PREVALENCE OF CONFIRMED TUBERCULOSIS AND FACTORS INFLUENCING ITS MANAGEMENT IN CHILDREN AGED 12YRS AND BELOW PRESUMED TO HAVE TB ATTENDING BWIZI BWERA HEALTH CENTER IV, MBARARA DISTRICT.

BY

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MARCH, 2020

DECLARATION

I **Nabimanya Phillip,** declare that this research dissertation is an original work and has never been submitted in whole or in part to any institution for obtaining any qualification. I therefore, carried out this research in partial fulfillment of the requirements for the award of Master of Public Health at Busitema University.

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SUPERVISORS ASSERTION

This research dissertation is submitted with the approval of the following supervisors

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DEDICATION

I, dedicate this work to my parents for having endeavored to send me to school. Thank you, Daddy and Mummy, May God bless you abundantly.

ACKNOWLEDMENTS

I, thank God the Almighty who has enabled me to go through this course and complete this work.

In a special way I extend my sincere appreciation to the following people, May God bless you:

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ACRONYMS AND ABBREVIATIONS

HIV:	Human Immunodeficiency Virus
HSD:	Health Sub District
IDI:	In-depth Interviews
ISS:	Immune Suppression syndrome
KCCA:	Kampala Capital City Authority
KII:	Key Informant Interviews
LF-LAM	Lateral flow Lipoarabinomannan assay
MDRT:	Multi-Drug Resistant Tuberculosis
MOH:	Ministry of Health
NTLP:	National Tuberculosis and Leprosy Program
TASO:	The AIDS Support Organization
TB:	Tuberculosis
TST:	Tuberculin Skin Test
UNCST:	Uganda National council of science & Technology
WHO:	World Health Organization?
WRD:	WHO-recommended Rapid diagnostic
XDR-TB:	Extensively Drug-Resistant TB

OPERATIONAL DEFINITIONS

The operational definitions below have been used in this study.

Pediatric: Any individual aged less than 12 years.

Pediatric TB case: Any individual aged less than 12 years who have a positive TB diagnosis as per the hospital documents**.**

A clinically diagnosed TB case according to this study will refer to one that does not fulfill the criteria for bacteriological confirmation but has been diagnosed with active TB by a Clinician or other medical practitioner after identifying signs/presentations of cough for at least two weeks or more, loss of appetite/refusal of feeds, unexplained weight loss, unexplained prolonged fevers/evening fevers, night sweats, and has decided to give the patient a full course of TB treatment (WHO, 2015, MOH,2010).

A Bacteriologically confirmed TB case is one with a positive biological specimen that has been confirmed by sputum smear microscopy, or culture (such as X-pert MTB/RIF, LF-LAM) (MOH 2017).

TB Cure refers to a TB patient who was smear or culture positive and is sputum smear or culture-negative one month before the completion of anti-TB treatment and at least on one previous occasion during treatment (MOH 2010)

ABSTRACT

Introduction

In the year 2015, WHO estimated that there were one million incident cases and more than 240,000 deaths caused by TB; including children with HIV/TB co-infection. Children can get TB at any age, but usually, the infection and disease occur in children aged 1 to 4 years. Studies relating to childhood TB in Uganda, especially in the Western region have been sporadically conducted. More so, there is under-reporting and under-diagnosis of TB in children in Uganda which is likely to affect resource allocation and implementation of prevention and curative childhood TB programs.

Objective The objective of this study is to determine the prevalence of Confirmed tuberculosis and factors influence its management in children aged 12 years and below presumed to have TB attending Bwizi- Bwera Health center IV, Mbarara district.

Methods

This was a retrospective and prospective cross-sectional study design that employed both quantitative and qualitative data collection methods between January 2018 to December 2019 (two years period). Data abstraction tools were used to collect data from patients' health/medical records and in-depth interviews (IDI) and key informant interviews (KI) were used to collect data from selected caretakers of pediatric TB cases and health care workers respectively. Analysis of quantitative data was done using Stata version 14 and the results have been presented using descriptive statistics, measures of association, graphs, and tables. Qualitative data analysis was done using Atlas Ti version 6 and results were presented under themes.

Results

The proportion of children below 12years who had TB was 32 (8.5%) out of 375 presumptive TB cases screened. 32 cases were diagnosed positive using the gene-expert machine. Qualitatively, the themes that arose were classified as social and cultural, individual, and health system factors. The social and cultural included issues relating to misconceptions, stigma, and discrimination, and social support. The individual factors that emerged included economic constraints, knowledge, attitude, and practices towards the management of childhood TB. Health system-related issues that emerged related generally to limitations in knowledge and number of human resources, services delivery, and information medicine management.

Conclusion

Children are a particularly vulnerable group and have increased health risks. The prevalence of childhood TB in Bwizi Bwera HC IV was relatively high. This study found out that the child's age and HIV disease were associated with increasing TB among children. Distance to the facility, the size of the pill, understaffing, and insensitivity of the saliva that sometimes miss cases were factors affecting TB management among children. Results also showed that improved waiting time for patients and counseling improved the management of TB among the children. Interventions should be directed to improving the early detection of childhood TB by using the most sensitive method to screen the children and strengthening the health systems and quality improvement processes amidst the COVID-19 pandemic challenges to meet the international standard for TB control.

CHAPTER ONE

1.1 Introduction

Tuberculosis (TB) is a major cause of childhood morbidity and mortality worldwide (WHO, 2017). Globally, Mycobacterium tuberculosis affects approximately 25% of the population and thus possess a risk of developing TB disease (Global TB Report, WHO 2019). Tuberculosis is a communicable disease and a major cause of ill health (WHO, 2018). Tuberculosis primarily affects the lungs in more than 80% of the cases leading to pulmonary tuberculosis. Worldwide, it is one of the top 10 infectious diseases and the leading cause of death from one infectious agent just above HIV/AIDS (Schlüter et al., 2021). It is caused by the bacillus *Mycobacterium tuberculosis (M.tb)*, which is spread through contaminated air; that is when a person who is sick with TB expels the cough containing bacteria droplets into the air through coughing, sneezing, and spitting while in a crowded/congested environment, the neighbors are at a high risk of acquiring TB. Other complex forms include *Mycobacterium bovis, Mycobacterium africanum, and Mycobacterium microti*. It is commonly a lung disease (Pulmonary TB), although it also affects other parts of the body resulting in extrapulmonary TB disease. Among the children, approximately 1 million cases of tuberculosis disease and 233,000 TB-related deaths occurred among children in 2018 (Cowger et al., 2019). In most developing countries, it remains one of the major health problems, with the incidence increasing rather than decreasing

In Asia, according to the WHO, there is an estimated 1.8 million with active tuberculosis (Snow et al., 2018). Philippines is one of the countries with the highest TB incidence rates in Asia with about 32% of the TB cases (WHO, 2017), and in Africa, In 2016, an estimated 10.4 million new

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