Relationship Between The Lifestyle and Tuberculosis Study of Delhi

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ABSTRACT *This paper seeks to examine the sensitivity of tuberculosis transmission dynamics to the rate at which individual with active TB treatment course. Environmental conditions in which the epidemic occurs. Different kinds of determinants were studied. The objective of the study to determine the environmental conditions in which TB patients live. Methods Random sampling method was used to collect data. A total of 569 households formed the part of the study and an equal number of respondents were interviewed using various interview schedule developed for the study. Results Classification of alcohol consumptions frequency. Done on the basis of regular and quantity take by the subjects. Some take half bottle every day, three times in day. Some take every day or some only at party. In settled 50% males are non-drinkers while 24.8% male consume alcohol every day, 8.1% males consume alcohol at party, 4.1% consume half bottle alcohol every day, 3.5% drinks occasionally, in females only 0.7% consume at party only. whereas in migrated 8.2% consume alcohol once in week , 18% consumes alcohol everyday which is less in comparison to settled males, 6.6% drinks in party.*

Introduction: Tuberculosis is one of the major causes of death in worldwide and disability. According to the World Health Organization (WHO). Over 95% of death occur from the TB in middle and low-income country. Globally in 2014 an estimated 480,000 people developed multi drug resistance (MDR-TB). And in 2014 9.6 million people became ill with TB and 1.5 million people died from the disease. Active TB causes symptoms such as cough, fever, night sweat and weight loss. If left untreated a common scenario in developing countries lacking health care infrastructure a person with active TB has only a 50% chance of survival. And she/He will infect an average of 10-15 people each year. In above line it is said 50% chance of survival of infected people may effect. So here it well understood that patient living and environment condition play important role too. Living environment condition include the hygiene environment, littered environment, number of member living in a room. Number of members, mode of communication etc.

Keeping this in mind present study was carried out to examine the responsiveness of different environmental condition with TB treatment and determine their outcomes.

Materials and Methods: A cross-sectional study was conducted on a total of 569 household formed. Who were suffering from TB from different DOTs centre in Delhi. The sample was collected from different age group. And was also divided into settled and migrated population of Delhi.The data for present study was collected from different district TB centres in Delhi from July-August in 2015. The subjects were all cases of TB that is pulmonary TB and EPTB. Only those subjects who were confirmed by doctors. And by looking at report for type and category of TB. Exclusion criteria was previous anti-TB treatment, Disease with HIV patients were confirmed by doctors. A well informed written consent from the subjects for their willingness to participate in present study was taken before interview schedule.

Study Techniques : A schedule was made in which various question and measurements were taken . Data Processing-

After completion of field data collection each proforma was be edited and entered in MS-Excel data sheet, each subject was given code or numbering in order to keep the identity confidential. House-hold data and laboratory data was merged for linking the variables and for obtaining results from raw data.

Results: Environment profile:
Table 1.Presents information on living conditions of settled and migrated population as per Sex wise shown. It has been observed that in settled settings both genders having high percentage of own housed 59% and 75.5% male and female respectively. While in migrated it is rent type of house is more common in both sex. 60.7% and 51.3% male and female respectively, while 8.2% of males is observed in migrated population for footpath type settings. In no. of rooms having subjects its observed that 42.8% males having1 room, 45.6% female having 2 rooms in settled 55.7% males are having 1 rooms and 50% females of migrated are having 1 room set with them.

Individual living in a room it is observed that 64% 3-5 person living in a single room and 67.3%3-5 person in single room of settled male and female respectively. While in migrated it has been observed that no difference 57.4% and 75.6% male and female respectively are same as living in settled with 3-5 persons in a room.

Earning members in households it has been observed that single member earning have high percentage of both sexes of both settings. 52.7% , 53.1% ,55.7%, 62.8% male and female of settled and migrated population respectively.

In total no. Of members in households in this it has resulted that their is1-6 members in household have high percentage in both sex of both population. In fuel for cooking both groups settled and migrated having high percentage of liquefied petroleum gas in both sex.

In living condition present of mould fungus is 55%, 51.7%, 56.6%, 53.8% in male and females of settled and migrated

population respectively. Presence of bad smell from outside of the house. 70.7%, 67.3%, 68%, 60.3% in male and female of settled and migrated population respectively.

Littered environment only 22.5%, 21.8%, 26.2%, 34.6% which below then 50% having littered environment of male and female of settled and migrated population.

