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Attitudes, Acceptance and Stigma of Tuberculosis: A Study Among Muria Tribe in Bastar Division

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Abstract

Tuberculosis (TB) is a global public health problem, approximately 4, 00,000 people die from TB every year, more than 1,000 die every day and 100 million working days are lost. TB also remains as a major public health problem amongst the tribal population of this country. Studies show that socio-economic status, nutrition, family size, customs, beliefs and lack of medical facilities remain as concomitants to the high prevalence of TB among the tribal communities of this country.

The study aims to investigate the incidence of tuberculosis (TB) with its nature and stigmatic affect on health. Researchers selected 100 households by purposive sampling method from Muria tribal community residing in Karmari village, Jagdalpur (Chhattishgarh) for study. A village-wise resource data were gathered through a structured schedule, interview, observation and focus group discussion. Further along with opinion of representatives and local leaders / knowledgeable persons of village were also interviewed at the time from March to September, 2014.

The findings of the study shows that in spite of various plans and programs and projects taken up by the government machinery, the result has been far from satisfactory. The knowledge about TB and its situation amongst Muria tribal population is scanty; due to isolation, illiteracy, socio-culture factors. Thus, there is a need to maintain and further strengthen TB control measures along with awareness and management of TB related stigma on a sustained and long term basis.

Introduction

Worldwide every second 1 person is infected with tuberculosis (TB) and every 10 seconds someone dies as a consequence (Lonnroth K, Raviglione M, 2008). India alone accounts for one-third of the global burden of TB and every year more than 1.8 million new cases appear in the country. Approximately 4, 00,000 people die from TB every year in India, more than 1,000 die every day and 100 million working days are lost. The situation in the remote tribal areas is still grim. Among the tribals the prevalence of tuberculosis was found to be affected by socio-economic status, nutrition, family size, customs, beliefs and less use of medical facilities (Tungdim et al, 2008). T.B. remains a major public health problem amongst the tribal population and there is a need to study related physiological factors and stigma of patients as well as society to maintain and strengthen T.B. control measures and T.B. affected peoples on a sustained and long-term basis.

Current situation of Tuberculosis

According to WHO T.B. program, in the next 10 years, 90 millions are expected to become sick with tuberculosis; 30 millions will die of T.B. which is the

most common cause of death due to a single infectious agent in adults worldwide. In developing countries three fourth (75%) of infected persons are less than 50 years of age (Grigg, 1999). In India, according to the WHO's Global TB Report 2009, the country ranks first among the 22 high-burden TB countries worldwide with the highest number of TB cases annually. In 2007, it was reported that there were 331,000 deaths and approximately 1.96 million new TB cases, which represented more than 21 per cent of all TB cases worldwide[19]. The prevalence of Tuberculosis in 2000 was quoted as 3.8 million case, with 1.7 million new smear positive cases (ww.tbcindia.org / pdfs / KeyFactsand Concepts).

In the 1950s, the Indian Council of Medical Research (ICMR) conducted a large scale study to estimate the prevalence of tuberculosis nation-wide. Following this, half a decade later in 2000–2003, there was another survey that was conducted to study the prevalence of infection in different regions of the country (J. Bhat, V.G. Rao, P.G. Gopi, R. Yadav, N. Selvakumar, B. Tiwari, V. Gadge, M.K. Bhondelay, F. Wares., 2009). NFHS-3 shows that the prevalence of TB is higher in Tribal / rural areas than urban areas. Reports show that 469 out of every 100,000 persons have been medically treated for TB in rural areas as compared to 307 in urban areas.

Objectives

1. To ascertain the socio-economic and demographic characteristics of Muria Tribe.
2. To find out the nature and its affect on health due to Tuberculosis.
3. To analyze the factors involved in transmission of tuberculosis among Muria Tribe.
4. To assess the tuberculosis (TB) stigma among Muria tribal community.
5. To measure the prevalence of primary and acquired resistance of tuberculosis.
6. To make suggestions, if any, for policy and practice.

Methodology

The process of data collection was based on documentary and field resources, where documentary sources include material already collected whether published or unpublished. In field resources, it includes structured schedule interview, focal group discussions and observation as the tools of research. After collection of data through the primary source it has been coded and a code article was prepared. The data were entered into a master chart very meticulously. Thereafter, it was processed into the computer through MS EXCEL package. Later, the computerized data was taken in print form and the same was cross checked with the master chart to find out error(s), if any. After getting the processed data, percentage and other statistical measurements were derived.

