

Research Article

Sociodemographic Determinants of Knowledge towards Tuberculosis Transmission among Women of 15–49 Years of Age in India

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Received 11 May 2022; Revised 17 September 2022; Accepted 7 December 2022; Published 20 December 2022

Academic Editor: Jianrong Zhang

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Background. India is one of the countries in the world most heavily impacted by tuberculosis (TB). In 2015, TB was a leading cause of death, killing 1.4 million people worldwide. The aim of the study was to assess the knowledge and associated factors regarding the transmission of TB among women in India. **Method.** We used publicly available datasets collected as part of the NFHS during 2015–16 in India. Data related to sociodemographic factors and knowledge about the transmission of TB among women ($N = 699,686$) were extracted using STATA. Multiple logistic regression analyses were used to determine factors associated with the knowledge of TB transmission among women. **Results.** Among 699,686 women, 88.36% knew about TB, 59.81% recognized that tuberculosis spreads by air through coughing or sneezing, and 78.55% understood that tuberculosis is a curable disease indicating correct knowledge about TB. 70.74% of the women were from rural areas with 59.29% having a secondary or higher level of education and 40.41% living in poverty. Multivariable analysis indicated that the probability of having good knowledge of TB was consistently significant among women with higher education [aOR: 2.502; 95% CI: 2.454–2.551]; women living in rich households (highest wealth quintile) [aOR: 1.590; 95% CI: 1.556–1.625]; and women residing in urban areas [aOR: 1.191; 95% CI: 1.166–1.215] than their rural counterparts. **Conclusion.** The findings of this study showed that women in India have moderately good knowledge and a correct attitude towards tuberculosis. However, the level of information varies with the various sociodemographic factors such as age group, place of residence, education, wealth index, religion, and caste/tribe bearing a positive causal relationship between the knowledge and TB transmission and hence the resulting attitude.

1. Introduction

Tuberculosis (TB) is a contagious disease caused by the bacillus *Mycobacterium tuberculosis* (MTB). TB remains a major public health concern worldwide [1]. It is transmitted when an infected individual coughs or sneezes and releases infectious droplets into the air. TB is a highly contagious disease that can affect the lungs (pulmonary tuberculosis, PTB) as well as other parts of the body (extrapulmonary tuberculosis, EPTB). TB is a disease that manifests under poor economic conditions leading to improper nutrition, unhygienic living conditions, and so on.

About 90% of TB-related infections and deaths occur in underdeveloped countries with weak economies and inadequate healthcare infrastructure [1, 2].

Globally, around 10 million people are infected with tuberculosis of which 1.2 million deaths occurred in 2019 alone. Amongst those infected, 56% were males (>15 years), 32% were females (>15 years), and 12% were children throughout the world in 2019. According to the World Health Organization (WHO), the regions of Southeast Asia are geographically most affected (44%) followed by Africa (25%), and the Western Pacific (18%). Two-thirds of the global TB burden is developed in the eight countries where

India shares the greatest burden (26%) followed by Indonesia (8.5%), China (8.4%), South Africa (8.4%), the Philippines (6.0%), Pakistan (5.7%), Nigeria (4.4%), Bangladesh (3.6%), and South Africa (3.6%). Globally, India accounts for more than a quarter of all the reported cases. The proportion of TB cases is higher in India due to poor socioeconomic conditions, which are further aggravated by environmental pollution [3]. As per the National Family Health Survey-4 (NFHS-4) report, about 316 people are infected with TB per 100,000 people in India [4].

