PERCEIVED QUALITY OF TUBERCLOSIS TREATMENT SERVICES FROM PATIENT PERSPECTIVES IN SELECTED TB MANAGEMENT UNITS, MOGADISHU-SOMALIA

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ABSTRACT

Observing quality from the patient's perspective is of paramount importance for making the service more responsive to patients. However, little is known about the quality of tuberculosis treatment service from the patient's perspective in Mogadishu. ***Objectives****: The specific objective of this study is to determine the patients' perspective on the quality of TB treatment services focusing on all 9 key quality dimensions in selected TB Management Units in Mogadishu- Somalia.* ***Methodology****: A facility-based, cross-sectional study design was employed, and data were collected in May 2018 using A QUOTE-TB tool validated for three East African countries from a sample of 177 tuberculosis patients receiving treatments at Benadir hospital TB Unit and Finsom TB center. The number of TB patients included in the interview was all TB registered patients that were taking TB medicines More than 3 weeks, elder than 18 years after accepting oral informed consent. Analyses were performed using SPSS version 20 and Excel, QI-score value greater than 0.75 represents low performance score and QI-score value less than 0.75 represents high performance score.* ***Results:*** *Majority of the respondents were male between 18-28 years of age non-educated and un-employed. The quality dimensions that needed improvement were availability and accessibility of TB treatment services, communication and information, support, patient-provider interaction and infrastructure of TB facilities.*

High quality impact scores of TB care included affordability, stigma, HIV test and professional competence these dimensions not needed quality improvement, There were notable differences between TB patients 'expectations and what they actually received in terms of accommodation, availability of TB services, patient-provider interactions, health information, and communication, which were identified as being of inadequate quality. ***Conclusion****: Significant effort is needed to improve the quality of TB care with respect to these particular aspects from the perspectives of patients. Individuals caring for patients with TB in the health service should address these areas that were inadequately performing.*

Keywords: *Assessment, quality, tuberculosis, treatment, patient perspective.*

1.0 Background

Tuberculosis (TB) is an infectious disease caused by Mycobacterium tuberculosis. It can affect all parts of the human body, but the most likely target is the lungs. The disease is transmitted from one person to another by coughing or sneezing. Cough, often with bloodstained expectoration, fever, loss of appetite and weight are typical symptoms of lung TB. The diagnosis of TB is confirmed by bacteriological methods, direct microscopy or culture of sputum. (turpie *et,al*, 2008). The major objective of the TB control programs is to identify and to treat the patients with infectious pulmonary tuberculosis, the diagnosis of which relies on a bacteriological examination of the sputum. The culture of Mycobacterium is the reference method for the detection of the tubercle bacilli, but it is prohibitively slow and it requires special safety procedures in laboratories. Serological techniques are not useful in the control programs, due to a lack of sensitivity and specificity. Among the new approaches which are used for a rapid diagnosis of TB, the nucleic acid amplification methods are the most promising, but the technology is not applicable to the control programs in the developing countries (mindolli P.B, 2013).

Tuberculosis (TB) remains a major public health problem worldwide. There were 8.6 million new TB cases and 1.3 million TB deaths in 2012. The African region alone accounted for 27% of the world's cases and the highest rates of cases and deaths relative to population (225 incident cases per 100,000 on average and more than double the global average of 122) (Bulage*et.al,* 2014).

It remains a major cause of morbidity and mortality in many developing countries. Approximately95% of all TB cases and 99% of deaths occur in developing countries, with the greatest burden in sub-Saharan Africa and South East Asia. In addition, TB hinders socioeconomic development, because 75% of people with TB are within the economically productive age group of 15-54 years (MergyaEticha *et.al,* 2014).

