

Tuberculosis Entropy and Gender Responses in Pakistan: An Empirical Approach

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Abstract:

Tuberculosis in Pakistan is in the list of most fatal diseases equally present in urban and rural populations of the country. Globally particularly in Pakistan, WHO is showing its keen interest to eradicate TB from its roots but this requires a serious contributions by the Pakistani Government and private partners to the successful implementation of WHO projects for the removal of deadliest disease. In this study research were focused to explore the level of information among men and women of UC-49 Tehsil Malikwal of District Mandi Bahauddin regarding TB. With the help of structure questionnaire data on set objective were collected from field after taking verbal consent of the participants. Results explain that both men and women were well aware about TB, its signs & symptoms, prevention and treatment. Still there is a need to involve the women along with men of urban communities as well as rural in TB control interventions and consider both gender in policy making and successful implementation of TB control projects in Pakistan.

Key words: Tuberculosis, TB and gender, TB signs and symptoms, TB diagnosis and treatment

Introduction

“Identically in worldwide view TB is a very old disease and significantly observed in developing countries. On one occasion apparently under control, it has now made retaliation with a reprisal not seen before” [1].

From last couple of years it was observed that TB prevalence and death rates have likely been decreasing around the world, over-all quantity of fresh cases is yet showing uplift in graph gradually, with special reference to the caseload proceeding to grow in the South-East Asia, Eastern Mediterranean and African regions [2].

Different aspects affecting patient's behavior in complex ways. How the gender difference in health-care behavior and practices is related with the discrepancy of knowledge and awareness among men and women is unclear regarding TB. Very few existing studies have been previously focused on this issue [3], current study focused to explore the phenomena on TB among both male and female sections.

Tuberculosis reappeared as a major public health issue internationally, in 1980's. According to estimates of World Health Organization (WHO) about 5000 people expire by TB disease and 20000 are newly cases identified on daily basis [4]. Data of developing countries significantly show high rate of TB infection and death among young adolescents as reported in health reports. In Pakistan situation is at alarming stage regarding TB burden and rate of death due to TB disease. Each year about 350,000 Pakistani citizen were infected by TB and among them big ratio belongs to economically productive adults. The worst scenario of TB is constantly ever-increasing as mortality due to TB exceeds 50,000 annually [5].

Pakistan, according to the world ranking of Polio and TB disease is at point three in remaining nations with polio and at

number six with problem of tuberculosis. Important reasons of the high infant, under-5 and neonatal death rates include diarrhea, undernourishment, serious respiratory disease and other transmissible and vaccine avertible diseases. The occurrence of TB is calculated at 231 cases per 100,000/year on the other hand malaria cases were reported between the ranges 2 to 5 cases per 1,000 [6].

Historical evidences show that in many parts of the world, TB is diagnosed more in men rather than in women and they die from it. TB is importantly a leading communicable reason of mortality among women. In each calendar year, around 700,000 women die due to TB, and more than 3 million get the disease, accounting for about 17 million Disability Adjusted Life Years (DALY). Undoubtedly tuberculosis disturbs women life mostly in their economically and reproductively active years, the influence of the disease is strongly felt by their children and families too [7].

TB is more alike a serious phenomenon around the world and also a leading cause of death especially in developing countries as depicted in the existing records. In Pakistan TB is a life taking disease most of the times. Among gender variation in different issue like low awareness, delay in health seeking behavior, stigmatization among masses, access to better health facilities, availability of medicine and provider shows significant contribution toward the disease. Any disease is injurious for health when it should be considered as injurious for individuals or public health. In this research we were focused to collect the perceived opinion of both male and female regarding information of TB, signs & symptoms, diagnosis and treatment, knowledge and prevention in urban area.

Materials and Methods

This study was conducted in UC - 49 of *Tehsil Malikwal* District *Mandi Bahauddin*. To collect the data with deep

consideration of research ethics every single respondent of current study was briefly introduced on the topic and then after taking their verbal consent data was gathered. A structured tool was developed which cover the objectives of study. Before to implement the tool in the field it was pre-tested and improved the quality of tool. Researches collected the data, edited within the field and then entered in EpiData after coding that was further analyzed in SPSS-20.0 for data interpretation.

Results

Table # 1 Gender Distribution of Participants

Type	Frequency	Percent
Male	49	70
Female	21	30
Total	70	100

Table 1 shows the gender distribution of the sample. Percentile shows the 30% participation from female side and 70% involvement from male side in this study. Females were best possible interviewed (with their consent) in this study to record the responses from both gender as best they were available.

