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1 Seung KJ, Keshavjee S, Rich ML.

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TEXT AVAILABILITY

Abstract

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Full text

**Multidrug-Resistant Tuberculosis and Extensively Drug-Resistant Tuberculosis.**

1 Seung KJ, Keshavjee S, Rich ML.  
 Cite Cold Spring Harb Perspect Med. 2015 Apr 27;5(9):a017863. doi: 10.1101/cshperspect.a017863.  
 PMID: 25918181 [Free PMC article](#). [Review](#).  
 Share The continuing spread of drug-resistant **tuberculosis** (TB) is one of the most urgent and difficult challenges facing global TB control. ...Community-based programs can improve treatment outcomes by allowing patients to be treated in their homes and addressing socioeconomic ...

**Adherence interventions and outcomes of tuberculosis treatment: A systematic review and meta-analysis of trials and observational studies.**

2 Alipanah N, Jarlsberg L, Miller C, Linh NN, Falzon D, Jaramillo E, Nahid P.  
 Cite

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TEXT AVAILABILITY

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Full text

**Adherence interventions and outcomes of tuberculosis treatment: A systematic review and meta-analysis of trials and observational studies.**

1 Alipanah N, Jarlsberg L, Miller C, Linh NN, Falzon D, Jaramillo E, Nahid P.  
 Cite PLoS Med. 2018 Jul 3;15(7):e1002595. doi: 10.1371/journal.pmed.1002595. eCollection 2018 Jul.  
 PMID: 29969463 [Free PMC article](#).  
 Share BACKGROUND: Incomplete **adherence** to **tuberculosis** (TB) treatment increases the risk of delayed

## Lampiran 5. Pencariandenganidentifikasi tujuan (artikel 1) :The Effect of Psychosocial Factors and Patients' Perception of Tuberculosis Treatment Non-Adherence in Addis Ababa, Ethiopia)

The Effect of Psychosocial Factors and Patients' Perception...

Habteyes H. *et al.*

447

### ORIGINAL ARTICLE

## The Effect of Psychosocial Factors and Patients' Perception of Tuberculosis Treatment Non-Adherence in Addis Ababa, Ethiopia

Habteyes Hailu Tola<sup>1,2\*</sup>, Gholamreza Garmaroudi<sup>1</sup>, Davoud Shojaeizadeh<sup>1</sup>, Azar Tol<sup>1</sup>, Mir Saeed Yekaninejad<sup>3</sup>, Luche Tadesse Ejeta<sup>1</sup>, Abebaw Kebede<sup>2</sup>, Desta Kassa<sup>2</sup>

#### OPEN ACCESS

Citation: Habteyes Hailu Tola, Gholamreza Garmaroudi Davoud Shojaeizadeh, Azar Tola, et al. The Effect of Psychosocial Factors and Patients' Perception of Tuberculosis Treatment Non-Adherence in Addis Ababa, Ethiopia. *Ethiop J Health Sci.*2017;27(5):447. doi:<http://dx.doi.org/10.4314/ejhs.v27i5.2>  
Received: February 28, 2017  
Accepted: March 1, 2017

#### ABSTRACT

**BACKGROUND:** Although there are several studies reported on factors affecting tuberculosis (TB) treatment non-adherence, there is information gap on psychosocial and patients' perceptions aspects. Therefore, this study was aimed to investigate the effect of psychosocial factors and patients' perceptions on TB treatment non-adherence in Ethiopia.

**METHODS:** A cross sectional study was conducted in Addis Ababa from May to December, 2014. Thirty one health facilities were randomly selected and 698 TB patients, who had been on treatment, were enrolled consecutively using patient registration

## Lampiran 6. Pencariandenganidentifikasi tujuan (artikel2 :Prevalence of and Factors Influencing AntiTuberculosis Treatment Non-Adherence Among Patients with Pulmonary Tuberculosis: A CrossSectional Study in Anhui Province, Eastern China)