Tuberculosis is a curable disease that requires a combination of correct knowledge, attitude, and perception. Having the correct knowledge and understanding the mode of transmission of the disease is an essential prerequisite for prevention, screening, early detection, and health-seeking behaviour. Women in adult age group (15–49 year) bear a significant burden of TB in India and globally. TB among women can adversely affect the health of the mother, foetus, neonate, and their children with a wide spectrum of short and long-term implications [2]. Therefore, early diagnosis of TB among women can prevent further transmission thereby reducing the risk of deaths. In general, men have a higher prevalence of TB than women. However, women of reproductive age have a higher rate of disease progression and mortality than men due to less access to health care facilities and various socioeconomic factors [1]. Stigma is one of the important social factors that also create a hurdle among women seeking treatment for TB. Stigma has been referred to as negative social experiences such as discrimination, isolation, devaluing, and shaming of a person that exclude the individual from society due to the hazards they are facing. Few studies have suggested that social stigma and fear are strongly associated with the disease that may lead to TB at comparatively higher rate in women [5, 6]. The majority of people infected with tuberculosis can be effectively treated with drugs. However, early identification and detection among the suspects will help to cure the disease and prevent its further spread. Various studies have revealed that inaccurate and inadequate knowledge about TB, such as how it spreads, its cause, and symptoms, are the leading obstacles to the effective control of the disease [7–9]. Therefore, adequate knowledge and awareness, the right attitude, and approach to the disease are crucial for its effective control.

The aim of this study was to examine the knowledge and attitudes towards TB among women in India. We have included various sociodemographic factors to evaluate the knowledge and attitude towards TB among the women. Several studies have reported that socioeconomic and demographic characteristics such as age, education, place of residence, wealth index, caste, religion, and geographic location play a role in TB transmission [10–14]. TB care-seeking behaviour among people has been shown to be influenced by their perceived knowledge about the signs and symptoms of TB. [15–17]. Using the population-based data, this study aimed to examine correct knowledge and perception about TB among adults' women in India. The long-term objective of the study is to come up with findings for stakeholders and policymakers to develop an effective intervention strategy for TB management.

2. Methods

2.1. Ethical Consideration. The present analysis utilizes a secondary dataset with no identifiable information on the surveyed participants. This dataset is available in the public domain for research purposes; therefore, no approval is required from any institutional review board.

2.2. Study Design and Sample. TB in adults' women as well as pregnancy could have serial and sequential effects: repeated reproductive failure, foetal ill-health, preterm delivery, and TB of the newborns and infants, leading to high maternal and perinatal morbidity and mortality concern. A quantitative analysis was performed to explore the knowledge and attitude towards TB among women in India. This study utilized a large dataset from the United States Agency for International Development Demographic and Health Survey (USAID-DHS) program. The current study utilized data from the fourth round of NFHS-4 (2015–16) in India. NFHS-4 provides socio-demographic and health perspective data of each state and union territory in India. The survey included data on 699,686 women in the age group of 15–49 years across the nation.

A cross-sectional study was conducted at regular intervals for NFHS-4 data. Each round of the NFHS has the following two specific goals: (a) to provide essential data on health and family welfare needed by the Ministry of Health and Family Welfare (MoHFW) for health policy program purposes, and (b) to provide important information on emerging health and family welfare issues. The Government of India designated the International Institute for Population Sciences (IIPS) as a nodal agency responsible for providing technical guidance for the survey. A specific questionnaire directed towards the women regarding their TB knowledge and attitude was developed by the surveyor, such as “Have you ever heard of an illness called tuberculosis or TB? .” The resulting response defined the knowledge of TB among women. The study participants were women ($N=699,686$) recruited through a stratified sampling described elsewhere [18].

2.2.1. Outcome Variables. In this study, the outcome variables considered the respondent's knowledge and attitudes toward the mode of TB transmission. In this regard, the variables were created with the help of a set of nine questionnaires. For instance, the questionnaire “Q1. Have you ever heard of an illness called TB?” was designed to identify the comprehensive knowledge about TB among women. In addition, there are several questionnaires designed to evaluate the correct knowledge about TB. The questionnaire from Q2 to Q7 was used to evaluate the mode of transmission, while the questionnaire, Q8 and Q9, was used to evaluate the idea about the curability of disease and secrecy owing to the stigma related with the disease, respectively.

Q2. Does TB spread from one person to another through the air when coughing or sneezing?