Table # 2 Gender and Sign &Symptoms of TB

Gender	Signs and Symptoms of TB				Total
	Cough	Cough that lasts longer than 3 weeks	Coughing up blood	Do not know	
Male	11	26	11	1	49
	22.4%	53.1%	22.4%	2.0%	100.0%
Female	4	13	4	0	21
	19.0%	61.9%	19.0%	0.0%	100.0%
Total	15	39	15	1	70
	21.4%	55.7%	21.4%	1.4%	100.0%

Table 2 focused to explain the response distribution of both gender groups which shows their knowledge about signs & symptoms of TB. Male group reported cough in 22.4% cases as a major TB sign and symptoms while on the other hand female

group reported cough was 19.0% in the above context. Second option shows that female were recorded their opinion with percentile 61.9% as compared to male percentile with 53.1% in response and reported cough lasts than three weeks as dominant sign of TB. This shows that female have some better level of knowledge than male about TB signs & symptoms.

Table # 3 Gender and How a Person Gets TB?

Gender	How a Person Can Gets TB?				Total
	Through the air when a person with TB coughs or sneezes	Through sharing dishes	Through touching items in public place	Do not know	
Male	41	1	1	6	49
	83.7%	2.0%	2.0%	12.2%	100.0%
Female	20	0	0	1	21
	95.2%	0.0%	0.0%	4.8%	100.0%
Total	61	1	1	7	70
	87.1%	1.4%	1.4%	10.0%	100.0%

Table 3 depicted that in 83.7% cases male participants of study reported that through breathing in polluted air when can get TB very easily and 95.2 % females also highlighted the same as male. Other percentiles show very minor participation of other factors which contributed in getting TB.

Table # 4 Gender and How a Person Avoid TB?

Gender	How Can a Person avoid TB?			Total
	Covering mouth and nose when coughing or sneezing	Washing hands after touching items in	Through good nutrition	
Male	39	8	2	49
	79.6%	16.3%	4.1%	100.0%
Female	20	1	0	21
	95.2%	4.8%	0.0%	100.0%
Total	59	9	2	70
	84.3%	12.9%	2.9%	100.0%

Table 4 importantly unveil the level of understanding of both male & female in the scenario that who can avoid TB. Percentile shows that 79.6% of the male participants of study were of the view that by covering mouth and nose when coughing & sneezing on can possibly avoids getting TB. Other percentages show some other relevant responses with regards to TB.

Table # 5 Gender and Who Might be Infected?

Gender	Who might be Infected With TB?			Total
	Any body	Only poor people	Only people living with HIV/AIDS	
Male	47	1	1	49
	95.9%	2.0%	2.0%	100.0%
Female	19	2	0	21
	90.5%	9.5%	0.0%	100.0%
Total	66	3	1	70
	94.3%	4.3%	1.4%	100.0%

Above table shows male and female responses distribution on the question that who might be infected by TB. Male's percentile show in 95.9% cases that anybody will be infected by the virus of TB followed by 90.5% responses from female side under same category. Only poor peoples will be infected by TB was reported 2.0% by male sample and 9.5% by female participants.

Table # 6 Gender and How TB Gets Cured?

Gender	How TB gets Cured?				Total
	Herbal remedies	Home rest without medicine	Specific drugs given by health center	DOTS	
Male	2	2	37	8	49
	4.1%	4.1%	75.5%	16.3%	100.0%
Female	3	1	17	0	21
	14.3%	4.8%	81.0%	0.0%	100.0%
Total	5	3	54	8	70
	7.1%	4.3%	77.1%	11.4%	100.0%

Table 6 shows the comparative percentiles of both gender groups on their knowledge about how TB gets cured. Herbal remedies were reported 4.1% by male section and 14.3% in female category. Home rest was recorded 4.1% and 4.8% respectively by both male and female participants. Major percentile shows that specific drugs given by health center will be helpful to cure TB and that was reported by both categories of sample.

Table # 7 Gender and Place from where TB Get Cure

Gender	Place from where TB get cure			Total
	Private clinic	Government clinics or hospital	Traditional homeopathic or healer	
Male	4	43	2	49
	8.2%	87.8%	4.1%	100.0%
Female	0	21	0	21
	0.0%	100.0%	0.0%	100.0%
Total	4	64	2	70
	5.7%	91.4%	2.9%	100.0%

Table 7 shows significant result of the current study that explains opinion of gender about the place from where TB gets cured. Result unveils that male group significantly argued that government clinic or hospital will be the more suitable place for TB treatment while on the other hand female responses favored same category at 100%.