Sources of water 85.1%,61.9%,44.9%, 62.8% having supply water for males and females of settled and migrated population have access of motor water in migrated 13.1%, 18.4% male and female settled and migrated have R.O. water.

In mode of communication 48.2%, 42.9%,61.5%, 42.3%

male and female of settled and migrated respectively using public transport. In types of medicine its observed that 100% both sexes of settled population take allopathic while in migrated population 2.6% female take homopathetic medicine.

In smoking 45.9% males, 0.7% only females smoke in settled population. 39.7% males and females smoke in migrated settings. In drinker 49.5% male 1.4% female in settled and 42.1% and 1.3% do drink. In area of houses in yards 45.9%, 45.6% in settled male and female respectively were in living 20-25 yards. 5.9%, 16.3% male and female living in 45-50yards in settled while in migrated 32% males living in 25-30yards and 11.5% female in 50-55 yards.

Table 1.Living Conditions

Variables	Settled (N=369)				Migrated (N=200)			
	Male (N=222)		Female (N=147)		Male (N=122)		Female (N=78)	
	N	%	N	%	N	%	N	%
House Type								
Own	131	59.0	111	75.5	37	30.3	38	48.7
Rent	90	40.5	36	24.5	74	60.7	40	51.3
Footpath	1	0.5	0	0	10	8.2	0	0
No. of Rooms								
	Settled (N=369)				Migrated (N=78)			
	Male (N=222)		Female (N=147)		Male (N=122)		Female (N=78)	
	N	%	N	%	N	%	N	%
0 rooms	1	0.5	0	0	10	8.2	0	0
1 Room	95	42.6	47	32	68	55.7	39	50
2 Rooms	91	41	67	45.6	35	28.7	30	38.5
3 Rooms	19	8.6	23	15.6	8	6.6	8	10.3
4 Rooms	8	3.6	6	4.1	0	0	0	0
5 Rooms	5	2.3	3	2	1	0.8	1	1.2
6 Rooms	1	0.5	1	0.7	0	0	0	0
8 Room	2	0.9	0	0	0	0	0	0
Individual Living in a room								
	N	%	N	%	N	%	N	%
0	1	0.5	0	0	2	1.6	0	0
<3 person	47	21.2	2.4	16.3	38	31.2	14	17.9
3-5 person	142	64	99	67.3	70	57.4	59	75.7
6-7 person	28	12.6	21	14.3	10	8.2	2	2.6
8+ person	4	1.8	3	2.1	2	1.6	3	3.8
Earning Members								
	N	%	N	%	N	%	N	%
1 Member	117	52.7	78	53.1	68	55.7	49	62.8
2 Members	62	27.9	47	32	43	35.2	18	23.1
3 Members	34	15.3	17	11.5	10	8.2	9	11.5
4 Members	8	3.6	4	2.7	1	0.8	2	2.6
5 Members	0	0	1	0.7	0	0	0	0
6 Members	1	0.5	0	0	0	0	0	0
Total No. Of Members in a Household								
1-6 members	183	82.4	112	76.2	105	86.1	63	80.8
7-12 members	38	17.1	34	23.1	15	12.3	15	19.2
13-18 members	1	0.5	1	0.7	2	1.6	0	0
Fuel								
Stove	40	18	8	5.3	26	21.3	8	10.3
Gas	182	82	139	94.7	96	78.7	70	89.7
Mould Fungus in house								
Present	122	55.0	76	51.7	69	56.6	42	53.8
Absent	100	45.0	71	48.3	53	43.4	36	46.2
Bad Smell from outside								
Yes	157	70.7	99	67.3	83	68	47	60.3
No	65	29.3	48	32.7	39	32	31	39.7
Littered Environment								
	N	%	N	%	N	%	N	%
Yes	50	22.5	32	21.8	32	26.2	27	34.6
No	172	77.5	115	78.3	90	73.8	51	65.4
Sources of water								
	N	%	N	%	N	%	N	%
Supply water	189	85.1	91	61.9	59	44.9	49	62.8
Bisleri water	4	1.8	5	3.5	7	5.7	8	6.4
R.O water	29	13.1	27	18.4	12	9.8	11	9