- Q3. Can TB be transmitted through sharing utensils?
 Q4. Can TB be transmitted by touching a person with tuberculosis?
 Q5. Can TB be transmitted through food?
 Q6. Can TB be transmitted through sexual contact?
 Q7. Can TB be transmitted through mosquito bites?
 Q8. Can tuberculosis be cured?
 Q9. If a member of your family has tuberculosis, would you want it to remain a secret or not?

The aforementioned set of questions revealed the outcome of respondent knowledge, attitude, and perception of tuberculosis. However, response to Q2 was used for measuring the mode of TB transmission, whereas Q3 to Q7 was a misconception. If the women responded “yes” to Q1, Q2, and Q8 and answered “no” to Q3 to Q7 and Q9 was recorded as adequate knowledge about TB. Therefore, getting the correct answer from the respondents showed the quality and quantum of knowledge about tuberculosis.

2.2.2. Exposure Variables. In this study, the exposure variable is considered an independent variable such as age group; place of residence; education level; wealth index; religious affiliation; and caste or tribe. All these exposure variables were selected based on the literature reviewed. These variables were further categorized into covariates such as, age group (15–19, 20–24, 25–29, 30–34, 35–39, 40–44, and 45–49), place of residence (urban, rural), education level (secondary and above, primary, or no education), wealth index (rich, middle-class, poor), and religion (Hindu, Muslim, Christian, Sikh, Buddhist, Jain, Jewish, Parsi, and other). All these variables were used to determine the association between knowledge and attitude towards TB with exposure variables.

2.2.3. Statistical Analysis. We performed our analysis on NFHS-4 data for women respondents. First, we applied basic statistics to all the categories of exposure variables and outcome variables to check the frequency or percentage of the study participants. Second, we applied bivariate analysis to both the variables (exposure and outcome) of women participants. We used the chi-square test to check the association between all the categorized variables of the exposure and outcome variables and the mode of TB transmission among adult women. Finally, we conducted multivariate logistic regression to recheck the strength of association between both the variables and knowledge about TB transmission among women. We have also considered the adjusted odds ratio (aOR), 95% confidence interval (95% CI), and the P value ($P \leq 0.001$) for assessing the association between sociodemographic factors and knowledge about TB transmission among the women participants. The P value ($P \leq 0.001$) was considered statistically significant. All analyses were performed with STATA version 16.0 (Stata Corp., College Station, Texas, USA).

3. Results

The study included 699,686 women participants with their sociodemographic factors such as, age group, education level, place of residence, wealth index, religion, caste, or tribe. Table 1 presents the sociodemographic characteristics of the study participants. The higher proportion of the study participants was in the age group 15–19 years 124,878 (17.85%), followed by 20–24 years 122,955 (17.57%), and 25–29 years 115,076 (16.45%) whereas the least proportion of the study participants was in the age group 45–49 years 72,669 (10.39%). Most of the study participants belong to the rural areas 494,951 (70.74%) whereas the urban participants were 204,735 (29.26%). The educational level of the study participants ranged from secondary to higher education 414,850 (59.29%), followed by no education or illiterate 146,556 (28.09%), and primary education 88,290 (12.62%). The economic status of wealth index such as poor, middle-class, and rich of the study participants was found to be 282,715 (40.41%), 147,168 (21.03%), and 269,803 (38.56%), respectively. Religious affiliations show that the majority of the participants were Hindu 519,281 (74.22%) while 7 (0.00%) participants were Jewish and Parsi/Zoroastrian.

