

Lingual Distribution of Tuberculosis Patients in Karachi - A Demographic Analysis

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Abstract: The main objective of this paper is to investigate tuberculosis patients' demographic distribution including their sociocultural impacts among various ethnic groups in the study area. Data was collected through questionnaire survey (interviewing patients) at TB diagnostic centers in the study area over a period of eight months (March to October 2013). Analysis was made with the help of Microsoft excel and SPSS version 20 for demographic analysis. The questionnaire survey revealed the respondents in terms of languages as Urdu (33.28), Sindhi (20.63), Punjabi (14.98), Pashtu (11.48), Seraiki (10.48%) and other languages 14.81. Researchers have identified other languages (which included, Hindko, Balti, Persian, Brahvi, Marwari, Gilgiti, Gujrati) as being the most vulnerable/impoverished lingual groups in the study area. Demographically, Urdu speaking TB patients were recorded as 53% females, but the case of Sindhi speaking female patients was slightly high (50.81%) compared to males. Punjabi speaking patients were found to number almost similar to the Urdu speaking patients as the percentage of females was 52.22%. Pashtu speaking females amounted to 44.9 %, while males recorded highest percentage i.e. 55.07%.

The occurrence of TB in the purview of lingual distribution of population in Karachi provides an insight into the transmission of the disease especially in the context of the global as well as local environment, cultural and politico-economic scenario.

Keywords: Lingual, tuberculosis, demographic, Karachi, socioeconomic.

1. INTRODUCTION

Tuberculosis, one of the major causes of infectious diseases is the topmost ranking killer of humans in the world, which inflict people to an estimated tune of a million every year especially in developing countries [1]. The recent resurgence of tuberculosis forces us to reconsider the existing explanations of tuberculosis [2]. WHO and International Union against TB and lung diseases have not only recorded but also described the TB situation in Pakistan as one of the worst in the world [1, 3, 4]. Karachi the megapolis of Pakistan is facing innumerable problems of infectious diseases among which TB is spreading rapidly especially due to extreme density of population due to overpopulation, in-migration, housing congestion, environmental degradation, poverty, atmospheric pollution and lack of health facilities [5]. Karachi is characterized by a great deal of heterogeneity not only along the lines of ethnicity but also in terms of class identities and development disparities.

Studies have proved that female to male ratio (FMR) of TB is higher among women than men in a few

geographic regions due to various cultural factors among ethnic groups [6-10]. Various anthropologists who have investigated the cultural aspects of diseases have stated that lay beliefs about illness are often juxtaposed with biomedical knowledge about disease [2], while others have proved that cultural factors are also a significant cause for its expansion [11-13]. Rigid thoughts and perceptions are major factors which pose as barriers against a healthy lifestyle. Some studies with reference to impact of cultural factors on tuberculosis by researchers in other disciplines are also available [14-17].

Due to poverty of low-income countries, most of the affected patients with respiratory symptoms are unable to access an outpatient clinic or submit a sputum test for screening TB [18-20]. Pakistan ranks 5th amongst the 22 High Burden Countries and 4th among 27 MDR (multi-drug resistant) high burden countries in the world [21]. Notified incidence of TB concentrated in different areas of Karachi has revealed significant growth during the last four years [22]. On assessment of ethnicity/language, Sindhi and Seraiki have emerged as the most vulnerable/impoverished lingual groups in Pakistan with reference to TB [23].

The word ethnicity has various aspects, more so in the case of the Muslim world where it is riddled by

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greater complexity. Muslims reveal their identity through tribal connections. Each tribe is characterized by a variety of sociocultural differences among themselves, therefore it has been deemed necessary to discuss sociocultural problems on the basis of languages, because geographically it is convenient to identify ethnic groups here on the basis of languages. Karachi is a highly diversified city of the country where several ethnic groups live, enjoy its opportunities, and suffer the brutal competitiveness of a commercial city. Karachi is truly a melting pot of cultures, races, nationalities and religions. During the colonial period, Balochi and Sindhi were the main mother tongues of the native people of Karachi. Subsequent to partition and influx of migrants, the population of Karachi rose tremendously. According to the 1998 census of Pakistan, the lingual variation of Karachi comprised of Urdu (48.52%), Punjabi (13.94%), Pashtu (11.42%), Sindhi (7.22%), Balochi (4.34%), Seraiki (2.11%) and other languages (12.44%), [24]. The main objective of this paper is to investigate tuberculosis patients' demographic distribution among various lingual groups in the study area.

