Research Article

Factors contributing to treatment default by tuberculosis patients at art clinic: African perspective

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Abstract

Tuberculosis (TB) is one of the biggest public health problem and now ranks alongside Human Immunodeficiency Virus (HIV) as the world's leading infectious cause of death. The co-infection of TB to HIV patients has been increasing with suppressing impact to the host immunity. There are a lot factors contributing to default of ART patients with TB including personal factors, stigma, economic factors, educational background, quality and nature of care from the facilities. It is imperative to improve on encouraging the HIV patients on ART with TB to access health facilities for their improved life.

Keywords: tuberculosis, ART, HIV, AIDS, factors contributing to default

Introduction

Tuberculosis (TB) is one of the biggest public health problem and now ranks alongside Human Immunodeficiency Virus (HIV) as the world's leading infectious cause of death (Mohammed, 2017, Jakheng and Obeagu, 2022; Oloro and Obeagu, 2022; Obeagu and Obeagu, 2022; Igwe et al., 2022). Tuberculosis is an infectious disease caused by Mycobacterium tuberculosis (WHO, 2016). The disease primarily affects lungs and causes Pulmonary Tuberculosis (PTB) and also affect bones and joints, meninges, skin and other tissues of the body (Park, 2015).Human Immunodeficiency Virus (HIV) activates the transmission and infection of TB (Obeagu et al., 2022; Obeagu et al., 2023; Obeagu et al., 2023; Obeagu2023; Obeagu and Obeagu, 2023).

According to World Health Organization 2013 report, people who have PTB can infect others through droplets infection when they cough, sneeze or talk yet the prevalence of this TB among close contact of infectious patients can be about 2.5 times higher than that in the general population (WHO, 2013). Besides well-known risk factors, the most vital unresolved challenge in TB control is the treatment completion and studies now found that Treatment default and resistance to anti-TB drugs emerged as a vital obstacle in the control of TB disease (Ronald *et al*., 2016).

Globally, patient compliance with anti-TB therapy had an estimate of as low as 40% in developing countries which remains the major principle cause of treatment failure much as the World Health Organization recommended at least 90% cure rate of all diagnosed TB cases (WHO, 2015). Despite the World Health Organization expected recommendation on cure rate, Zumla and his colleagues found that the main barrier for achieving this desired TB treatment success rate is the high treatment default rate of 10% in the 2008 to 11.9% in 2010 (Zumla *et al*., 2013).

As with most African countries especially South Africa, the directly observed therapy short-course (DOTS) strategy is the mainstay of TB control. The Plan entails an ambitious drive to diagnose and successfully treat at least 90% of all noticed TB cases however, excessive default rates constrain the successful treatment of these patients (National Department of Health, 2015). From 2003 to 2011, patient default rates among new smear-positive TB cases remained higher than the less than 5% national target, fluctuating between 6.1% and 11.2% (Loveday, 2014).

In East African countries, The World Health Organization report showed that Uganda had a TB default rate of 11% with a treatment success rate of 70% among smear positive patients and clinically diagnosed TB of 19% (WHO, 2010). In 2010 to 2011, about 29% of TB patients registered at Infectious Diseases Institute clinic defaulted from treatment (data unpublished), for

reasons not well known particularly in Western region which had bigger number of TB patients (Elbireer *et al*., 2011).

Patients related factors that contribute to treatment default by Tuberculosis patients

Various personal factors have emerged and have been indicated to have contributed to the defaulting behavior of the Tuberculosis (TB) defaulters in many study. In a study done by Elbireer *et al*. (2011), found that Individual patient characteristics associated with defaulting were living at a distance of 10 km or more from the Infectious Diseases Institute clinic with 39.4%, those not knowing that TB can be cured were 48.8%, those not knowing the duration of TB treatment were 41.7% and a history of side effects during TB treatment with 8.7%.

The study further revealed that employment status, having a family member to remind patient to take their medicine, feelings of discrimination by family, feelings of lack of family support, disclosure status to family members about having TB, and being on HAART during TB treatment were not associated with defaulting (Elbireer *et al*., 2011).