TB strains to improve its overall management. As a consequence of global concerns about this problem, many studies have found that poor patient adherence to anti-TB treatment is the main risk factor [8]. Many TB patients do not complete their 6-month course of anti-TB medications and are not aware of the importance of sputum re-examinations, thereby putting themselves at risk of developing multidrug-resistant and extensively drug-resistant forms of tuberculosis and relapse [9]. According to the WHO, adherence to TB treatment is the extent to which a patient's medication-taking coincides with the prescribed treatment. Those who have completed treatment (directly observed therapy strategy, DOTS) or are cured correspond to adherents, and the patients who do not complete treatment correspond to non-adherents [10]. Non-adherence to TB treatment threatens the success of treatment, increases the risk of TB spread, causes drug resistance, and increases morbidity and mortality [4,11–13]. Many quantitative studies have investigated risk factors associated with poor adherence to anti-TB treatment [9,14,15]. However, few studies have examined the relationship between socio-economic determinants and treatment adherence. Thus, the aim of this study was to assess the adherence rate among pulmonary TB patients in Anhui Province, eastern China and to explore the factors affecting adherence to anti-TB treatment.

an effective rate of 94.17%.

2 /

#### Study design

This study was conducted in Anhui province, which consists of 106 counties (districts) with a total population of 62.548 million at the end of 2015. A total of 8 counties/districts (including Yuexi county, Taihu county, Jinzhai county, Shou county, Feixi county, Huoqiu county, Shushan district, and Tongcheng city) were selected as study sites. Based on relevant literature and expert consultation, the questionnaire was developed and administered by trained doctors and health workers. The questionnaire is composed of 4 parts: general information, status of treatment, knowledge on TB prevention and treatment, and access to information on TB. The first section includes 13 questions involving demographic and economic characteristics (such as gender, occupation, educational level, marital status, annual income, annual income, medication adherence, and presence of chronic diseases). The second section consists of 23 questions, including questions on missed medication and reasons why, completion of treatment course, whether visited by the medical staff and levels of the staff, and distance from residence to the nearest clinic or hospital. The section on TB knowledge is composed of 12 questions covering items such as tuberculosis transmission, suspicious symptoms of tuberculosis, and BCG. The access to information on TB section is made up of 5 clear multiple-choice questions. For the respondents who were unable to response themselves, the questionnaire was completed with the help of trained LTD nurses.

## Lampiran 7. Pencariandenganidentifikasitujuan (artikel3 :Non-Adherence to Anti-Tuberculosis Treatment and Determinant Factors among Patients with Tuberculosis in Northwest Ethiopia)



### Non-adherence to anti-tuberculosis treatment, reasons and associated factors among TB patients attending at Gondar town health centers, Northwest Ethiopia

Habtamu Sewunet Mekonnen<sup>\*</sup> and Abere Woretaw Azagew

#### Abstract

**Objective:** The aim of this study was to assess the prevalence of non-adherence to anti-tuberculosis treatment, reasons and associated factors among TB patients attending at Gondar town health centers.

**Result:** A total of 314 participants were included with the response rate of 97.5%. The mean age of participants was 35.94 (SD ± 13.83) years. The overall rate of non-adherence to anti-TB treatment was 21.2% (95% CI 17.2, 26.1). Continuation phase of treatment (AOR = 2.27, 95% CI (1.54, 5.94)), presence of more than one co-morbidity (AOR = 6.22; 95% CI (2.21, 17.48)), poor knowledge about TB and anti-TB therapy (AOR = 4.11; 95% CI 1.57, 10.75), poor patient-provider relationship (AOR = 4.60, 95% CI 1.63, 12.97), and alcohol intake (AOR = 5.03; 95% CI 1.54, 16.40) were significantly associated with non-adherence. Forgetting 40 (23.1%), Being busy with other work 35 (20.2%), and being out of home/town 24 (13.9%) were the major reasons of participants for interruption of taking anti-TB medications.

**Keywords:** Prevalence, Reasons, Non-adherence, Tuberculosis treatment, Ethiopia

## Lampiran 8. Pencariandenganidentifikasitujuan (artikel4 :The prevalence and factors associated for anti-tuberculosis treatment non-adherence among pulmonary tuberculosis patients in public health care facilities in South Ethiopia: a cross-sectional study)

Woimo et al. *BMC Public Health* (2017) 17:269

Page 2 of 10

#### Background

Evidence exists that tuberculosis (Tb) is a major public health problem throughout the world, with an estimated 9.6 million annual incident cases, of which 1.2 million (12%) were co-infected with HIV and 1.5 million died globally in 2014 [1]. South East Asia (29%) and Africa (26%) accounted for the highest number of Tb cases, and both continents also shared 75% of global Tb deaths [2]. India, china and South Africa are countries with the highest burden of Tb accounting for 1.98 million [3], 1.4 million [2] and 0.5 million [4] respectively.