Table # 8 Gender and Duration of TB Treatment

Gender	Duration of TB Treatment				Total
	1-3 months	3-6 months	6-9 months	9 months+	
Male	4	40	4	1	49
	8.2%	81.6%	8.2%	2.0%	100.0%
Female	5	15	0	1	21
	23.8%	71.4%	0.0%	4.8%	100.0%
Total	9	55	4	2	70
	12.9%	78.6%	5.7%	2.9%	100.0%

It is very important to note the level of knowledge about the treatment duration of TB among both gender groups. Male group of the study reported that 1-3 months for TB duration reported 8.2%, 3-6 months were 81.6%, 6-9 months were 8.2% and more than 9 month was recorded 2.0%. Percentile of females group shows 23.8% responses for 1-3 months, 71.4% argued for 3-6 months and 4.8% for more than 9 month for duration of TB treatment.

Table # 9 Gender and TB Diagnosis & Treatment in Pakistan

Gender	TB Diagnosis and Treatment in Pakistan			Total
	Free of charge	It is reason able priced	It is some-what/moderately expensive	
Male	40	6	3	49
	81.6%	12.2%	6.1%	100.0%
Female	16	1	4	21
	76.2%	4.8%	19.0%	100.0%
Total	56	7	7	70
	80.0%	10.0%	10.0%	100.0%

Table 9 explains that 81.6% of the male respondents argued that TB diagnosis and treatment in Pakistan is fully free while 76.2% female section replies in same direction.

Discussion

Current study was focused to explore the level of information about TB among both gender groups belongs to the urban areas of *Tehsil Malikwal, District Mandi Bahauddin*. This study reveals that in both male and female groups adequate level of awareness regarding TB sign and symptoms is present; predominantly cough lasts more than 3 weeks were reported. Some of the existing studies conducted in different other countries like Nigeria, Malaysia and some of other Asian countries shows quite similar general findings regarding level of awareness as depicted in current study [8].

In Pakistan, as per the protocol of TB control Department, TB diagnosis, counseling and treatment is exclusively free for every citizen and soul theme of the program is based on referral mechanism. Previous studies show that masses were not fully aware about free diagnosis and treatment process, and this leads them to show less interest in treatment and diagnosis. Another point to be discussed here poor quality of knowledge, low level of awareness, low sensitization, treatment results, delay in case findings and poor treatment behavior also participated in the above scenario [9-11].

In the scenario of developing countries, among women aged 15-44 years TB is third significant cause of mortality and morbidity and TB played a crucial role than any other infectious diseases like AIDS and Malaria to kill women [12-13]. Knowledge of Epidemiology depicts that there are variations among men and women in occurrence of disease, pace of development from infection to illness, frequency of medical disease, and mortality due to tuberculosis [14].

Several studies have proved that lack of knowledge to TB is likely to hinder positive health-care seeking behavior whilst better knowledgeable on TB was significantly related to health-care seeking action [15-17]. When someone do not have any information or less information about any crucial disease then how we consider a positive treatment seeking attitude from them until successful intervention were implemented to improve the awareness level. Previous studies found that there was gender difference in knowing TB. As reported by Agboatwalla in Pakistan and Shetty in London, knowledge of TB was generally deficient in women, particularly in rural women [18, 19], on the other hand current study depicts different condition for urban area where women reported very brief and comprehensive information about TB and related concerns as reported by male participants of the study.

Tuberculosis control is a gender issue that has been neglected by the tuberculosis-control programmes. "Gender"

refers not only to the physiological differences between sexes but also to the variety of behaviors, expectations, and roles that exist within a social, economic, and cultural context. A gender-based approach to tuberculosis control will assist in understanding not only the biological and cultural differences between the sexes but also the structural violence leading to poverty, grossly inadequate health care resources, and increased risk of tuberculosis and death [20].

Gender is an important aspect of societies and no one can neglect the roles and responsibilities of both ends. Study findings explain that TB awareness level was quite high among male and female of the respective locality of *Mandi Bahauddin*. But the picture is not similar in the bigger scenario. Particularly; if we consider the level of information among the women of rural area of Pakistan the situation is different [18-19] as existing studies reported. One thing is to be given more importance to secure the future of our generations that is to include women section in our policy making and implementation at both public and private level.