2. MATERIALS AND METHOD

2.1. Study Area

Karachi is the capital city of the province of Sindh and the largest and thickly populated (16 million) city of Pakistan. Located strategically between 24.750 to 25.656 N and 66.653 to 67.574 E on the coast of the Arabian Sea, north-west of the Indus River delta, it covers an area of 3 600 km² [25]. The study area is administratively a Division of Sindh Province comprising on six districts i.e. Karachi.

2.2. Data Collection and Analysis

Data was collected through questionnaire survey (interviewing) of TB patients at diagnostic centers in the

study area which were visited and about 1 260 respondents participated in the survey during the eight months periods (March to October 2013). Data was entered into a Microsoft Excel spreadsheet and analyzed with Microsoft excel and SPSS version 20 for demographic analysis.

3. RESULTS

Two types of the tuberculosis, pulmonary and extra pulmonary have been documented during data collection in the study area. Figure 1 depicts distribution of notified TB patients in terms of types in the study area. Response by patients of EPTB and PTB reveal that highest number of patients reveal the pulmonary type of TB and the most affected age groups which have emerged as significant are the first 2 i.e. 11-20 and 21-30 years.

The questionnaire survey revealed the TB notified patients in terms of languages as Urdu (33.28), Sindhi (20.63), Punjabi (14.98), Pashtu (11.48), Seraiki (10.48 %) and other languages (14.81). A perusal of the Figure 2A to F reveal that in the study area, respondents of Urdu speaking TB patients were recorded as 53% females compared to males (Figure 2A) but the case of Sindhi speaking female patients was slightly high (50.81%) compared to males (Figure 2B). The number of Punjabi speaking respondents were observed to be closer to the value of Urdu speaking respondents as the number of females (52.22%) was comparatively high in comparison to males (Figure 2C) while Figure 2D showing females of other languages (which included, Hindko, Balti, Persian, Brahvi, Marwari, Gilgiti, Gujrati) gave highest response i.e., 69.66%, while lowest response among females was recorded for Pashtu speaking i.e., 44.93%. Pashtu males recorded highest percentage i.e., 55.07%, especially in the age group 21-30 years (Figure 2E). Seraiki males also showed very high

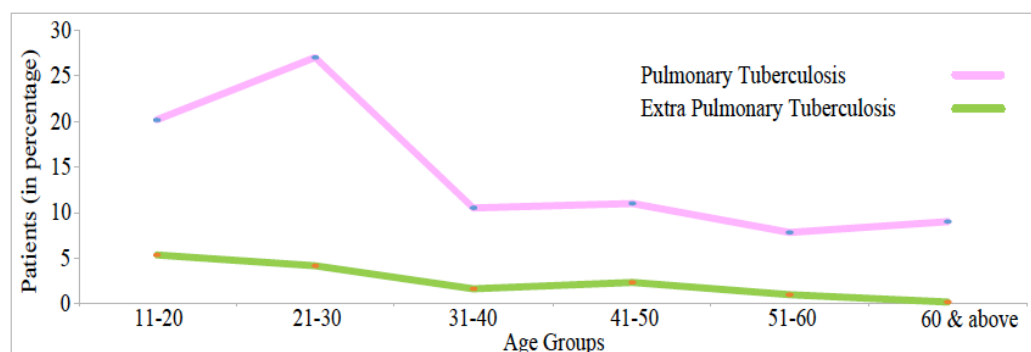


Figure1: Types of tuberculosis among age groups of notified patients.

