tuberculosis.

AWARENESS ABOUT TUBERCULOSIS	NO. OF PARTICIPANTS	PERCENTAGE (%)
Yes	92	85.2%
No	16	14.8%

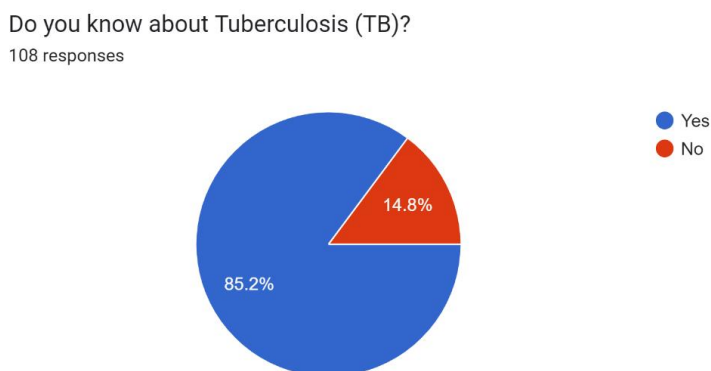


Fig. 5: pie chart depicting the response of participants to whether they are aware about dementia.

Table 6: Response of participants to whether they know about symptoms of Tuberculosis.

SYMPTOMS OF TB	NO. OF PARTICIPANTS	PERCENTAGE (%)
Cough more than 2 weeks	91	84.3%
Fever	54	50%
Weight loss	53	49.1%
Chest Pain	53	49.1%
Blood in sputum	56	51.9%
Appetite loss	42	42%

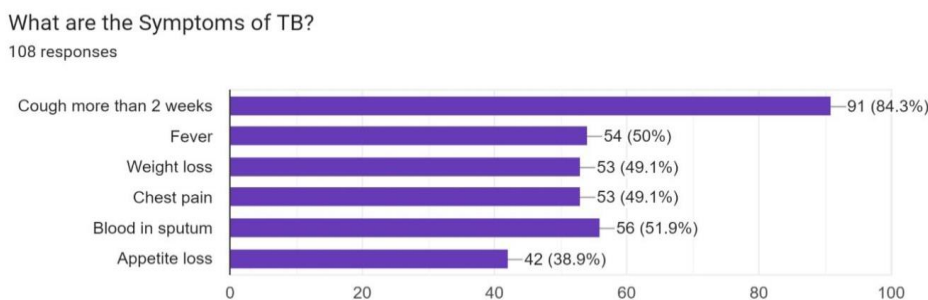
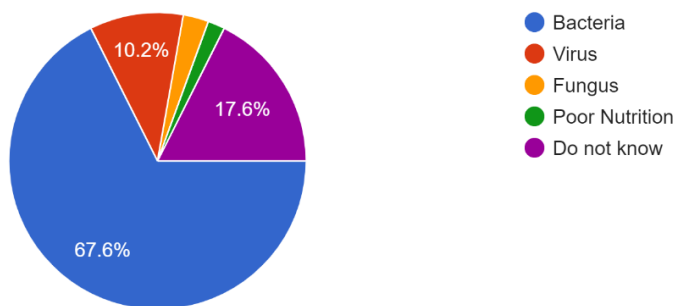


Fig.6: Graph depicting whether the participants know about symptoms of Tuberculosis.

**Table 7: Response of participants to whether they know sources of Tuberculosis.**

SOURCE OF TB	NO. OF PARTICIPANTS	PERCENTAGE (%)
Bacteria	73	67.6%
Virus	11	10.2%
Fungus	3	2.8%
Poor Nutrition	2	1.9%
Do not know	19	17.6%