Table 2 and Figure 1 show the level of knowledge and attitude towards TB transmission among the study participants in absolute numbers and percentage. About 618,274 (88.36%) participants out of a total (699,686) knew about TB. Overall, 418,449 (59.81%) of the participants correctly knew that TB spreads from one person to another via infectious airborne droplets when the infected person coughs or sneezes, while 113,061 (16.16%) of the women participants did not know about the mode of TB transmission. As shown in Table 2 and Figure 1, there is a relatively high level of misconception about the mode of TB transmission among women such as, TB spreads from one person to another through sharing utensils 128,710 (18.40%), touching a person with TB 106,346 (15.20%), sharing food 233,081 (33.31%), sexual contact 52,777 (7.54%), mosquito bite 14,659 (2.10%), and others 4,260 (0.61%), respectively. A relatively large number of participants 549,671 (78.53%) knew that TB is a curable disease while 36,132 (5.16%) knew that TB is noncurable. Majority of the study participants 592,612 (75.69%) preferred to disclose the infection status of their family members, and relatively a few 79,397 (11.35%) participants preferred to keep it a secret. The women participants who answered “yes” about the questionnaire of “heard of TB,” “TB can be cured,” and “TB spreads by air when coughing or sneezing” while those women participants who answered “no” about the questionnaire “hide the infection status of their family members which was considered as adequate knowledge about the TB.

Table 3 shows the bivariate association between knowledge regarding the transmission of TB and the sociodemographic characteristics of study participants. These associations are age groups of the respondents ($P \leq 0.001$), place of residence of the respondents ($P \leq 0.001$), education level ($P \leq 0.001$), wealth index ($P \leq 0.001$), religion ($P \leq 0.001$), and caste or tribe of the respondents ($P \leq 0.001$). Results show that all of these sociodemographic variables

TABLE 1: Demographic characteristics of the study participants (N = 699,686).

Variables	N (%)
Age (years)	
15–19	124878 (17.85%)
20–24	122955 (17.57%)
25–29	115076 (16.45%)
30–34	97048 (13.87%)
35–39	90433 (12.92%)
40–44	76627 (10.95%)
45–49	72669 (10.39%)
Place of residence	
Urban	204735 (29.26%)
Rural	494951 (70.74%)
Education level	
Secondary and above	414840 (59.29%)
Primary	88290 (12.62%)
No education	196556 (28.09%)
Wealth index	
Rich	269803 (38.56%)
Middle	147168 (21.03%)
Poor	282715 (40.41%)
Religion	
Hindu	519281 (74.22%)
Muslim	94591 (13.52%)
Christian	52113 (7.45%)
Sikh	15300 (2.19%)
Buddhist/neo-Buddhist	8981 (1.28%)
Jain	1028 (0.15%)
Jewish	7 (0.00%)
Parsi/zoroastrian	7 (0.00%)
No religion	399 (0.06%)
Other	7979 (1.14%)
Caste or tribe	
Caste	562334 (80.37%)
Tribe	103157 (14.74%)
No caste/tribe	29302 (4.19%)
Don't know	2668 (0.38%)

were significantly associated with respondents' knowledge and attitudes towards TB.

Table 4 shows the multiple logistic regression analysis, which was performed to determine the association between the sociodemographic characteristics of the study participants and knowledge of TB transmission among women. Multivariable logistic regression analysis show that parameters such as age group 30 years and above [aOR = 1.297, 95% CI: 1.267–1.328; $P \leq 0.001$], urban residence [aOR = 1.191, 95% CI: 1.166–1.215; $P \leq 0.001$], secondary and above educational level [aOR = 2.502, 95% CI: 2.454–2.551, $P \leq 0.001$], rich class as per wealth index [aOR = 1.590, 95% CI: 1.556–1.625, $P \leq 0.001$], religions [aOR = 1.288, 95% CI: 1.238–1.341, $P \leq 0.001$], and caste or tribe [aOR = 0.908, 95% CI: 0.813–1.013, $P = 0.086$] were strongly associated with the knowledge towards TB among women respondents in India.

4. Discussion

The aim of this study was to examine the association of sociodemographic factors with TB transmission knowledge among women subjects in India. The study shows

TABLE 2: Knowledge and attitude towards tuberculosis among women (N = 699,686).