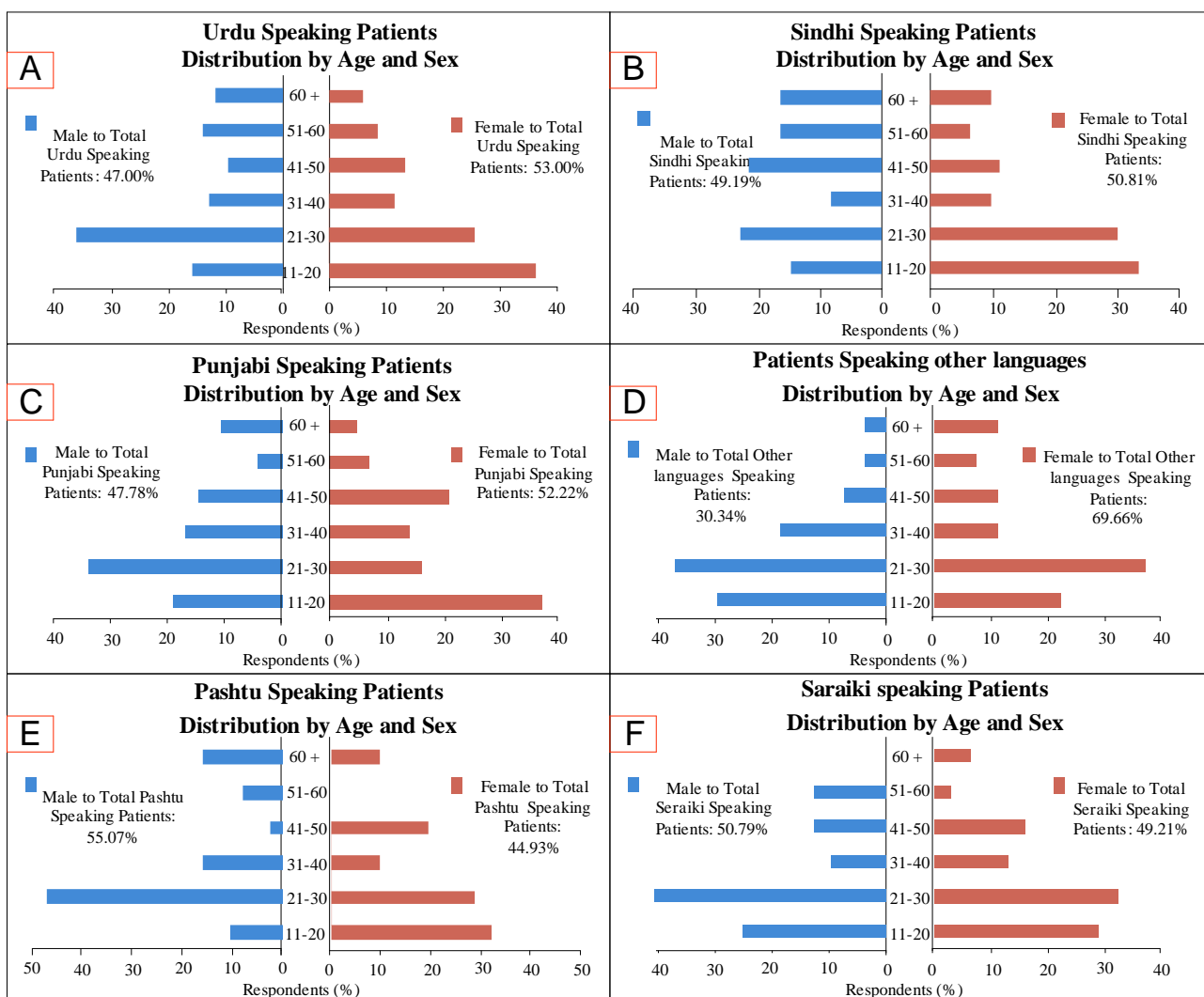


Figure 2: Linguistic distribution of TB patients in the study area.

response to the tune of 50.75% with reference to the occurrence of this disease (Figure 2F).