Conclusion

This study was focused to explore the level of information among males and females of the study areas with regard to TB. Results of the study show that women and men know well about the sign & symptoms, treatment and prevention of TB. When the level of information is quite satisfactory among urban localities then why the number of incidence is still increasing day by day. Who will be responsible to answer this question; public sector or private stakeholders? Any how important thing is to given more attention to focused and serious development of policies and there successful implementation in urban areas as well as in rural areas, first to enhance the level of information, to sensitize the communities, to increase their motivational level, to develop early diagnosis and treatment behavior and

finally to reduce the burden of disease from our country by considering TB in gender perspective.

REFERENCES

- Agboatwalla, M., Kazi, G.N., Shah, S.K., and Tariq, M. 2003. "Gender perspectives on knowledge and practices regarding tuberculosis in urban and rural areas in Pakistan." *East Mediterr Health J* 9(4):732-740. [18]
- Aliyu, M.H. and Salihu, H. M. 2003. "Tuberculosis and HIV disease: two decades of a dual epidemic." *Wien KlinWochenschr* 115(19–20):685-97 [1]
- Auer, C., Sarol, J. J., Tanner, M., and Weiss, M. 2000. "Health seeking and perceived causes of tuberculosis among patients in Manila." *J Trop Med Int Health* 5:648-56. [8]
- Connolly, M. and Nunn, P. 1996. "Women and tuberculosis." *World Health Stat Q.* 49(2):115-9. [13]
- Demissie, M., Lindtjorn, B., and Berhane, Y. 2002. "Patient and health service delay in the diagnosis of pulmonary tuberculosis in Ethiopia." *BMC Public Health* 2(1):23 [9]
- Diwan, V., Thorson, A., Winkvist, A. eds. 1998. "Gender and tuberculosis. NHV report 1998." Göteborg: Nordic School of Public Health [20]
- Hoa, N.P., Thorson, A.E., Long, N.H., and Diwan, V.K. 2003. "Knowledge of tuberculosis and associated health-seeking behaviour among rural Vietnamese adults with a cough for at least three weeks." *Scand J Public Health Suppl* 62:59-65. [17]
- Holmes, C.B., Hausler, H., Nunn, P. 1998. "A review of sex differences in the epidemiology of tuberculosis." *Int J Tuberc Lung Dis* 2: 96 –104 [14]
- Irani, L., Kabalimu, T.K., and Kasesela, S. 2007. "Knowledge and healthcare seeking behaviour of pulmonary tuberculosis patients attending Ilala District Hospital,

- Tanzania.” *Tanzania health research bulletin* 9(3):169-173. [15]
- Jianming, W., Yang, F., Hongbing, S., and Biao, X. 2008. “Gender difference in knowledge of tuberculosis and associated health-care seeking behaviors: a cross-sectional study in a rural area of China.” *BMC Public Health* 8:354 [3]
- Mangesho, P.E., Shayo, E., Makunde, W.H., Keto, G.B., Mandara, C.I., Kamugisha, M.L., Kilale, A.M., and Ishengoma, D.R. 2007. “Community knowledge, attitudes and practices towards tuberculosis and its treatment in Mpwapwa district, central Tanzania.” *Tanzania health research bulletin* 9(1):38-43 [16]
- Murray, C.J.L., Styblo, K., and Rouillon, A. 1990. “Tuberculosis in developing countries: burden, intervention and cost.” *Bull Int Union Tuberc Lung Dis* 65: 6–24 [12]
- Shetty, N., Shemko, M., and Abbas, A. 2004. “Knowledge, attitudes and practices regarding tuberculosis among immigrants of Somalian ethnic origin in London: a cross-sectional study.” *Commun Dis Public Health* 7(1):77-82. [19]
- Wang, J., Fei, Y., Shen, H., and Xu, B. 2008. “Gender difference in knowledge of tuberculosis and associated health-care seeking behaviors: a cross-sectional study in a rural area of China.” *BMC Public Health* 8:354 [11]
- WHO Report. 2008. “Global tuberculosis control – surveillance, planning, financing.” [http://www.who.int/tb/publications/global_report/2008/pdf/fullreport.pdf] [2]
- WHO. 2004. “The world health report 2004 - changing history: World Health Organization.” Geneva [4]
- WHO. 2006. “Tuberculosis Control Programme.” Geneva: World Health Organization. [5]
- WHO. 2013. “Country cooperation strategy at a glance.” The brief is available online at

<http://www.who.int/countryfocusWHO/CCO/13.01/Pakistan> [6]

WHO. "Tuberculosis and gender." Online available at [<http://www.who.int/tb/challenges/gender/en/>]. Accessed date 20-04-2014; 13:14 [7]

World Health Organization. 2009. *Global tuberculosis control: surveillance, planning, financing. WHO report 2009*. Geneva. [10]