Variables	Total (699,686)
Heard of tuberculosis or TB	
No	81412 (11.64%)
Yes	618274 (88.36%)
Tuberculosis spread by: air when coughing or sneezing	
No	281237 (40.19%)
Yes	418449 (59.81%)
Tuberculosis spread by: sharing utensils	
No	570976 (81.60%)
Yes	128710 (18.40%)
Tuberculosis spread by: touching a person with TB	
No	593340 (84.80%)
Yes	106346 (15.20%)
Tuberculosis spread by: food	
No	466605 (66.69%)
Yes	233081 (33.31%)
Tuberculosis spread by: sexual contact	
No	646909 (92.46%)
Yes	52777 (7.54%)
Tuberculosis spread by: mosquito bites	
No	685027 (97.90%)
Yes	14659 (2.10%)
Tuberculosis can be cured	
No	36132 (5.16%)
Yes	549617 (78.55%)
Don't know	32525 (4.65%)
Keep secret when a family member gets TB	
No	529612 (75.69%)
Yes, remain a secret	79397 (11.35%)
Don't know/not sure/depends	9265 (1.32%)

a significant association of sociodemographic factors with the respondent's knowledge and attitude towards TB (88.76%). Similar findings were also reported in Brazil, and Lesotho [9, 19]. Our study reported that younger women in the age groups of 15–19 years (18.29%), 20–24 years (18.49%), and 25–29 years (16.77%) had relatively better knowledge about TB transmission compared to the age group of 45–49 years (9.53%). Similarly, women subjects with secondary or higher education (68.81%) had better knowledge compared to the women respondents with no education (20.321%). Our results are consistently similar to the previous studies in this regard [7, 20, 21]. Women with higher education have relatively better access to and understanding of TB transmission through different sources.

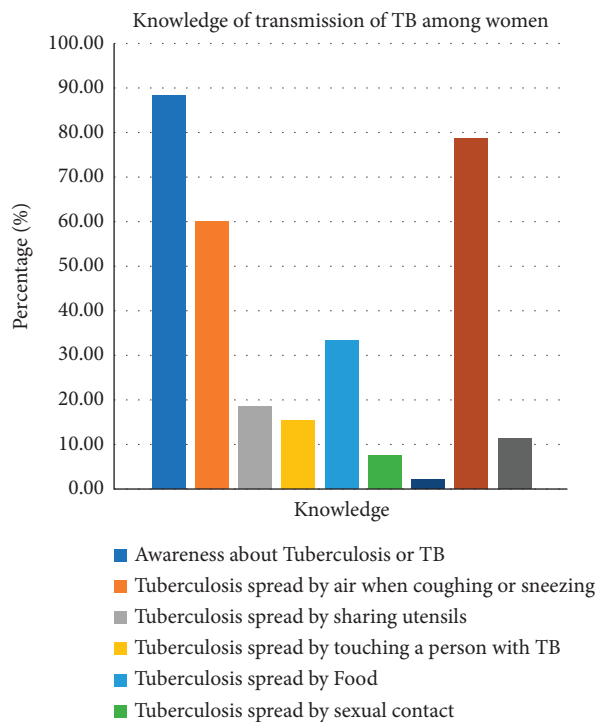


FIGURE 1: Knowledge of transmission of TB among women (N = 699,686).

They can also have a better understanding of complex media communication. Therefore, the level of education and the knowledge of TB are linearly related, i.e., those with higher qualifications have better knowledge about TB than those who are less qualified.

This study shows most of the women respondents knew that TB is a curable disease (78.55%) as well as its route of transmission (59.81%). Therefore, most of the women correctly answered the questionnaire “TB can be cured” and “TB spreads from person to person through the air when an infected person coughs or sneezes.” A similar study was conducted in Lesotho, and Brazil reported that 83.3% and 96.1% of women in these countries knew that tuberculosis is a curable disease which is almost similar to our findings [9, 19].