Source of TB  
108 responses

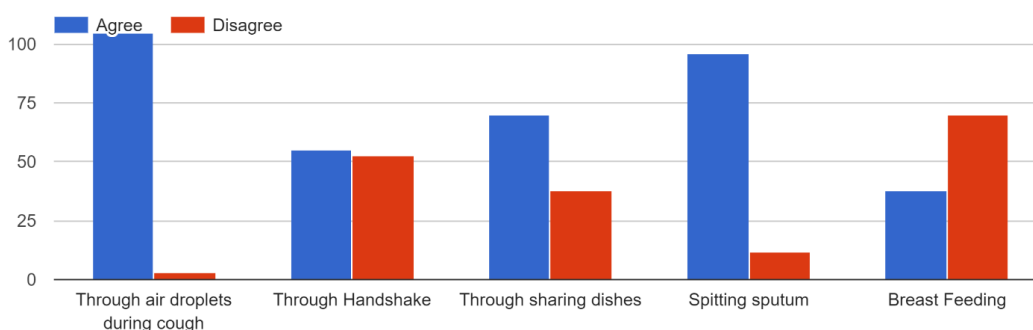


**Fig.7 Pie chart depicting participant’s response to whether they know about sources of Tuberculosis.**

**Table 8: Response of participants to whether they know about the Transmission of Tuberculosis.**

TRANSMISSION OF TB	NO. OF PARTICIPANTS	
	AGREE	DISAGREE
Through air droplets during cough	105	3
Through Handshake	55	53
Through sharing dishes	70	38
Spitting sputum	96	12
Breast Feeding	38	70

Do you agree that transmission of TB through



**Fig. 8: Graph depicting whether participants know about the Transmission of Tuberculosis.**

**Table 9: Response of participants to whether they know about the Management of Treatment.**

MANAGEMENT OF TREATMENT	NO. OF PARTICIPANTS	PERCENTAGE (%)
Use of Medicine	100	92.6%
Improving Nutrition	64	59.3%
Improving Sanitation	66	61.1%
Good Ventilation	46	42.6%
Vaccination	61	56.5%

Management of Treatment

108 responses

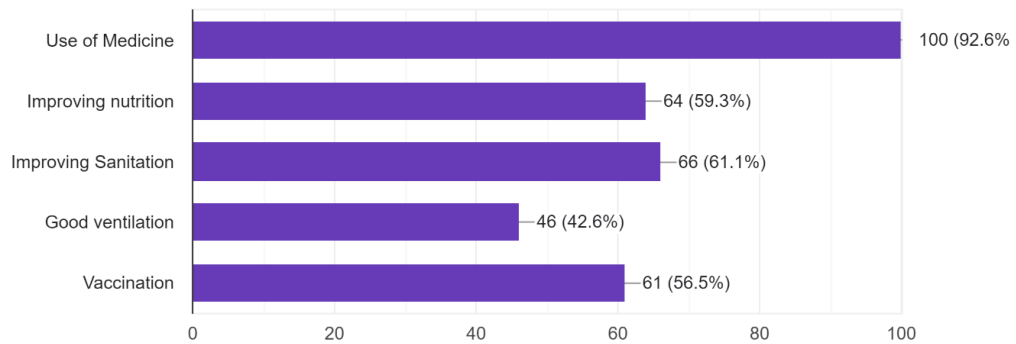


Fig. 9: Graph depicting whether the participants know about the Management of Treatment.

Table 10: Response of participants to whether they are aware of TB drugs.

AWARENESS OF TB DRUGS	NO. OF PARTICIPANTS	PERCENTAGE (%)
Yes	79	73.1%
No	29	26.1%

Do you know TB drugs are available?

108 responses

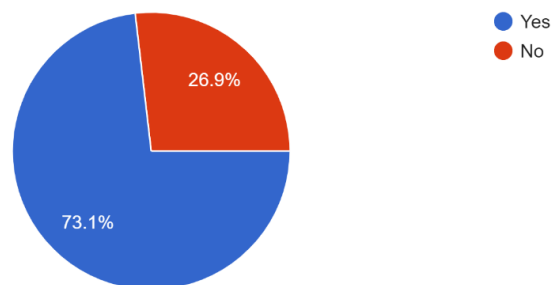


Fig.10: Pie chart depicting whether the participants are aware of TB drugs.

Table 11: Response of participants to whether they are aware of TB DOTS.