In another study done by Slama (2013), on factors associated with treatment default by tuberculosis patients in Fez, Morocco found out that the main reason for defaulting anti-TB according to the 108 defaulters were feeling of being cured (9%), followed by the duration of treatment being too long (9%), the lack of overall time (24.1%) and the lack of knowledge about the benefits of finishing the treatment (1%).

In addition, though compliance to Tuberculosis treatment can therefore, be improved by promoting Tuberculosis treatment literacy among those with the disease to their families and communities, through empowering the healthcare provider with knowledge on Tuberculosis (Ndimande, 2009).

A study conducted by Kudakwashe (2010), in Namibia report showed that most, 46 (94%) of the patients had a treatment supporter while they were taking treatment and 3 (6%) did not have even one treatment supporter. In the same study only 22 (48%) of the respondents who had a treatment supporter were compliant while 24 (52%) were non-compliant. In this study, having a treatment supporter was not associated with any significant difference between compliant and non-compliant groups, neither was not having a treatment supporter (P=0.626).

Health facility related factors that contribute to treatment default by Tuberculosis patients

A study done in Kenya on factors contributing to patient defaulting to Tuberculosis treatment in Nakuru East and West Sub-Counties, Nakuru Countyindicated that 7 (16.7%) of the respondents were only counseled during first visit for treatment, 17 (40.5%) were counseled on each visit, 13 (31%) were counseled once a while 5 (11.9%) were never counseled (Ronald *et al.*, 2016).

In addition, 7 (16.7%) of the respondents spend less than 1 hour for monthly refill of TB treatment, 17 (40.5%) spent 2-3 hours and 13 (31.0%) spent 3 hours and above meanwhile 12 (28.6%) of the respondents viewed health care workers as friendly during treatment, 7 (16.7%) as empathetic, 14 (33.3%) as rude and 9 (21.4%) as uncaring despite 100% of the interviewed respondents agreed that drugs were always available on their scheduled visits (Ronald *et al.*, 2016).

In another study done in Namibia by Kudakwashe (2010), on factors affecting compliance to tuberculosis treatment in Andara Kavango region showed a total of 49 responses were recorded of which 43 (88%) of the respondents said they usually waited for less than an hour at the TB clinic before they were attended to, while 4 (8%) had to wait between one and two hours and 2 (4%) usually waited for more than two hours. None of the six patients who had to wait for more than an hour at the clinic completed their TB treatments.

Furthermore, in the same study waiting time at the clinic was significant between the compliant and non-compliant groups that is longer waiting times were associated with non-compliance of TB treatment (Kudakwashe, 2010). All the respondents in this study ranked the health worker attitudes from friendly to very friendly except one who ranked them as unfriendly. Despite this, more than 50% of those who ranked the attitude as friendly to very friendly were non-compliant (Kudakwashe, 2010).

In Uganda Clinical Guidelines (UCG), treatment regimen are expressed in a standard format like 2 RHZE/6 EH or 2 RHZE/4 RH where: Letters represent abbreviated drug names, Numbers show the duration in months and / show the division between treatment phase. Drugs used: R=Rifampicin, H=Isoniazid, Z=Pyrazinamide, E=Ethambutol, S=Streptomycin (UCG, 2016).

Nevertheless, Non-compliance can result in acquired drug resistance, which requires a prolonged period of treatment with more expensive medicines than treatment for drug-susceptible TB. Treatment with second line medicines is likely to be less successful than treatment with first line drugs, mainly because the second line medicines are less potent and more toxic, with a longer treatment period that makes it more difficult for patients to complete it (Dye, 2009).

Conclusion

Tuberculosis (TB) is one of the biggest public health problem and now ranks alongside Human Immunodeficiency Virus (HIV) as the world's leading infectious cause of death. There are a lot factors contributing to default of ART patients with TB including personal factors, stigma, economic factors, educational background, quality and nature of care from the facilities. It is imperative to improve on encouraging the HIV patients on ART with TB to access health facilities for their improved life.

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