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# Factors contributing to non-adherence with treatment among TB patients in Sodo Woreda, Gurage Zone, Southern Ethiopia: A qualitative study

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ABSTRACT

Poor adherence by tuberculosis (TB) patients to their medication contributes not only to the worsening of their TB situation but also paves a way for incidence of drug resistance. This study, hence, aims to explore factors contributing for non-adherence of TB treatment among TB patients in Sodo Woreda, Gurage Zone, Southern Ethiopia. A qualitative study, which included 22 in-depth interviews from four health centers and seven health posts, was conducted from February 25 to April 27, 2014. Although the drugs were given free of charge, many patients were unable to adhere to their treatment because of one or a combination of the following factors; lack of adequate food, poor communication between healthcare providers and patients, beliefs in traditional healing system, unavailability of the service in nearby health facilities, side-effect and pill burden of the drugs, stigma and discrimination. The patients take their anti-TB medications under difficult circumstances and experienced a wide range of interacting factors. This, in turn, has resulted for non-adhered treatment taking behavior by many patients. Health professionals and policy makers should be aware of such factors and initiate sustained educational campaigns directed towards all parties in the study area to obtain a good success with TB treatment.



## Background

Tuberculosis (TB) is a major public health challenge worldwide. It is the second leading cause of death from infectious diseases next only to human immune deficiency virus (HIV) [1]. Above 90% of the global TB cases and deaths occur in the developing world where also 75% of the cases are in the most economically productive age group (15–54 years) [2].

Even though Ethiopia achieved 100% geographical and above 92% health facility directly observed treatment schedule (DOTS) coverage, the country is ranked as 8th among the TB high burden countries in the world with an estimated incidence of 258 TB cases per 100,000 population [3,4]. Despite the extensive expansion of DOTS service in the country, the program performance indicators remain unsatisfactory [4]. For example the rate of default from TB treatment ranges from 12 to 20%, which is also higher than the World Health Organization (WHO) recommendation of less than 10% [5].

Poor adherence contributes to worsening of TB situation not only by increasing incidence but also by initiating drug resistance. Resistance to anti-TB drugs has become a serious obstacle in the control of the disease. Patients' poor adherence to anti-TB therapy, with an estimate of as low as 40% in developing countries, remains the principal cause of treatment failure globally [6]. The WHO recommends at least 85% cure rate of all diagnosed TB cases [7]. In order to achieve this cure rate, adherence needs to be in the order of 85–90% [8].

Evidences from a variety of literature show that there are many factors affecting adherence to TB treatment. Lack of access to formal health services, traditional beliefs leading to self-treatment, loss of income, lack of social support, drug side effects, pill burden, lack of food, stigma with lack of disclosure, and lack of adequate

*Abbreviations:* AIDS, acquired immune deficiency syndrome; DOTS, directly observed treatment schedule; HEWs, health extension workers; HIV, human immune virus; HP, health post; TB, tuberculosis; WHO, World Health Organization.

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communication with health professionals were some of the documented factors [9–11]. Knowing factors contributing to non-adherence to TB treatment helps policy makers, health care providers, the community as well as patients to tackle the problem.

Few studies have used qualitative methods to explore about factors contributing towards non-adherence to treatment among TB patients. This study, thus, aims to explore factors contributing for non-adherence among TB patients in Sodo Woreda, Gurage Zone, Southern Ethiopia.

## Methods

### *Study design and period*

We used a phenomenological study design approach to explore factors contributing for non-adherence with TB treatment over a two-month period from February 25 to April 27 of 2014.

### *Study area*

The study was conducted in Sodo Woreda (second from lowest administrative units in the government structure), one of the districts from Gurage Zone, in Southern Nations, Nationalities and Peoples Regional State of Ethiopia. The district is bordered, from south, by Meskan and from west, north and east by the Oromia regional state. The administrative center of Sodo is Buee and it covers an area of 109,943 ha. The district is about 178 km far from the capital of the region, Awassa and 105 km from Addis Ababa. The total population of the Woreda is estimated to be 175,725 of which 89,619 (51%) are female according to the 2007 national census projected for 2012/2013. Ninety percent of the population resides in the rural part of the district [12].