4. DISCUSSION

Data pertaining to the seven years study period 2007-2013 has revealed TB notification in the study area. Except for 2009 an increasing trend has been observed (Figure 3) for the whole study period. Currently Pakistan's tuberculosis control programs focus on treatment of the bacterial cause among patients. According to scholars the pathway from health to tubercular disease is determined not only by bacterial infection but by a multitude of factors. Pakistan's population is characterized by a variety of cultures, which is most explicit in the study area due to its being a megapolis.

A number of studies have discussed the social, economic and environmental determinants of TB. Most

of them have however identified poverty as being the root cause of the disease with the low income classes being exposed and at major risk [26, 27]. There is an emergent need not only to intervene on matters of economic interest but also on the crucial risk factors to which the poor are increasingly being exposed. Although, some epidemiological studies have sought to measure the impacts of these determinants, only a few have made efforts to identify explicitly the methods by which such problems can be handled [28, 29].

Figure 4 depicts selected socioeconomic and environmental determinants with reference to respondent TB patients' demographic distribution in the study area. According to the survey there were 48.83 percent illiterate respondents while 63.84 percent were literate but their education level was very poor. In the case of female respondents 79.05 percent had non-working status and were spending their lives as

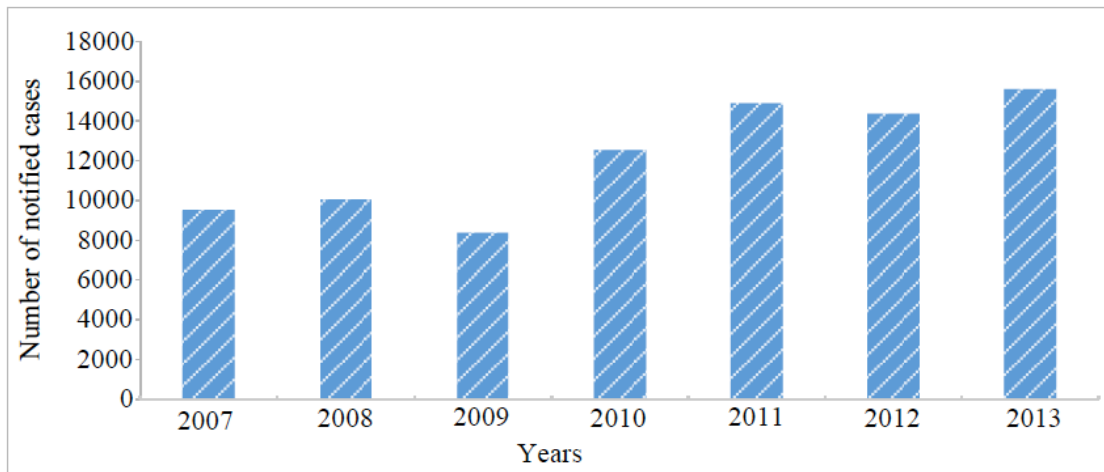


Figure 3: Notified patients at diagnosis centers in the study area. (Source: National TB control Program).

