

ABSTRACT

Introduction: Globally, Tuberculosis (TB) is a leading cause of morbidity and mortality. The majority of TB cases are in low- and middle-income countries (LMIC). Healthcare providers' fidelity or adherence to TB intervention guidelines is critical to facilitate positive cases to care and to decrease the incidence of TB. In Tanzania, in 2013 the National Tuberculosis and Leprosy Programme (NTLP) issued a manual/guideline for the management of TB and Leprosy to facilitate health workers in the detection of TB cases in public health facilities. Little is known of health worker fidelity to these guidelines. Therefore, the present study aimed to examine the level of implementation fidelity and its determinants in relation to the adherence to TB guidelines among healthcare providers.

Methods: The study employed an explanatory sequential mixed design to collect data from 26 healthcare facilities that provide TB care in Ubungu district, Dar-es-Salaam, Tanzania.

Quantitative data were collected first, followed by in-depth qualitative interviews. The qualitative component sought to explore concepts including stakeholders' involvement, willingness and readiness to adhere to TB guidelines as well as facilitations and strategies to adhere to TB guidelines that had been examined in the quantitative component. To analyse the quantitative component, an overall fidelity score was first generated. Second, implementation fidelity was ranked as low, moderate or high. Third, an Exploratory Factor Analysis (EFA) was employed to extract latent factors/determinants enabling implementation fidelity. These latent factors were used in regression modelling to examine their relationship to implementation fidelity. Lastly, qualitative data guided by an in-depth interview guide were collected through individual in-depth interviews (IDIs) to further explore the constructs generated by the

quantitative phase. The Qualitative Analysis Package (MAXQDA) was used to facilitate qualitative analysis which was guided by the framework approach.

Results: One hundred and thirty-eight healthcare providers participated in the quantitative part of the study and 12 healthcare providers participated in the qualitative phase. In the quantitative phase most healthcare providers had a mean overall level of implementation fidelity at 92 (66.67%). Four latent variables (factors) were extracted from the EFA and were labelled:

“Stakeholders’ involvement, willingness and readiness to adhere to TB guidelines/intervention”, “Facilitations and strategies to adhere to TB guidelines/intervention”, “Knowledge/information sharing and goals’ communication” and “Client/Patients’ characteristics” for factor 1, 2, 3 and 4 respectively. In multivariate regression factors 1 and 2 were found to have a statistically significant relationship with implementation fidelity at $p < 0.05$ as well as a marginally significant relationship at $p=0.06$ with factor 3. Twelve healthcare providers (six male and six female) participated in individual IDIs from August to November 2018. The average duration of IDIs was 45 minutes. Themes that emerged from the IDIs were categorised into five domains. The domains were guidelines’ characteristics, outer settings, inner settings, healthcare provider’s characteristics and process for implementation. Participants’ mentioned more nuanced themes including: the size and level of healthcare facility; skills-building capacity; performing internal review or feedback; networking and communication; and organisational culture as potentially influencing adherence to the guidelines.