Majority (93%) of the inhabitants practice orthodox Christianity faith. The Woreda is primarily inhabited by the Sodo Gurage and small number of Oromo and Amhara ethnic groups. There are 4 urban and 54 rural kebeles (lowest administrative units in the government structure) under the district. The rural part of the district includes both highland and lowland kebeles which have difference in morbidity rates. At the time of the survey, the district had eight health centers, 55 health posts as well as two private clinics and three drug stores [12].

### *Selection of study sites and participants*

Among the seven health centers and 16 health posts that serve DOTS program in the Woreda, four health centers (eleven participants) and seven health posts (eleven participants) were selected. The research sites were chosen based on advice from Woreda focal personnel, Woreda administrator, Woreda health office, health extension workers (HEWs) and DOTs clinic nurses whereas the sites were considered to be DOT clinics, they were also chosen because they represented diversity being located in different areas of the Woreda. Upon selecting the study participants, criterion purposive sampling was employed. Consideration was given to priority criteria to meet the research objectives. The parties consulted during the study site selection were also asked to assist on the recruiting process of potential interviewees. Health center databases and clinic DOTS registry books were used in tracing the participants on any phase of treatment.

The study included those TB patients who had interrupted TB treatment or who had poor adherence to their treatment. The health facility TB registration book was used as a source of information about the patient characteristics. A total of 22 respondents were involved for the interview; five in Buee health center, two in Kela health center, two in Tiya health center, two in Refanso health center, three in Wacho health post, two in Gogeti-one health post, two in Agamsenado health post, one in Gogeti-three health post, one in Wodoget health post, one in Gogeti-two health post, and one in Adazer health post. Out of the 22 participants, 18 were new-patients initiated for an intensive phase, two were relapsed and were under a continuation phase and the rest two were failure who are on their 'intensive phase' treatment.

Confirmation of participants' involvement into the study was based on their consent and as per the recruitment guideline developed by the researchers. The guideline contains procedures briefly about the potential participant. After taking the address of recruited participants, the investigators and HEWs visited their home. Participants had to fully understand what the study was and how their privacy will remain confidential. The voluntary nature of the study was explained to the study participants. If the patient wishes to take part, they were given to sign the consent form. Last, the investigators discussed with the selected participants to arrange and fix the time and date for the interview.

The major variables of interest were; reasons for non-adherence against TB treatment from lived experiences and the views of TB patients on the disease and its treatment. Probes were directed based on subsequent narrations. Each session lasted about 60–90 min for the in-depth interviews. Data was collected by two research assistants who had a prior experience on qualitative data collection and could speak both Amharic as well as Guragigna languages. They were trained for one week on TB and skills required in respective responsibilities.

After obtaining consent from participants, in-depth interviews were tape-recorded. Notes were also being taken during the interviews. The research assistants were engaged with participants by posing question in natural manner, listening participants response attentively and asking follow-up questions and probes based on the participants responses. The interview was conducted face-to-face and one interviewer and one participant. The interview was conducted in a convenient place for the participants. These interviews were taking place in the patient's own home and at health facility based on their interest and residence.

### *Operational definition*

#### *Non-adherence*

A patient is said to be non-adherent if he/she missed three or more of the doses of the prescribed anti-TB drugs.

### *Ethical approval and consent to participate*

Prior to gaining consent form the participants, permission to carry out the study was requested and obtained from Jimma University Research Ethics Committee. Necessary permission was obtained from the respective localities of Sodo Woreda administrative council, the Woreda health office and the health centers. After all permission requests were granted, an invitation letter, that explains the purpose of the study and rights of participants, was distributed to all participants. Participants were assured that they could withdraw from the study at any time during study period. Written consent was sought in all cases. The privacy of subjects was fully respected during data collection and dissemination of results. Sessions were arranged in a private and quiet place convenient for the participants. The identities of in-depth interviewees were changed to ensure that they would not be identified. The tape records and transcripts were kept in a safe place and remain confidential.

### *Analysis*

Data collection and analysis were done simultaneously. After each interview data collection, the investigators and the research

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