AWARENESS OF TB DOTS	NO. OF PARTICIPANTS	PERCENTAGE (%)
Yes	66	38.9%
No	42	61.1%

Are you aware about TB-DOTS (Directly Observed Therapy)?

108 responses

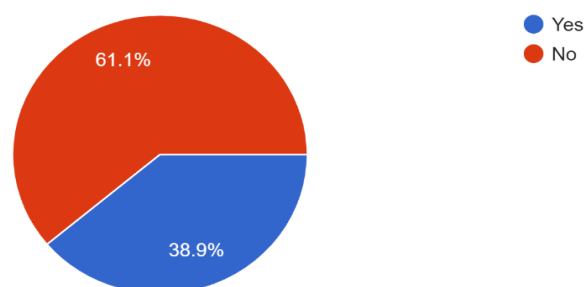
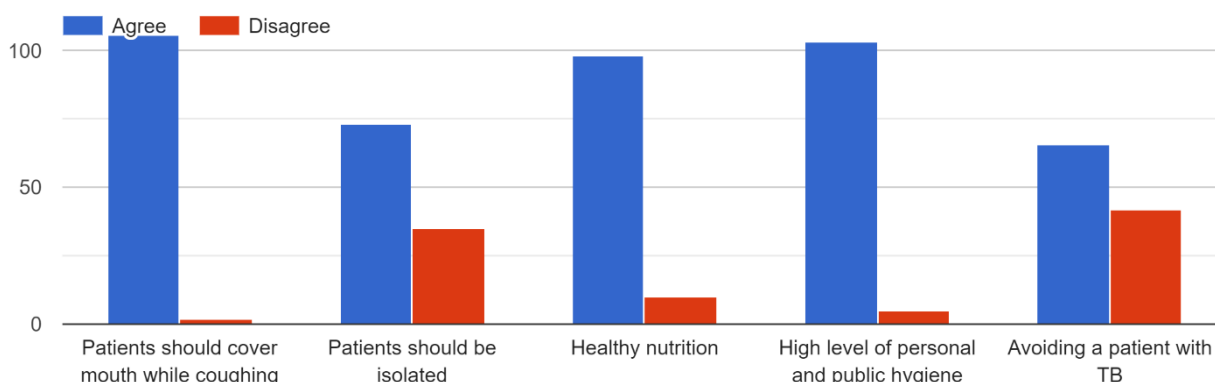


Fig. 11: Pie chart depicting whether the participants are aware of TB DOTS.

**Table 12: Response of participants to whether they know about the methods of preventing Tuberculosis.**

PREVENTION	NO. OF PARTICIPANTS	NO. OF PARTICIPANTS
	AGREE	DISAGREE
Patients should cover mouth while coughing	106	2
Patients should be isolated	73	35
Healthy nutrition	98	10
High level of personal and public hygiene	103	5
Avoiding a patient with TB	66	42

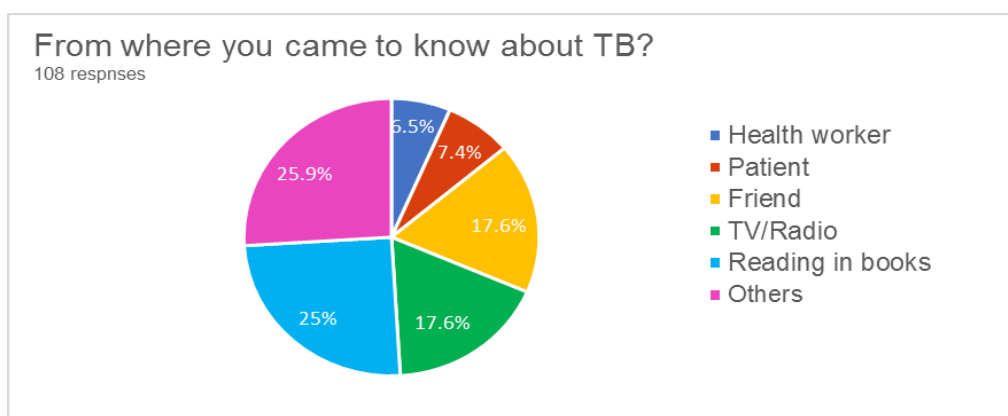
Do you agree that TB can be prevented by following