Sample Design

The Muriya Tribe however, as four villages from each setting was chosen for the purpose of study, the following conditions were stipulated for selection of a beneficiary:

1. Any one of the members of the family from the Muria Tribe.
2. The respondents, between 15–70 Age groups.
3. The respondents, whether using DOTS or not under allopathic medication.
4. The respondents probably identified or symptomatic of T.B.

Sampling Frame

For the purpose of identification of respondents, the investigator followed purposive sampling method wherein the respondents were indentified with the help of other respondents. Only after ascertaining that the respondents fit into the sampling frame they were selected. As the study took place in one village. As such 100 households were selected for the purpose of study from March to September, 2014.

Study Area

For the purpose of the study researcher had selected Karmari Village, Jagdalpur in Bastar because Muria tribals are the inhabitant of this place in higher frequency.

Result and Discussion–Major Findings

Indian population is composed of people of diverse cultural, linguistic, biological, ethnic and genetic backgrounds, living in different socio-cultural and socio-economic settings. Chhattisgarh, a state in central India, is a home to more tribes, most of which

have been given the status of Primitive Tribal Groups (PTGs) by the Government of India. The health status of these tribes is extremely poor due to malnutrition, lack of proper hygiene and illiteracy. Lack of proper nutrition, especially protein-deficient diet in children, very often predisposes them to diseases. Thus, Tuberculosis is recently reported higher among Muria Tribe. To investigate tuberculosis disease and their present situation in the remote tribal areas and prevalence status among tribals, it is pertinent to study socio-economic status, nutrition, family size, customs, beliefs and use of medical facilities, demographical variables and stigma for actual database. The major findings are given below:

Level of Education

Table 1 shows, the level of literacy of the selected Muria tribes. It can be seen that out of the total 202 (5^+ age in year) population, Majority (57.92) were literates whereas illiterates were only (42.08%). Out of the total literates (40.17%) had ability to read & write only which followed by (21.36 %) respondents had primary level of education as formal education. It is closely seemed that approximately same percentages of aspirants were middle passed whereas less than 10 percent were high school and higher secondary passed. Thus, it can be seen that the literacy status is not up to the marks, they cannot able to use their education to understand biological environment as well as disease.

Table 1: Level of educational status of surveyed household

Label of Education	Male		Female		Total	
	No.	%	No.	%	No.	%
Population (5^+)	110	54.45	92	45.54	202	100.00
Illiterate	33	38.82	52	61.17	85	42.08
Literate	62	53.00	55	47.00	117	57.92
Read & Write	22	46.80	25	53.20	47	40.17
Primary	15	60.00	10	40.00	25	21.36
Middle	13	50.00	13	50.00	26	22.22
High School	7	77.80	2	22.20	9	7.69
H.S.	5	71.43	2	28.57	7	5.98

Pattern of Occupation

It's noted on table 2, the agriculture occupation was prevalent among large group of Muria families (36.00%) while 20.0 per cent of families depend on agriculture as well as labor occupation because they didn't have proper resources to utilise in self farming, so they work as a labour in others farms. (16%) families had not any agricultural land and they worked as a labor only. Very few percentages of Muria families were engaged in both Agriculture and Services. According to this data, it is clearly understood that Muria were suffering from poor economy with lower level of occupations.

Table 2: Occupational status of Muria household

Types of Occupation	Total families (n=100) %
Agriculture	36.00
Daily Labor	16.00
Service	8.00
Business	10.00
Agriculture and Labor	20.00
Agriculture and Service	10.00

Annual Income Range

Table 3 depicted that 34.0 per cent of the families come under poverty line with >12000 and (18%) families' income ranges were between Rs.12001-20000. Less than 20 per cent families have Rs. 20001-50000 annual income. Only 14 per cent families' incomes were more than 100000 Ru. And they were living in better condition among Murias in the village.

Level of Knowledge on Tuberculosis

The knowledge about causes of tuberculosis among Murias, only (66%) respondents reported that they had heard about tuberculosis while 14% individuals were the sufferer of tuberculosis. 80 percent population of Murias heard about B.C.G. vaccine but they didn't know why it is important for health. It is observed in table 4 that higher percentage of population reported that they were living in epidemic range by tuberculosis.