TB is a major health burden in Somalia, contributing significantly to the reported high morbidity and mortality among the population. The epidemiology of TB in Somalia is similar to that found in many other developing countries where the disease is closely associated with widespread poverty, poor living conditions and reduced immune state especially those living with HIV and AIDS. According to WHO, TB in Somalia is the leading cause of morbidity and mortality among the adult population, contributing to significant loss in work productivity and increased household expenses in support of affected member of the household during the long treatment of TB. The Global Fund TB program in Somalia was found to have significantly contributed to the general betterment of the health status of the population by reducing the impact of TB on the population. The national program to manage and control the spread of TB in Somalia is supported by the large grant from the Global Fund, administered through the World Vision International (Somalia) as the Principal Recipient of the Global Fund and implemented through a total of sub recipients implementing different components of the program in the different regions of Somalia (World vision report, 2013).

QUOTE TB is management tool that specifically measure the quality of TB care from the patient perspective. It combines both the performance and TB care dimensions. The development of QUOTE TB took place in three East Africa countries; Kenya, Malawi and Uganda. Eight quality dimensions specific to TB care were established through qualitative research among TB patients

and healthcare providers. The eight quality dimensions were also tested quantitatively and validated through statistical analysis (Sara Massaut*et.al*, 2007).

Specific Objective of the study

To determine the patients' perspective on the quality of TB treatment services focusing on all 9 key quality dimensions in Finsom TB Center and Benadir hospital Mogadishu Somalia

2.0 METHOLOGY

2.1 Research Design

The study was adopted a facility-based descriptive cross sectional conducted at TB management units in Mogadishu-Somalia.

2.2 Study Population

The study population of this study were adult patients, aged ≥ 18 years (both drug sensitive and drug resistant TB forms) who used the TB treatment service for at least three weeks prior to the data collection period at sampled TBMUs in Mogadishu-Somalia. Mogadishu is the capital Benadir region as well as the capital city of Somalia and it's the most populous city in the country.

2.3 Sample size and sampling technique

The study were employ non-probability-sampling methods the sample size comprised 177 patients attending two TB management Units in Mogadishu, namely Finsom TB center and Benadir Hospital TB Unit. The number of TB patients included in the interview was all the TB registered patients that were taking the TB medicines More than 3 weeks, elder than 18 years after accepting oral informed consent.

2.4 Study area

Individual interviews were conducted to assess the performance of Finsom TB center and Benadir hospital as experienced by TB patients using a standardized questionnaire. The performance assessment is based on the nine quality dimensions specific to TB care.
TB patients for performance assessment interviews. Health facility staff was assist with the recruitment of TB patients, based on the following: Registered TB patients at respective health facility and have history of at least 3 weeks visiting the health facility for diagnosis and treatment.

2.5 Data Collection Instruments

The study was applied pre-tested structured questionnaire and focus group discussion adopted from the QUOTE TB (**Quality of Care as seen through the Eyes of the Patient)** tool validated by WHOM for East African Countries. The QUOTE-TB questionnaire is being developed by the Regional Centre for Quality of Health Care (RCQHC) and National TB Programs (NTPs) of Uganda, Kenya, and Malawi, with technical support from Royal Tropical Institute (KIT), KNCV Tuberculosis Foundation and the Netherlands Institute for Health Services Research (NIVEL).

The quality of care aspects were formulated as importance and performance statements in the questionnaire. Respondents were asked to rate the importance measures using a 4-point like scale and performance measures using dichotomized (Yes or No) Response.

2.6 Data Processing and Analysis

Data collected was compiled, and then analyzed using the statistical package for social scientists (SPSS) version 20 and excel. Descriptive statistics and mean scores were used to summarize data. Importance ranking score analysis were used to identify independent predictors of patient satisfaction. QI score less than 0.75was considered quality significant.

2.7 Ethical Considerations

The research was done in the way that no one can harm or suffer adverse consequences from research activities. Respondents were not forced to respond. The research was conducted with respect to ethical values, confidentiality, moral expectation, and rules governing the conduct of a research especially in areas of data collection. Permission to conduct the study was obtained from the National TB Program, Ministry of Health and Human Services- Somalia.