Standard Tb treatment requires patients to take a

of and factors associated for non-adherence towards anti-Tb treatment in 18 health care facilities in South Ethiopia using mixed methods.

#### Methods

##### Study design, settings and participants

This was an institution based cross-sectional survey that mixed quantitative and qualitative methods. We followed the guidelines on programmatic management of tuberculosis in Ethiopia for diagnosis and classification of Tb cases [5]. The zone is locate in Southern Nation, Nationalities and Peoples Region (SNNPR) and is

**Lampiran 9. Pencariandenganidentifikasitujuan (artikel5 :Factors influencing adherence to tuberculosis treatment in Asmara, Eritrea: a qualitative study)**

## Factors influencing adherence to tuberculosis treatment in Asmara, Eritrea: a qualitative study



Frezghi Hidray Gebreweld<sup>1</sup>, Meron Mehari Kifle<sup>2\*</sup>, Fitusm Eyob Gebremicheal<sup>1</sup>, Leban Lebahati Simel<sup>2</sup>, Meron Mebrahtu Gezae<sup>1</sup>, Shewit Sibhatu Ghebreyesus<sup>1</sup>, Yordanos Tesfamariam Mengsteab<sup>1</sup> and Nebiat Ghirmay Wahd<sup>1</sup>

### Abstract

**Background:** Non-adherence to tuberculosis (TB) treatment is an important barrier for TB prevention and control. Poor adherence may result in prolonged disease infectiousness, drug resistance, relapse and death. **The aim of this study was to assess factors influencing adherence to tuberculosis treatment in selected health facilities in Asmara, Eritrea.**

**Methods:** A qualitative study which included in-depth interviews with 12 TB patients, three focus group discussions in selected health facilities in which one group comprised eight patients and key informant interviews with three health workers. Data analysis was done by translating and transcribing the verbatim of the interviews and focus group discussions. Transcribed data was then analysed using thematic

**Lampiran 11. Pencariandenganidentifikasitujuan (artikel6 :Self-reported adherence and associated factors to isoniazid preventive therapy for latent tuberculosis among people living with HIV/AIDS at health centers in Gondar town, North West Ethiopia)**

Open Access Full Text Article

ORIGINAL RESEARCH

## Self-reported adherence and associated factors to isoniazid preventive therapy for latent tuberculosis among people living with HIV/AIDS at health centers in Gondar town, North West Ethiopia

Asnakew Achaw Ayele<sup>1</sup>  
Seyfe Asrade Atnafie<sup>2</sup>  
Demis Driba Balcha<sup>1</sup>  
Asegedech Tsegaw  
Weredekal<sup>2</sup>  
Birhanu Alemayehu

**Purpose:** **This study aimed to assess self-reported adherence and associated factors to isoniazid preventive therapy (IPT) for latent tuberculosis among people living with HIV/AIDS (PLWHA) at health centers in Gondar town, North West Ethiopia.**

**Patients and methods:** An institution-based prospective cross-sectional study was conducted from March 10 to June 11, 2016. A total of 154 eligible participants were included in the study, using the simple random sampling method, from the available four health centers and one teaching referral hospital that provided antiretroviral therapy (ART) for HIV/AIDS patients.

**Lampiran 12. Pencarian dengan identifikasi tujuan (artikel 7 : Psychological changes and associated factors among patients with tuberculosis who received directly observed treatment short-course in metropolitan areas of Japan: quantitative and qualitative perspectives)**

## Psychological changes and associated factors among patients with tuberculosis who received directly observed treatment short-course in metropolitan areas of Japan: quantitative and qualitative perspectives




Kae Nagahiro Shiratani 


### Abstract

**Background:** The directly observed treatment short-course (DOTS) is one of the most effective tuberculosis (TB) control measures worldwide. However, despite its aim of providing comprehensive and humanistic care, few studies have examined its psychological effects from the patient's perspective. Thus, this study aimed to evaluate the psychological changes and identify associated factors among patients with TB undergoing the DOTS program in Japan.