Table 3: Annual Income Range of Surveyed Household

Annual Income Range (in Rs.)	Total Families (n=100) %
>12000	34.00
12001–20,000	18.00
20,001–50,000	16.00
50,001–1,00,00	18.00
< 1,00,000	14.00

Table 4: Knowledge about Tuberculosis

Variables	Respondents (n=100) Yes %	No %
Heard about Tuberculosis	66	34
Heard about B.C.G.	20	80
Visited/lived in Tuberculosis area	24	76
Suffering from Tuberculosis	14	86

Knowledge and Perception on Mode of Transmission of tuberculosis

It is depicted from table 5 that among the respondents, knowledge and perception on mode of transmission of tuberculosis were not satisfied because only (24%) individuals had knowledge that tuberculosis can be transmit from person to person, its followed by (22%) considered, the infection is transmitted through contact . Below 15 percent asserted, that the infection is transmitted through breathing whereas very less percent had knowledge about real cause of tuberculosis and how it can be transmitted from Bacteria while one forth population did not know how tuberculosis transmit from one to another.

Table 5: Knowledge and Perception about Mode of Transmission of Tuberculosis

Variables	Respondents (n=100) Yes %	No %
Bacteria	10.00	90.00
Contact (sweat, Cloth, Saliva, Vomit, Sleep, Eating with Patient)	22.00	78.00
Tuberculosis transmit from person to person	24.00	76.00
Breathing	14.00	86.00
Do not Know	26.00	74.00

Knowledge about Reasons of Tuberculosis

Table 6 shows that knowledge about reasons of Tuberculosis among Murias where majority of participants knew that Tuberculosis can attack males and females as well as all age groups. Only (30%) respondents agreed that not having B.C.G. vaccine was the main cause of tuberculosis while (24%) reported that using of unhygienic water and food was main reason. Very few respondents (10%) also believed that tuberculosis was infectious disease. Less than 25 percent of the respondents said Smoking / Drinking was also one of the reasons of tuberculosis. And 70.0 per cent of the respondents stated that they don't have any idea about the tuberculosis.

Table 6: Knowledge about Causes of Tuberculosis

Variables	Respondents (n=70) Yes %	No %
Do not Vaccination(B.C.G)	30.00	70.00
Taking Unhygienic water and food	24.00	76.00
Infection	10.00	90.00
Smoking, Drinking etc	20.00	80.00
Do not know	70.00	30.00

Knowledge about Signs and Symptoms of Tuberculosis

Table 7 depicts that the community awareness about signs / symptoms of tuberculosis in the study area. More than half (58%) of the population reported that continue coughing is the most common symptom of tuberculosis while others mentioned symptoms like high fever (24%) is prevalent sign. 10.0 per cent of the respondents stated that vomiting and headache, continue pain in whole body were pertinent of the symptoms of T.B. (44%) respondents had do not knowledge about sign and symptoms of tuberculosis due to illiteracy.

Table 7: Knowledge about Signs and Symptoms of Tuberculosis

Variables	Respondents (n=90)	
	Yes %	No %
Continue coughing	58.0	42.0
Continue high fever	24.0	76.0
Abdominal discomfort, diarrhea, vomiting, headache, cont. pain whole body	10.0	90.0
Do not know	44.0	56.0

Knowledge on Side Effects from TB

Side effects are one the ripple effect of the tuberculosis. Sometimes the patient cannot notice the problem by side effects. The table 8 explains the knowledge about the side effects from the T.B where more than 80 percent of the respondents stated that they have knowledge about the side effects due to TB and rest of the respondents had no knowledge. A majority of the respondents (92.0%) stated that side effects frequently arise and only 32.5 per cent of the respondents stated that they talks to DOTs provider for help. It has been observed that one fourths of the respondents (26.0%) stopped the medicine due to side effects. Most of the tribes were unaware of the symptoms of T.B and the seriousness of the malady.

Table 8: Knowledge on Side Effects from TB

Variable	Respondents (n=90) %
Knowledge about Side Effects	
Yes	82.0
No	18.0
How often had side effects	
Ever	92.0
Never	8.0
If had side effects	
Talked to Doctor	17.0
Talked to DOTs provider	32.5
Talked to Local Health Worker	24.5
Stopped Medicine	26.0

Perception among Muria about Best Treatment of Tuberculosis

Table 9 reveals that 34.0 percent of the participants said that modern anti tubercle drug is best treatment of tuberculosis and (30%) reported, traditional healer can give better treatment. (62%) respondents availed traditional healer and modern anti tubercle drug, both is best treatment of tuberculosis because it is consider as a curse in life. Less than one forth respondents reported that they had no information what is better treatment of tuberculosis.