**Fig. 12: Graph depicting whether participants know about the methods of preventing Tuberculosis.**

**Table 13: Response of participants about their source of awareness.**

Source of Awareness	No. of Participants	Percentage (%)
Health worker	7	6.5%
Patient	8	7.4%
Friend	19	17.6%
TV/Radio	19	17.6%
Reading in Books	27	25%
Others	28	25.9%



**Fig. 13: Pie chart depicting response of participants about their source of awareness.**

**Table 14: Response of participants to whether they know about the organ affected by Tuberculosis.**

Organ Effected by Tb	No of Participants	No of Participants
	AGREE	DISAGREE
Lung	104	4
Bone	32	76
Whole Body	48	60

Do you know organ effected by TB?

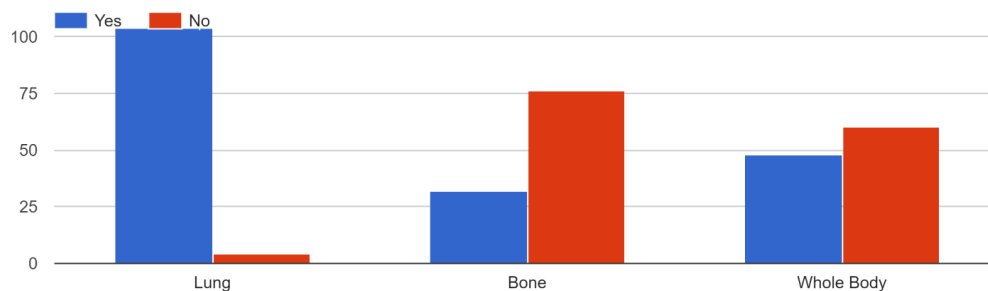


Fig. 14: Graph depicting whether the participants know about the organ affected by Tuberculosis.

Table 15: Response of participants to whether they know about the tests performed for diagnosis of Tuberculosis.

Tests for Diagnosis Of Tb	NO. of Participants	Percentage
Chest X ray	70	65.4%
Sputum	60	56.1%
ESR	24	22.4%

What are the tests for diagnosis of TB?

107 responses

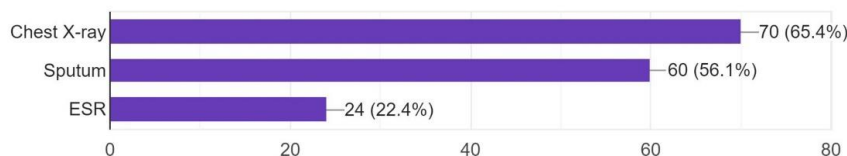


Fig. 15: Graph depicting whether the participants know the tests performed for diagnosis of Tuberculosis.

Table 16: Participants idea to increase public awareness and knowledge about Tuberculosis

	NO OF PARTICIPANTS AGREE	NO OF PARTICIPANTS DISAGREE
Health education service by social workers	107	1
Awareness program to public by state government	105	3
Counselling	94	14
Adequate Sanitation facilities	99	9
Medical facilities in Govt hospitals	107	1

Do you agree that for public awareness about TB it is necessary

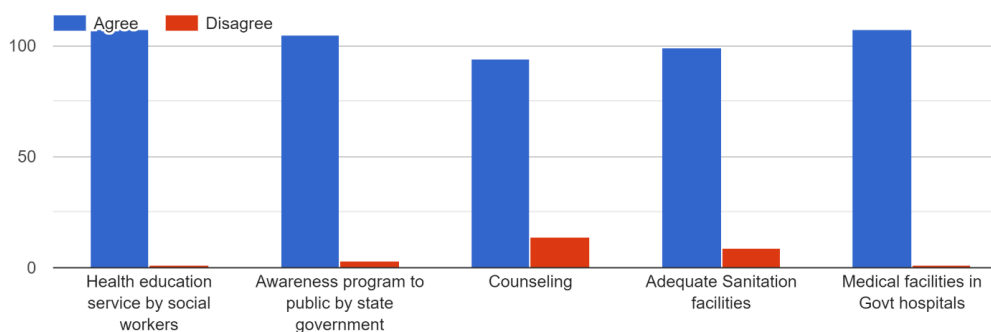


Fig. 16: Graph depicting participants idea to increase public awareness and knowledge about Tuberculosis.