Commutation	N	%	N	%	N	%	N	%
Cycle	54	24.3	32	21.8	22	18	18	23.1
Bike	37	16.7	43	29.3	20	16.4	23	29.5
Car	17	7.7	7	4.8	4	3.3	3	3.8
Public Transport	114	51.3	65	44.1	76	62.3	34	43.3

Medicine System	N	%	N	%	N	%	N	%
Allopathic	222	100	147	100	122	100	76	97.4
Homopathic	0	0	0	0	0	0	2	2.6

Smoking Habits	N	%	N	%	N	%	N	%
Yes	102	45.9	1	.7	49	39.7	3	3.8
No	120	54.1	146	99.3	73	60.3	75	96.2

Alcohol Consumers	N	%	N	%	N	%	N	%
Yes	110	49.5	2	1.4	52	42.1	1	1.3
No	112	50.5	145	98.6	70	57.9	77	98.7

Area of Houses in Yards	N	%	N	%	N	%	N	%
0	63	30.1	31	21.1	72	59	30	39.7
20-25	102	45.9	67	45.6	39	32	32	40.0
25-30	11	5	6	4.1	2	1.6	3	3.8
30-35	4	1.8	0	0	0	0	1	1.3
35-40	4	1.8	1	0.7	1	0.8	3	3.8
40-45	3	1.4	1	0.7	1	0.8	0	0
45-50	13	5.9	24	16.2	5	4.2	9	11.5
50-55	2	0.9	1	0.7	0	0	0	0
55-60	1	0.5	2	1.4	1	0.8	0	0
60-65	1	0.5	3	2	0	0	0	0
65-100	6	2.7	7	4.8	0	0	0	0
100-117	3	1.4	0	0	0	0	0	0
117-120	2	0.9	0	0	0	0	0	0
120-150	4	1.8	0	0	0	0	0	0
150-170	1	0.5	1	0.7	0	0	0	0
>170	2	0.9	3	2.1	1	0.8	0	0

No. of Household Members	N	%	N	%	N	%	N	%
1 Member	6	2.7	1	0.7	17	13.9	0	0
2 Members	11	5	4	2.7	5	4.1	4	5.1
3 Members	30	135	17	11.6	25	20.5	10	12.8
4 Members	37	16.7	21	14.3	25	20.5	19	24.4
5 Members	69	31.1	50	34	23	18.9	25	32.1
6 Members	32	14.4	19	12.9	10	8.2	4	5.1
7 Members	17	7.7	18	12.2	8	6.6	8	10.3
8 Members	5	2.3	8	5.4	5	4.1	4	5.1
9 Members	5	2.3	3	2	0	0	4	5.1
10 Members	4	1.8	4	2.7	2	1.6	0	0
11 Members	2	0.9	1	0.7	0	0	0	0
12 Members	3	1.4	0	0	0	0	0	0
16 Members	1	0.5	0	0	0	0	0	0
18 Members	0	0	1	0.7	2	1.6	0	0
25 Members	0	0	0	0	0	0	0	0

Table 2. Presents percentage of alcohol consumer among settled and migrated population. Classification of alcohol consumptions frequency. Done on the basis of regular and quantity take by the subjects. Some take half bottle every day, three times in day. Some take every day or some only at party. In settled 50% males are non-drinkers while 24.8% male consume alcohol every day, 8.1% males consume alcohol at party, 4.1% consume half bottle alcohol every day, 3.5% drinks occasionally, in females only 0.7% consume at party only. whereas in migrated 8.2% consume alcohol once in week , 18% consumes alcohol everyday which is less in comparison to settled males, 6.6% drinks in party.

Table 2. Percentage of alcohol consumers among settled and migrated Population of Delhi.

Variables	Settled				Migrated			
	Males		Females		Males		Females	
	N	%	N	%	N	%	N	%
Non-Drinkers	111	50	146	99.3	73	59.8	78	100
Half Bottle everyday	9	4.1	0	0	2	1.6	0	0
Hukka	1	0.5	0	0	0	0	0	0
3 Times in a day	2	0.9	0	0	0	0	0	0
Party	18	8.1	1	0.7	8	6.6	0	0
Everyday	55	24.8	0	0	22	18	0	0
once in week	14	6.3	0	0	10	8.2	0	0
2, 3 Bottle Every day	4	1.8	0	0	2	1.6	0	0
Occasionally	8	3.5	0	0	5	4.2	0	0

Discussion: Present study revealed In types of medicine its observed that 100% both sexes of settled population take allopathic while in migrated population 2.6% female take homopathetic medicine.In smoking 45.9% males, 0.7% only females smoke in settled population. 39.7% males and females smoke in migrated settings. In drinker 49.5% male 1.4% female in settled and 42.1% and 1.3% do drink. In area of houses in yards 45.9%, 45.6% in settled male and female respectively were in living 20-25 yards. 5.9%, 16.3% male and female living in 45-50yards

in settled while in migrated 32% males living in 25-30yards and 11.5% female in 50-55 yards.