Table 9: Perception of Muria about Best Treatment of Tuberculosis

Type of Treatment	Respondents (n=80)	
	Yes %	No %
Modern Anti tubercle drug	34	74
Traditional Healer	30	70
Traditional Healer & Modern anti tubercle drug	62	38
Do not know	22	78

Perception among Muria about Preventive Method of Tuberculosis

It is recorded in table 10 that (50%) believed to keep their houses clean to prevent T.B. A very small population (6%) had having Vaccination against T.B while (44%) of the respondent reported that they had no information about preventive methods of tuberculosis. Under one forth population believe that it is preventable after taking ant tubercle drug and uses of hanky in front of sneezing and T.B. affected persons.

Table 10: Perception of Muria about Preventive Method of Tuberculosis

Type of treatment	Respondents (n=90)	
	Yes %	No %
Anti tubercle drug	20.0	80.0
Cleaning house properly	50.0	50.0
Take nutritional food	26.0	74.0
Sneeze with hanky	10.0	90.0
Vaccination	6.0	94.0
Do not know	44.0	56.0

Perception among Respondents about Tuberculosis

Its clear from table 12 that the majority of the respondents reported (52%), it is very serious disease if not treated in time while 22.0 per cent stated that it is ordinary disease whereas (16%) do not know about the seriousness of T.B while (10%) replied, it is a serious disease.

Table 12: Respondents perception about Tuberculosis

Responses	Respondents (n=90) %
Ordinary disease	22.00
A serious disease	10.00
Serious disease if not treated in time	52.00
Do not know	16.00

Media Role for Tuberculosis Information

Table 14 shows that role of media has important to increase the awareness level of the public. Majority (30%) of Muria respondents had taken information regarding T.B. from their relatives and other knowledgeable literate persons of village or neighboring village followed by only(22.00%) respondents got knowledge from radio and (10.00%) from posters. Very insignificant numbers of Muria followed the newspaper, T.V., and radio for getting information about T.B.

Perception among Muria on Tuberculosis Control Program

Table 11 depicts the perception of Muria respondents about tuberculosis control programme which is carried out by different agencies. Majority (68%) of them favour to Govt. agencies followed by both Govt. agencies & Private agencies. (22%) like to prefer only private agencies because they get proper attention and care in this section whereas (40%) of the participants reported that they had no idea regarding tuberculosis control program.

Table 11: Perception of Muria About Tuberculosis Control programme

Type of Agency	Respondent (n=90)	
	Yes %	No %
Govt. agencies	68.00	32.00
Private agencies	22.00	78.00
Govt. & Private agencies	38.00	62.00
Public	12.00	88.00
Do not know	40.00	60.00

Types of Medicines used for Tuberculosis

Table 13 reveals that D.O.T.S were taking by below one fourth of the population while (10%) respondent were taking streptomycine and Pyrazynamyde (8%) respectively.(88%) of the Muria population reported that they had no idea about the uses and names of medicine in tuberculosis.

Table 13: Types of Medicines used for Tuberculosis

Name of Medicine	Respondents (n=55)	
	Yes %	No %
DOTS	24.00	76.00
Straptomycine	10.00	90.00
Pyrazynamyde	8.00	92.00
No idea	88.00	12.00

Tuberculosis Service in the Village

The following Table 15 depicts the Tuberculosis service availability and its proximity. Most of the respondents (44.0%) use auto services to get TB services and a significant number of respondents (22.0%) stated that they used bus services. Most of them have to travel more than one hour (48.0%) to get the TB services and a significant number of respondents (37.5%) stated that they had suffered 30-60 minutes for transportation services. The TB services which provided by government transport in least rate, and large number of patients under poor economic background use the Government services.

Table 14: Role of Media for Tuberculosis Information

Responses	Respondents (n=67) %
Television	16.00
Radio	22.00
Newspaper	4.00
Poster	10.00
Television & Radio	12.00
Newspaper,T.V. & Radio	6.00
Others	30.00

Table 15: TB Service Characteristics

Variable	Respondents (n=90) %
Mode of Transport to get TB service	
Bus	22.0
Car	5.5
Bicycle	17.5
Auto	44.0
Walk	11.0
Time to get to the TB services	
< 30 minutes	14.5
30–60 minutes	37.5
> 1 hour	48.0

Availability of hospital for TB treatment

The admission in to hospital for TB is very risky and also rare among the Muria people. A majority of the respondents (84.5%) opined that there was no patient admitted in hospital for TB treatment and a small sample stated that some of them were admitted. As regards to period of staying in hospital, 45.0 per cent of the patients stayed in hospital from one week to one month. Most of the patients cannot resort to admission due to some prohibition and socio-economic conditions. These reasons definitely hindering their health and promoting mortality and morbidity. Table 16 may be consulted for better understanding.