The educational level and age group of women were strongly associated with knowledge and awareness about tuberculosis. A study reported that women with secondary education or higher education were at a lower risk of getting TB as compared to those who had no education [8]. The findings from the study also revealed a possible causal relationship between the age group and correct knowledge about TB transmission. Another study also revealed that the correct knowledge about tuberculosis among Indian females was significantly associated with their age group and the knowledge increased with age [8]. The adult female individuals (15–29) years and above had better knowledge about TB transmission. This is consistent with the findings of previous studies [22, 23]. Consistent with our findings, previous studies have also reported that female respondents with secondary or higher education had relatively better

knowledge about TB transmission [7, 20, 21]. This may suggest that education is important to improve the knowledge among women about TB and its mode of transmission [21]. A study by Jadgal and Nakhaei-Moghadam [24] also suggested that the implementation of educational intervention programs can increase the level of knowledge and awareness about TB. These educational intervention training programs enhances the correct health behaviour practices such as self-care, and personal hygiene. The wealth index of women respondents was also significantly associated with their knowledge and awareness about TB. This study also revealed that rich women respondents had higher knowledge compared to the poor women respondents.

TB scenario in tribes is particularly intriguing as most of the tribes lead insular life in the inaccessible deep pockets of the jungle. The insularity and seclusion make them averse to the treatment by modern medicine, sometimes even leading to side effects. Additionally, tribes largely depend on the tribal healers, herbs, and other forest products for most of their treatment, which may not work effectively all the time [25]. TB is more common in countries with poor human development index (HDI). Therefore, it could aptly be dubbed as a poor man’s disease that manifests in poor socioeconomic conditions [26]. This was reflected in our findings also, i.e., with increased income level (wealth index) the chances of getting access to education, better living conditions, exposure to mass media (television, radio, and Internet), and medicare increases. Numerous studies have shown that mass media influences people’s behaviour [27–29].

Place of residence is one of the important sociodemographic factor, which is significantly associated with TB [12]. People living in urban areas have better cure rates due to the availability of medical facilities than those living in rural areas. However, the cost of living is relatively higher in the urban areas forcing people with a lower or intermediate income to live in the unliveable dark, dingy, claustrophobic urban slums/ghettos leading to the rapid transmission of TB. This, coupled with air pollution and poor nutrition, makes urban slum dwellers vulnerable to TB infection. In rural areas, the biggest limiting factor is the lack of medicare facilities leading to delayed diagnosis thus complicating the overall treatment outcome [30]. Most of the time gets aggravated by drug-resistant TBs (MDR, XDR). Additionally, lower education level, lack of awareness, and lower income are other major driving forces. However, more comparative analyses of the knowledge of TB in rural and urban communities are required so as to arrive at a concrete conclusion.

4.1. Limitations. This study has few limitations firstly, our analysis is confined to the information available in the NFHS-4 dataset. Secondly, some variables that can affect people’s knowledge and attitudes about tuberculosis, such as the distance to a medical facility, the time required to find a medical service, and the regional category were not analyzed in our study. The questionnaire related to the knowledge of TB in the primary dataset did not contain

TABLE 3: Association between knowledge regarding transmission of tuberculosis and sociodemographic characteristics of study participants (N = 699,686).