In an influential work, argues that beyond a fairly low level in the provision of food, hygiene and basic health care, it is personal lifestyle that causes the greatest variation in health. Estimated that the three leading external (non-degenerative or directly genetically determined) causes of mortality in the US in 1990 were tobacco, diet and activity, and alcohol consumption. They estimated that these lifestyle variables explained around 38% of premature mortality, and also noted that a dramatically reduced quality of life is associated with many of the diseases related to these behaviours. Other authors have concluded that, with the exception of tobacco consumption, lifestyle factors do not affect the widely observed relationship between socio-economic status and health substantially (Kristensen 2000; Marmot et al., 1997). Lonnorth et al., (2008) they have concluded that people who drink more than the 40 gm. of alcohol has alcohol disorder. This may due to the increased of social mixing pattern associated with alcohol use as well as influence of immune system of alcohol itself and alcohol related conditions. Khan (2009) concluded that the men living in the urban slums reported higher rates of smoking cigarettes and bidis as compared to men living in the urban non-slums. Some of the significant correlates of smoking e.g. education and division should be considered for prevention activities.While having 82% Male and 76% females of settled are having 1-6 members of household which is lesser when compared to the migrated so they can spend more on them for medical treatment. 82% males and 94.7% females of settled are using LPG gas for cooking which are good for health purpose but in settled 45% males are 48.3% females are having mould fungus absent in their house which is lesser then migrant when compare 70.7% male and 67.3% females settled live in Bad Smell area around houses. Which is not good for health. 24.8% males of settled consume every day alcohol full bottle which is again not good for health purpose. Hawker et al., (1999) in his finding it was poverty was significantly associated with tuberculosis in white population and tuberculosis. In single variable analyses for white residents the only variables significantly associated with tuberculosis rates were the proportion of households with more than 1.5 people per room (P = 0.0036) and the proportions of residents in such households (P = 0.0085), both of which were positively associated with tuberculosis dates. In multiple regressions analysis the only variable independently associated with tuberculosis was the proportion of households with more than 1.5 people per room. For the Asian population, no single variable was significantly associated with tuberculosis for example the proportion of households with more than 1.5 people per room had a regression coefficient. The only covariate approaching significance was the proportion of households not owning their own home, which was marginally positively associated.

In over all it can be said having own house which save the money so they can spend on alcohol and smoking. They live in good conditions like not having bad smell and mould fungus present in surrounding. Kulman (2011) in his studies it was concluded that TB needs to be recognized not only as a disease of poor it is disease of unhygienic conditions living in poor condition alcohol consumers. In Chandini chowk is a part of Delhi. Most crowded places in Delhi. Here people migrated used to live on the footpath, shop, tea stall shop. This area so vulnerable because TB patience register with the DOTS centre don't take medicine on time they move from one place to another place

within Chandini chowk. These people don't even get the proper meal on time because of the money constraint there work, also live in unhygienic place like public toilet they use to sleep nearby it. These are mostly rickshaw puller, coolies on railway station, daily wages labour. I have seen one of the rickshaw puller who uses to live on his rickshaw outside of the Dots Centre. Met one of the female patients suffering from EPTB she was crying because she cannot meet to her family they have excluded her and left her alone because she suffering from TB. These people are very poor in everything like in their lifestyle, health, education, awareness not having single room to reside, no one to take care of them. Family living in very small area having large number of members in a single room. One room having very small window which never open for the ventilation purpose. Surrounding environment are not cleaned although they always say yes when its asked if the environment is cleaned in outside of the house or not? Most of them use to spit near the Dots centre they never ever use to cover their mouth while coughing or talking to other outside of the Dots centre when they come to take medicine only cover their mouth with the handkerchief and as they move they take off it.

Conclusion: Clearly underscore the necessity of interventions and preventions by policy makers, public health experts and other stakeholders in slums because smoking was more prevalent in the slum communities with detrimental health.

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