The Ethical approval was obtained from Ethical Review Committee of Jamhuriya University of Science and Technology (JUST), Mogadishu- Somalia. Informed consent were obtained from all participants before the interview, they were informed about their right not to participate or withdraw anytime, to maintain privacy and confidentiality no names of participants were obtained.

3.0 RESULTS

2.0 Availability & Accessibility of TB services

Dimension **(Category)**	**Quality of TB care aspect**	**Importance Score**	**Performance score**	**QI score**
Availability & Accessibility	Acceptable waiting time	0.94	0.407	3.82
	Attended by same health provider	0.94	0.271	2.55
	Service hours are convenient to you	0.94	0.356	3.35
	Drugs not available when required	0.94	0.22	2.07
	Difficulty because of language barrier	0.94	0.056	0.53
	Without referral to another TB Unit	0.94	0.079	0.74
	TB services are available during working hours	0.94	0.644	6.05
	TB facility easy to reach	0.94	0.412	3.88
	Health provider's availability	0.94	0.350	3.29

Table 3.0: Availability and Accessibility of TB services

The analysis of the data showed that patients treated at TB centers perceived that waiting time (QI= 3.82), being attended by same health provider (QI= 2.55), convenience service hours (QI= 3.35), availability of TB drugs when required (QI= 2.07), TB services available during working hours (QI= 6.05), distance to TB facility (QI= 3.88) and health provider's availability (QI= 3.29) as priorities that need to be addressed. The quality aspects of availability and accessibility of TB treatment services seemed quite satisfied by the patients were: language barrier and referral to another TB center (QI< 0.75).

From FGDs, the patients were satisfied with the services provided by the health facility; however some patients at the hospital would prefer that more staff should be available to give their medicines as early as possible.

"… *We are satisfied with the service provided, however we observed that sometimes one staff is available to give TB medicines, fills the form, we waited little bit longer time……"*(33year Male patient, Benadir Hospital)

3.1 communication and information

Dimension	Aspects	Importance Score	Performance score	QI score
Communication & information	Spreading of TB	0.78	0.266	2.07
	TB can be cured	0.78	0.196	1.54
	Observed TB treatment	0.78	0.339	2.64
	Side effect of TB drugs	0.78	0.322	2.51
	Sputum test during treatment schedules	0.78	0.299	2.34
	Duration of TB treatment	0.78	0.192	1.50
	How to store TB medicines	0.78	0.311	2.42
	Next to come back for TB services	0.78	0.322	2.51

Table 3.1 Communication and information

Patients treated at the TB facility perceived that all aspects of communication and information need to be improved as their Quality impacts scores were (> 0.75): spreading of TB (Infectiousness) (QI= 2.07), importance of observed treatment (QI= 2.64), side effects of TB medicines (QI= 2.51), sputum test during treatment schedule (QI= 2.34), duration of TB treatment (QI= 1.50), Storing of TB medicine (QI= 2.42) and when to come back for TB services (QI= 2.51) are the priorities needs to be addressed and patient needs were not met by the performance of health facility.

From the FGDs, we found that some patients experienced not receiving adequate information about services at TBMU; an example is lack of DOTs observer.

"……*there are a lot of patients who attend at TB management unit to receive their medicines early in the morning, there is no one who observes while patients are taking TB drugs in front of the care providers and no one told us more about the adverse effects of TB medicines*….." (24 year old, Male)

3.2 support

Dimension 8	Quality of TB care aspect	Importance Score	Performance score	QI Score
Support	Transport support	0.94	0.988	9.294
	Food support	0.94	0.983	9.241
	Money support	0.94	0.994	9.347

Table 3.2 support

This quality dimension has got the highest important ranking score of 0.94 and all the patients receiving care at TB facility felt it should be improved. Concerning the aspects of support; transport support had quality impact score of 9.2938 which is based on weighed importance score of 0.94 and corresponding performance score of 0.988, this indicates that 98% of the patients did not get transport support and their priority needs were not met. Furthermore food support had quality impact score of 9.241 with corresponding importance score of 0.94 and performance score of 0.98 and money support received quality impact score of 9.347 with importance score of 0.94 and corresponding performance score of 0.994, and this means that 99% of respondents felt the facility is performing poorly as their priority needs were not met. Hence all patients felt that all aspects of support should be improved.