Table 16: Admitted to the hospital for TB treatment

Variable	Respondents (n=90) %
Admitted	
Yes	15.5
No	84.5
Duration of admitted	
>4 months	2.0
3–4 months	3.0
1–2 months	12.0
1 month	23.0
>1 week <1 month	45.0
<1 week	15.0

Reasons for Missing Treatment

Table 17 explains the reasons how and why tribals were missing treatment. Most of the respondents (36.0%) opined that due to busy schedule in work and not able to leave from work was the main reason for missing treatment and more than one fourths (28.0%) of the respondents stated, their working location is too far from the T.B clinic. A significant number of the respondents stated that they don't know about their disease so they missed treatment of T.B. The side effects also one of the major reasons to stop the allopathic treatment.

Table 17: Reasons for Missing Treatment

Variable	Respondents (n=80) %
Too work/not sufficient time to leave job	36.0
Work too far from TB clinic	28.0
Employer did not allow	7.5
Did not want coworkers to know	12.5
Had to move to keep job	5.0
Side effects interfered with work	11.0

Stigma and Social Acceptance

The social stigma of tuberculosis has been known for a long time and the disease has been labeled as a "polluted disease", "a death punishment" or a punishment meted out to "culpable people" for ages. Table 18 revealed that very higher frequency of the respondents stated that they have knowledge on social stigma and rest 16 percent of the respondents had no knowledge about stigma where 52.0 per cent people reported that they take away themselves and their relatives from TB affected persons and not allowed patients in festivals and ceremonial functions due to discrimination (33.0%).

Table 18: Stigma and Discrimination pertains to Tuberculosis

Variable	Respondents (n=90) %
Knowledge about Stigma	
Yes	84.0
No	16.0
Type of Stigma	
Away from Relations	52.0
Discrimination in Rituals	15.0
Abstinence form Festivals and Functions due to discrimination	33.0

TB makes it more difficult for patients to continue with care, because their fears of being identified as being, or having been infected with TB hinder their access to services on a daily basis. Again, this can

lead to serious symptoms and increased transmission. It has been observed in the family and society patients' are suffering from social isolation, both outside the family, where the person may be avoided by former friends and acquaintances and inside the family where the patient may be forced to eat and sleep separately. Patients often isolate themselves to avoid infecting others and to avoid uncomfortable situations such as being shunned or becoming the subject of gossip. Unmarried women often find it difficult to get married, due to discrimination by prospective husbands and in-laws, while married women may find they are divorced because they have TB or if a history of TB is subsequently revealed in Disability Discrimination Act 1995.

Suggestions

- A base hospital in a tribal area that should offers up to the secondary level of health services serves multiple roles: providing clinical services, promoting health and wellness, and acting as an operations base through which hospital-based health workers and village-based health auxiliaries should be trained to provide health services.
- The focus on primary healthcare necessitates further intervention at the community level to increase awareness, and preventive and early medical care from the allopath, thus reducing the need for secondary management of morbidities at the base hospital.
- Additionally, traditional healers can be trained by the hospital in the basics of allopathic and integrated into the health system, such that other tribal groups will not hesitate to avail of modern medicine in addition to traditional healing practices.
- On a larger scale, the diversity among scheduled tribes of India as well as in terms of social, cultural and economic development requires that the healthcare model be holistic in nature, taking into consideration the socio-cultural pattern of the tribe in the specific ecological setting, when designing and deploying preventive and curative measures.

Conclusion

The problem of tuberculosis draws a serious attention as short course chemotherapy or DOT therapy seems to be still out of reach for these tribals. In spite various plans, programs and projects taken up by the government machinery but the result has been far from satisfactory. This is, no doubt, an enormous challenge to the effective control of tuberculosis in India but strengthening of PHC's is essential for effective implementation of DOT's at micro level. The findings show gross deficiencies in medical education in India for tribals with the largest numbers of tuberculosis cases by reasons of poor socio-economic status, low level literacy, poor awareness, ignorance, cultural and ritual factors with stigma. It had been revealed that tuberculosis is a disease affect mainly lower economic people in the more than 45 years age group and higher prevalent among males in Muria tribal community. Thus, tuberculosis remains a major health problem among tribes, so instant tuberculosis control activities should be continued.

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