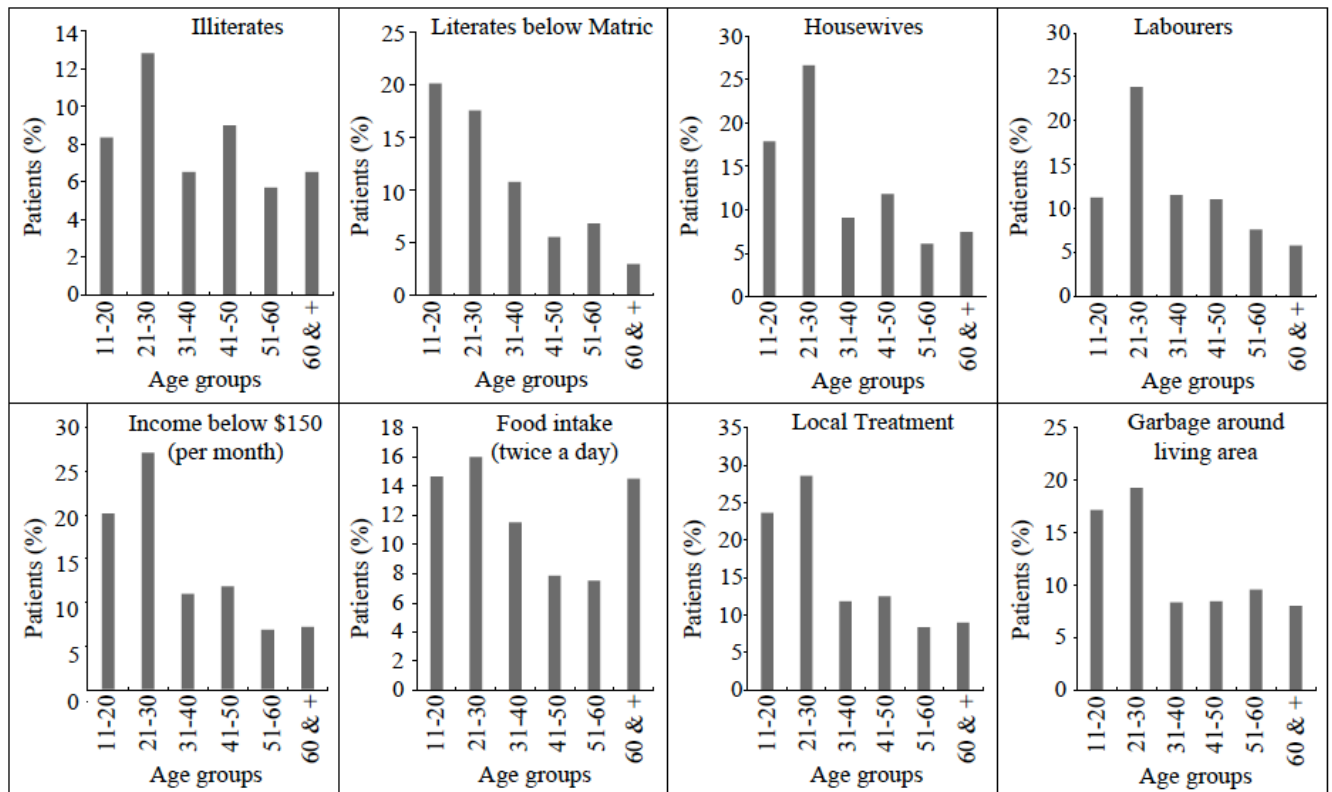


Figure 4: Risk Factors.

housewives. 72.07 percent to total male respondents recorded their occupation in the category of labour class while 84.17 percent fell in low monthly income category and only had twice a day food intake (72.07 % respondents) although generally the norm of the common man in the study area is to have three meals a day. Due to low level quality of life suspected patients were unable to get themselves properly tested for mycobacterium from quality medical centers because 94% of the respondents reported having visited local

clinics for initial treatment. Patients also highlighted that their living areas faced worst environmental conditions due to improper arrangements of garbage lifting and disposal because 70.82% reported presence of garbage heaps around their living areas.

Urdu speaking female patients were observed to be 3% higher than males, being most affected in the age group 11-20, while male contribution to the disease has been observed in the age group 21-30. The occurrence

of the disease among Pashtu male and female patients seems to be somewhat comparatively balanced but mycobacterium appears to have attacked the first two age groups, while it appears as disbalanced in the age groups 51-60 with no female respondents and in the 41-50 age group males having very low representation as compared to females.