In this study total number of respondents were 108. Among the 65.7% Female & 34.3% male. Their age group varied from 18 to 60 years. About 85.2% of the respondents were aware about TB. 73.1% aware about the available TB drugs. TB is an airborne ailment which is caused by bacterium called mycobacterium.<sup>[4]</sup> Despite decades of research driving advancements in drug development & discovery against TB, it still leads among the cause of deaths.<sup>[5]</sup> Improving patients' knowledge of TB is an important component of enhancing patient-centric care.<sup>[6]</sup> Clinicians who manage patients with suspected TB should ensure that their diagnostic practices align with the guidelines for TB.<sup>[7]</sup> Prompt & accurate diagnosis is of paramount importance both for better patient outcome & for control of disease.<sup>[8]</sup> The Scale-up of tuberculosis preventive treatment (TPT) must be accelerated. When a patient with TB is treated a dual benefit sought, an individual benefit focused on curing the patient affected by TB & a collective benefit for the community in which the patient resides.<sup>[10]</sup> Several diagnostic techniques are commonly employed including immunological, radiological, microscopical, bacterial culture & clinical methods.<sup>[11]</sup>

WHO developed a strategy called directly observed treatment short course (DOTS).<sup>[12]</sup>

## CONCLUSION

Public awareness raising programmes should be arranged using electronic & print media.

## REFERENCES

1. AA Agyemen & others. Tuberculosis – an overview. *Jay Public health & emergency*, 2017; 1: 1-11.
2. Gursimrat K Sandhu. Tuberculosis: current situation, Challenge & overview of its control programs in India. *Journal of Global infectious disease*, 2011; 3(2): 143-150.
3. Yefat Kesele. Assessment of the Prevalence of Pulmonary tuberculosis patients at Nakfa Hospital from 2014-2019, Eritrea. <http://doi.org/10.1101/2020>, 1-5.
4. A Tiwari et al. Machine learning techniques for Tuberculosis Prediction. *International Conference*, 2019; 1-8.
5. Cara M Oill et al. New developments tuberculosis diagnosis & treatment. *Breathe*, 2022; 18: 1-15.
6. Ameya D Bendae & others. Tuberculosis: Past, present & future of the treatment & drug discovery research. *Current Research in Pharmacology & Drug discovery*, 2021; 2: 1-9
7. S Huddant et al. Knowledge about tuberculosis & infection prevention behavior: A nine city longitudinal study from India. *PLOS ONE*, 2018; 13(10): 1-15.
8. Yon Ju Ryu, M.D. Diagnosis of Pulmonary Tuberculosis: Recent advances & Diagnostic Algorithms, 2015; 78: 64-71.
9. Kusum Sharma & Others. Recent advances in the diagnosis of Tuberculosis. *Journal of Postgraduate Medicine, edu & Res.*, 2013; 47(4): 181-187.
10. Y Hamada et al. Framework for the evaluation of new tests for tuberculosis infection. *Evr Respir J.*, 2021; 58: 1-10.
11. J F P Pareja & others. Treatment of pulmonary & extrapulmonary tuberculosis. *Enferm Infecc Microbiol Clin.*, 2018; 36(8): 507-516.
12. Shahinda S R A et al. Tuberculosis: Pathogenesis, Current treatment Regimens & New Drug targets. *Int. J of molecular sciences*, 2023; 24: 1-23.
13. C Genet & others. Effectiveness of directly observed treatment short course (DOTS) on treatment of tuberculosis patients in public health facilities of Debre Tabor Town, Ethiopia: retrospective study.