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Gender Distinguishes in Knowledge of Tuberculosis and Associated Health-care Finding Behaviors in Simanjiro District

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Abstract

Background: *Tuberculosis detection under the national tuberculosis control program in Tanzania follows passive case-finding guidelines, which could be influenced by the accessibility of health service and patient's health-care seeking behaviors. The correlation between men and women's knowledge on TB and their health-care seeking*

Objectives: *This study aimed to determine the gender distinguish in knowledge of Tuberculosis and associated health-care finding behaviours among maasai in Simanjiro district,northern Tanzania general population.*

Methods: *Cross-sectional studies were carried out in Simanjiro District, Tanzania by using randomly sampling method, including 1,335 subjects, was conducted to investigate the tuberculosis knowledge among household's population and individual interviews were then carried out. Gender distinguishes in the knowledge of tuberculosis and health-care finding behaviors was analyzed.*

Results: *Among Maasai general population men 15.0% and women 13.0% knew the prolonged cough with the duration of 3 weeks or longer was a symptom for suspicious tuberculosis. Fewer women than men knew the local appointed health facility for TB diagnosis and treatment as well as the current free TB service policy. Moreover, women were less likely to learn information about TB and a large part of women preferred to visit village traditional healer.*

Conclusion: *Tuberculosis and direct observing treatment program were not well known by Maasai in Simanjiro. Gender issues should be considered to reduce diagnostic delay of TB and improve both men and women's access to qualified health facility for TB care. Strengthening awareness of TB and improving the accessibility of health-care service is essential in TB eradication.*

Keywords: Gender, Tuberculosis, Heath care-seeking

Background

Tuberculosis (TB) is the chronic infectious disease caused by Mycobacteria complex (M. tuberculosis, M. bovis and M. africanum). The disease can be localized into the lungs and orchestrates pulmonary TB or can be found in tissues and organs other than the lungs and termed as disseminated. Globally, TB was conspicuous among the top ten causes of deaths; this was demonstrated by 1.3 million HIV negative people who died of TB in the year 2017. The low- and middle-income countries (LMIC) are affected with TB significantly and Tanzania is among the 30 countries on earth with high burden of TB [1].

Active TB case finding is one of the interventional strategies to control transmission of TB because one active TB index case can infect up to 15 people if not diagnosed and subjected to treatment. As of the year 2016, 65,902 cases of TB were notified in Tanzania, of these, 64,404 were new and relapse cases, however, with all diagnostic tests available in Tanzania, the notification rate for TB is only 40% meaning that more than a half of the people living with active TB are yet to be identified [2].

On the other hand, Tanzania is one of the countries in Africa that are affected significantly by the HIV epidemic. Majority of HIV infections were explained by heterosexual transmission (NACP, 2000, 2017). Among the Tanzanians aged 15 to 49 years, prevalence of HIV infection was 5.1% in the year 2011-2012 (TACAIDS et al., 2013). By the year 2016, 1.4 million Tanzanians were estimated to be living with HIV (UNAIDS, 2017). In the

year 2016-2017, among the Tanzanians aged 15 to 49 years, prevalence of HIV infection was found to be 4.7% (NBS et al., 2017), a 0.4% drop from the prevalence obtained in 2011-2012 survey. The noted drop of prevalence of HIV infection were explained by nationwide campaigns in HIV prevention, voluntary counselling and testing, and scaling up of Highly Active Antiretroviral Therapy (HAART) (NACP, 2017).

Being HIV positive is a risk factor for acquiring TB and therefore screening both infections (TB and HIV) is advocated. With reference to Kibong'oto Infectious Diseases Hospital (KIDH) TB register; the authors observed that significant proportion of admitted cases of TB and TB/HIV were coming from Maasai villages of Simanjiro district, Manyara region, northern Tanzania. Then, the authors further hypothesized that high prevalence of TB/HIV among the Maasai were connected to lack of knowledge about the diseases, traditional beliefs and gender inequality as previously described by Haasnoot et al. (2010).The Maasai is the indigenous ethnic group in Africa of semi-nomadic people settled in Tanzania, they are largely traditionalist and have resisted the urging of the Tanzanian government to adapt more modern life style and have rightfully demanded pasturing and grazing rights to several national parks Haasnoot et al [5]. In conformity to the active TB case notification strategy of the National Tuberculosis and Leprosy program (NTLP); this study was designed for TB/HIV intervention for Maasai community in Simanjiro district.

Methods

Study Area: This study was conducted in Simanjiro District which is one of the six district of the Manyara region of Tanzania bordered to the north by Arusha region, to the north east by Kilimanjaro region,to the south east by Tanga region,to the south by kiteto district,to the south west by Dodoma region,to the west by Babati Rural District with a population of about 0.2million and an area of about 19,928km2.

Study Design and Data Collection

Cross-sectional Studies were Conducted in the Study Site
Knowledge on tuberculosis (TB) and Health-care finding behaviors among maasai TB suspects among maasai general population Sampling strategy in the current study followed the guidelines designed by Tanzania. After sorting all towns in Simanjiro district by socioeconomic status, in each household, two family members aged 12 to 65 were selected as study subjects and were then interviewed by trained investigators with a detailed questionnaire.