Among Urdu and Punjabi speaking respondents also the highest respondents were among the younger age groups. This indicates that lower immunity at young age leads to higher vulnerability and risk to all types of diseases especially contagious TB. The slum areas of New Karachi and Liaquatabad are generally characterized with small and congested houses where sunlight hardly reaches the inner portions even during the afternoon. The houses are multistoried, coming close to each other with the ascent in height of floors, as a result of which penetration of sunlight and circulation of air becomes negligible\difficult. Sewerage facilities are not proper and gutter lines are choked most of the time. In most areas, the sewerage lines are open and when the dirty water over flows in these narrow lanes and streets the situation worsens.

Among Sindhi speaking males, TB was found to be high in all age groups. Highest in 21-30 age group, while among females it was highest in the young age groups 11-20 and 21-30. Among patients speaking other languages, the younger age groups of both sexes revealed highest responses.

The Pashtun community pouring in from up country generally live in the slums of Karachi city. These poor people pursue specific professions as cobblers, transporters, tea hotel workers, un-skilled laborers, wood/coal sellers, shopkeepers, small businessmen, illegal peddlers on carts around busy market places etc. They live generally in community groups by capturing government plots and buildings or converting it as their settlements. Thus, the Pashtun belts are spread throughout the city, especially around the periphery of the city. In the relatively larger settlements they build compounds consisting of small narrow rooms with un-hygienic latrine facilities. For the new youth arrivals, these compounds are shelters for living till they manage to find some jobs and arrange their own livelihoods. Generally, these settlements are located around natural streams filled with overflowing sewerage water, open drains or over the hills traversed by narrow and zigzag streets and lanes, improper sewerage systems and lack of parks and playground.

The Pashtun workers spend their day time at their jobs in much polluted environments returning to their un-hygienic houses to sleep at night. Lack of open fresh air and use of substandard food items entangles them in the grip of various diseases. It is necessary to clarify here that standard quality food items are not generally available in the shops of these slums. Sub-standard food items are preferred due to their low cost. Poor contact with educated people leads to obliviousness towards the values of education, health and other social values which may help improve quality of life. Pashtun culture is mainly based on Sunni Muslim orthodoxy and considered as conservative and patriarchal [30] but in the case of Karachi, Pashtun women appear to be comparatively more empowered than they are in their native land.

Due to low level of quality of life the suspected patients were unable to get themselves tested for mycobacterium at reliable, quality medical centers because 95 percent of the respondents reported having visited local clinics for initial treatment.

The Seraiki community belongs to southern Punjab. These migrants live in the under construction houses, suburbs, open places (generally in open plots falling within residential areas) or in tents/huts. Men are engaged as skilled and un-skilled laborers or in sundry professions. On the other hand their women and girls work as house maids. Poverty, lack of education, consumption of food taken from their master's houses, use of junk, sub-standard food items, living in un-hygienic conditions and non-availability of basic health facilities are general causes of diseases in these areas. Early marriages of girls in the Seraiki community are common. These girls give birth to large number of children at very short intervals and also perform their routine working jobs without taking proper food and medicine or rest. As a result, they become old very early in their lives. Marriages with close cousins and relatives being common are also a cause of spread and proliferation of diseases.

5. CONCLUSION

The ethnographic data supports a multi-factorial theorization of tuberculosis and provides a relevant context linking disease transmission to the global environmental, cultural, and politico-economic processes. Along with the literature review, the case study has a number of implications for researchers, policy makers and health-care providers. The present study has identified that TB patients mainly comprise

the labor class, with low literacy, low incomes and hence extremely poor household hygienic conditions, which go on in a vicious cycle perpetrating poverty and disease. In the perspective of TB control, the government should build better housing schemes under the domain of quality living and also make efforts to control housing density and construction on encroached land. In addition, the administration should ensure the promotion of the significance of quality food, as well as develop open green spaces in overcrowded areas. It is also necessary for communities to improve interaction among other groups which reside in close proximity to their settlements. This activity will act as an impetus in changing and improving lifestyles and cultures hence trigger improvement of health.

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