Variables	Tuberculosis spread by: air when coughing or sneezing			P value
	No N (%)	Yes N (%)	All participants, N (%)	
Age in 5 year groups				≤0.001
15–19	48355 (17.19%)	76523 (18.29%)	124878 (17.85%)	
20–24	45572 (16.20%)	77383 (18.49%)	122955 (17.57%)	
25–29	44902 (15.97%)	70174 (16.77%)	115076 (16.45%)	
30–34	39088 (13.90%)	57960 (13.85%)	97048 (13.87%)	
35–39	37491 (13.33%)	52942 (12.65%)	90433 (12.92%)	
40–44	33024 (11.74%)	43603 (10.42%)	76627 (10.95%)	
45–49	32805 (11.66%)	39864 (9.53%)	72669 (10.39%)	
Place of residence				≤0.001
Urban	60043 (21.35%)	144692 (34.58%)	204735 (29.26%)	
Rural	221194 (78.65%)	273757 (65.42%)	494951 (70.74%)	
Education level				≤0.001
Secondary and above	126906 (45.12%)	287934 (68.81%)	414840 (59.29%)	
Primary	42761 (15.20%)	45529 (10.88%)	88290 (12.62%)	
No education	111570 (39.67%)	84986 (20.31%)	196556 (28.09%)	
Wealth index				≤0.001
Rich	72168 (25.66%)	197635 (47.23%)	269803 (38.56%)	
Middle	58406 (20.77%)	88762 (21.21%)	147168 (21.03%)	
Poor	150663 (53.57%)	132052 (31.56%)	282715 (40.41%)	
Religion				≤0.001
Hindu	211803 (75.31%)	307478 (73.48%)	519281 (74.22%)	
Muslim	39335 (13.99%)	55256 (13.20%)	94591 (13.52%)	
Christian	19149 (6.81%)	32964 (7.88%)	52113 (7.45%)	
Other	3778 (1.34%)	4201 (1.00%)	7979 (1.14%)	
Caste or tribe				≤0.001
Caste	216323 (76.92%)	346011 (82.69%)	562334 (80.37%)	
Tribe	49188 (17.49%)	53969 (12.90%)	103157 (14.74%)	
No caste/tribe	13403 (4.77%)	15899 (3.80%)	29302 (4.19%)	
Don't know	1451 (0.52%)	1217 (0.29%)	2668 (0.38%)	

P values by Chi² test for categorical variables.

TABLE 4: Multiple logistic regression analysis for association between sociodemographic determinants of knowledge of TB among women in India [N = 699,686].

Variable	aOR [95% CI]	P value
Women's age in years		
15–19	Ref	
20–30	1.163 [1.137, 1.189]	≤0.001
30 and above	1.297 [1.267, 1.328]	≤0.001
Place of residence		
Rural	Ref	
Urban	1.191 [1.166, 1.215]	≤0.001
Education level		
No education	Ref	
Primary	1.493 [1.459, 1.528]	≤0.001
Secondary and above	2.502 [2.454, 2.551]	≤0.001
Wealth index		
Poor	Ref	
Middle	1.173 [1.150, 1.196]	≤0.001
Rich	1.590 [1.556, 1.625]	≤0.001
Religions		
Hindu	Ref	
Muslim	1.090 [1.028, 1.093]	≤0.001
Christian	1.060 [1.066, 1.115]	≤0.001
Other	1.288 [1.238, 1.341]	≤0.001
Caste/tribe		
Caste	Ref	
Tribe	1.081 [0.973, 1.206]	0.137
Other	0.908 [0.813, 1.013]	0.086

some important questions. For example, “whether drinking unpasteurized milk causes tuberculosis?” Thirdly, identifying the causal relationship behind the association is not possible in our study.

Despite the above limitations, our study demonstrated that the risk factors for TB transmission are influenced by age group, educational status, wealth index, and place of residence. An understanding of such knowledge will help policymakers and stakeholders make effective TB control programs and awareness campaigns in TB hotspot regions such as rural areas and urban slums or ghettos. Additional messages can be spread through print and social media, primary and community health centers and district hospitals. There is a need to bring in NGOs working at the grass-root level with all the stakeholders to launch a nation-wide campaign covering every nook and corners of the country in a mission mode to eradicate TB completely out of India.

5. Conclusions

The results of this study showed that women in India have moderately good knowledge and the correct attitude towards tuberculosis. However, the level of information varies with the various demographic factors such as age group, education, religion, caste/tribe, place of residence, and wealth index, bearing positive causal relationship between the knowledge and TB transmission and hence the resulting attitude. The management of current TB infections and eradicating the future infections requires the alignment of all the stakeholders to devise a strategy where appropriate solutions and interventions are provided to address the causative sociodemographic factors, the foremost being the spread of knowledge “faster than the spread of TB.”

Data Availability

Data are available from the corresponding author upon reasonable request to the National Family Health Survey (NFHS) of India for providing us with the population-based tuberculosis data.

Ethical Approval

The present analysis utilizes a secondary data set with no identifiable information on the survey participants. This dataset is available in the public domain for research purposes therefore, no approval is required from any institutional review board.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

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