Data Analysis

Data were entered, cleaned and analyzed using SPSS version 21. Numerical data were summarized by measure of central tendency and corresponding measure of dispersion. Categorical data were summarized by frequencies and proportions. Both numerical and categorical data were presented by tables. Chi-squared test was used to test for association between the categorical variables.

Table 1: Demographic characteristics across participants (N = 1,335)

Variable	Frequency	Percentage
Age (Mean)	47.5 + 13.7	
12-17yrs	445	33.3%
>18yrs	890	66.7%
Sex		
Male	772	57.8%
Female	563	42.2%
Marital status		
Married	559	41.9%
Not Married	776	58.1%
Education		
STDVII to college	302	22.6%
Not educated	1,033	77.4%
Occupation		
Both pastoralist and peasant	178	13.3%
Pastoralist only	1,157	86.7%

Table 2: Responses to questions towards TB among men and women and health care finding in Simanjiro area (Male N =772 and Female N = 563

Variable	Response toward Men and Women		X^2	P-value
	Men (n) %	Woman (n) %		
TB heard	(712) 92.2%	(383) 68%	0.015	0.721
Not heard TB	(70) 7.8%	(280) 32%		
Contagious diseases	(706) 91.5%	(397) 70.5%	1.722	0.189
Not contagious diseases	(66) 7.4%	(166) 29.5%		

Learning TB	(234) 30.3%	(116) 20.6%	18.440	0.001
Not learning TB	(538) 69.7%	(447) 79.4%		
Prolonged cough > 3 weeks	(116) 15.0%	(73) 13.0%	14.12	0.001
Cough < 3 weeks	(656) 85.0%	(490) 87.0%		
Local policy idea	(343) 44.4%	(204) 36.2%	17.340	0.001
No idea	(429) 55.6%	(359) 63.8%		
Village policy idea	(310) 40.2%	(181) 32.2%	10.723	0.004
No idea	(462) 59.8%	(382) 67.8%		
TB is curable idea	(587) 76.1%	(387) 68.7%	0.172	0.782
No idea of TB is curable	(185) 23.9%	(176) 31.3%		
Health care dispensary	(502) 65%	(163) 29%	9.720	0.003
Tertiary hospital finding	(270) 35%	(400) 71%		
Traditional finding	(545) 70.6%	(286) 50.8%	0.271	0.550
Non-traditional finding	(227) 29.4%	(277) 49.2%		
False belief	(571) 73.9%	(458) 81.3%	0.162	0.600
True belief	(201) 26.1%	(105) 18.7%		

Discussion

The study enrolled 1,218 subject that were from fifteen village in Simanjiro, the subject age was 47.5 years (SD 13.7)

In this study there was greater predominance of males at 57.8% as opposed to the female at 42.2%, This suggests that males either access health care compare to female due to that their own the economy as supported by studies found that female sex was less accessed health care simply were 70% of female were poor Diwan VK et al [32].

The greatest proportional of persons hailed in the village were not married by 58.1% as opposed to 41.9% married peoples and greatest number of persons were not educated by 77.4% and most of them were pastoralist only by 86.7%.

This study found that 92.2% of male heard about tuberculosis compare to 68% of female heard about tuberculosis this was contrast to study showed that Women would frequently seek information on behalf of their male relatives at the health post Onifade DA et [33].

This study found there were difference from those knew that Tuberculosis was contagious disease by 91.5% male and 70.5% female.

Also, this study found that 30.3% male learned tuberculosis compared to 20.6% female (p = 0.001)

This study found that persons with prolonged cough greater than 3weeks were 15.0% male compare with female 13.0% (p=0.001) contrast to a study found that male was 89.8% and female were 96.4% (p=0.273) Tarek M et al [34]. also, this study found that 44.4% male had knowledge on local policy compare to 36.3% female with 40.2% male and32.2% female on knowledge about village policy.

This study found that population with knowledge about tuberculosis that was curable 76.1% male and 68.7% female respectively.

Also, this study found that on seeking health facilities 65% was male and 29% was female contrast in study of Baluku JB et al. showed that seeking health facilities was 8.7% male and 6.4% female (p-0.006) respectively [35].

This study found that almost 70.6% male and 50.8% female were seeking traditional medicine for tuberculosis treatment.

This study found that there was difference among 73.9% male and 81.3% were had false beliefs on tuberculosis diseases contrast with the study of Kamel et al. found that Women had considerably lower levels of TB knowledge, beliefs, and attitudes than men [36].

Conclusion

Findings from our study indicate that knowledge and awareness of TB are still unsatisfactory in Simanjiro population, Gender issues should be considered in promoting patients' health-care seeking and to shorten the delay of diagnosis.

Tuberculosis and direct observing treatment program were not well known by maasai in Simanjiro. Gender issues should be considered to reduce diagnostic delay of TB and improve both men and women's access to qualified health facility for TB care. Strengthening awareness of TB and improving the accessibility of health-care service is essential in TB eradication.

Competing Interests

The authors declare that they have no competing interests.

Authors' contributions AW, BL and DD conceived the idea, implemented the field study and wrote the manuscript. BL and DD participated in the design and implement of the study and statistical analysis. BL and SM participated in data analysis and helped to draft the manuscript. All authors read and approved the final manuscript.

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Ethical Consideration

Oral informs consent was obtained in the study on the knowledge of TB among general population. Written inform consent was obtained from all participants in the study on health-care seeking behavior among TB suspects. The study was approved by KNCRECH

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