From the FGDs, we found that most of the patients experienced without support services at TBMU; "……*we never received any support regarding -transportation, food and money …"* (30-year-old, female)

3.0 DISCUSION

The aspects of availability and accessibility dimension of the health facilities that needs to be improved applies to shortening waiting time at TB facilities, attending same health provider and to have TB treatment services, TB drugs and its health providers to be available at convenient time for patients within reachable distance. These aspects were also pointed out as important factors influencing patient satisfaction (Rai*et.al*, 2016)

In agreement with our findings, study by Sophia V et.al observed the major reason for defaults was the unsuitability of DOT timing. Whereas Mohamed *et.al* (2014) also reported greater satisfaction among patients who spent a short time to receive the TB services.

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Effective patient-provider communication is an essential component of patient care; and in order for communication to be effective, the information must be complete, accurate, timely, unambiguous, and understood by the patient By formally implementing the assessment of patient communication needs into routine care, nursing administrators will create a sense of accountability among bedside nurses to meet the needs of patients who are communication-vulnerable (patak *et.al*,2009)

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From the FGDs, we found that most of the patients experienced without support services at TBMU: "……*we never received any support regarding -transportation, food and money …"* (30 year old, female)

The study found that patients perceived this quality dimension as the most important to judge the quality of TB treatment services. The most important aspect for this quality dimension for patients is the support to cover transportation, food costs and other incentives. From the FGDs, we also found that most of the patients experienced without support services.

Supporting patients with TB in different ways such as food distribution, incentives and covering transportations can ease patients to adhere and complete medication.

As such, two studies have found that providing financial incentives to TB patients was effective in enhancing and improving treatment completion, as well as motivates patients and minimizing default rates(Wei et al., 2012; Nyamathi, Christiani, Nahid, Gregerson, & Leake, 2006). Also, Davidson et al. found that supporting TB patients financially improve adherence to TB treatment (Davidson et al., 2000).

Although Davidson has found that financial incentives is a batter way to motivate and improve patient medication adherence, it is too complicated to apply in routine busy practice (Davidson et al., 2000).

5.0 Conclusions

This study were conducted applying QUOTE TB light standardized questionnaire from 177 patients attending two TB management Units in Mogadishu, namely Finsom TB center and Benadir Hospital TB Unit. The number of TB patients included in the interview was all the TB registered patients that were taking the TB medicines More than 3 weeks, elder than 18 years after accepting oral informed consent. Structured Questionnaire was used for 177 respondents for two TB Centers. 127 respondent were from Finsom while remaining 50 were from Benadir Hospital. Majority of Benadir Hospital respondents are Male who are very poor and unemployed. Their age is between 18-28 years.

Performance scores are calculated from responses to the individual assessment interviews. High performance score means that large percentage of respondents interviewed provided a negative response and therefore the health facility is performing poorly, while low performance score means that a small percentage of respondents interviewed provided a positive response and therefore the health facility is performing highly.

The result we got from our research divides in to two sections socio-demographic characteristics and facility performance in socio-demographic characteristics majority of the respondents were male between 18-28 years of age non-educational and un-employers in facility performance has both low quality impact scores and high quality impact score dimensions of TB Care.

Low quality impact scores of TB care dimensions were availability and accessibility of TB treatment services, communication and information, support, patient-provider interaction and infrastructure of TB facility this dimensions needed quality improvement.

High quality impact scores of TB care include affordability, stigma, HIV test and professional competence this dimensions not needed quality improvement.

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