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## Lampiran 16. Pencarian dengan identifikasi tujuan (artikel 8 : Drug adherence and efficacy of smear microscopy in the diagnosis of pulmonary tuberculosis after 2 months of medication in North-western Tanzania)

## Drug adherence and efficacy of smear microscopy in the diagnosis of pulmonary tuberculosis after 2 months of medication in North-western Tanzania



Benson R. Kidenya<sup>a,\*</sup>, Stephen E. Mshana<sup>b</sup>, Lisa Gerwing-Adima<sup>c</sup>, Jeremiah Kidola<sup>d</sup>, Christa Kasang<sup>e</sup>

<sup>a</sup> Department of Biochemistry and Molecular Biology, Catholic University of Health and Allied Sciences (CUHAS)–Bugando Mwanza Tanzania, P.O. Box 1464, Mwanza, Tanzania

<sup>b</sup> Department of Medical Microbiology and Immunology, Catholic University of Health and Allied Sciences (CUHAS)–Bugando, Mwanza Tanzania, P.O. Box 1464, Mwanza, Tanzania

<sup>c</sup> Tuberculosis Laboratory, Bugando Medical Centre, Mwanza Tanzania, P.O. Box 1370, Mwanza, Tanzania

<sup>d</sup> National Institute for Medical Research (NIMR), Mwanza Tanzania, P.O. Box 1462, Mwanza, Tanzania

<sup>e</sup> Department of Infectious Diseases, Medical Mission Institute, Würzburg, Germany

### ARTICLE INFO

#### Article history:

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#### Keywords:

Drug adherence

### ABSTRACT

**Objectives:** The study aimed at assessing the Tuberculosis (TB) medication adherence level and the efficacy of smear microscopy in the diagnosing pulmonary TB at month 2.

**Methods:** A prospective study was conducted at the four sites located in the Northern-western Tanzania. New smear positive, pulmonary TB patients were followed up and their adherence to TB medication assessed after 2 months of the treatment. In addition, the acid fast bacilli (AFB) smear microscopy was performed after 2 and 5 months of the treatment. All smear positive samples were subjected to geneXpert (MTB/RIF) assay and culture on the Lowenstein Jensen (LJ) media.

**Results:** A total of 331 smear positive, newly diagnosed patients with pulmonary TB were enrolled. The median adherence to TB medication was 60% (95% CI: 55–65%). The adherence to TB medication was significantly higher among patients who were followed up at month 2 compared to month 5 (p < 0.001).

## Lampiran 17. Pencaria dengan identifikasi tujuan (artikel 9 : Social support a key factor for adherence to multidrugresistant tuberculosis treatment)

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INDIAN JOURNAL OF TUBERCULOSIS 65 (2018) 41–47

TB treatment was only 50%, mostly due to high death rates and loss to follow-up. Similar to the global trends, the treatment success rate in India for 12,125 reported was 48% with 22% death rate and 19% lost to follow up (LFU).<sup>2</sup> To achieve the Global Plan to end TB target of 90%,<sup>3</sup> programs need to enhance the treatment adherence. Completing MDR-TB treatment successfully is challenging considering the long duration of treatment, number of pills and toxicity of drugs. Studies of predictors of poor treatment outcomes and risk factors associated with LFU have been conducted previously.<sup>4–9</sup> Studies conducted earlier from India<sup>10,11</sup> had highlighted factors affecting adherence to tuberculosis treatment, but there is limited knowledge about factors influencing treatment adherence in MDR-TB patients which is more complicated as compared to the first line anti-TB treatment. A qualitative study was conducted to understand patient and provider related factors to MDR-TB treatment adherence and successful treatment completion.

## 2. Methods

### 2.1. Study setting

This qualitative study occurred in seven districts of Maharashtra linked to Drug-resistant TB Centre (DRTBC) in Nagpur.

### 2.2. Data collection

In-depth interviews were conducted in regional language. The patient interview guide included open-ended questions related to the diagnosis, treatment experiences, factors influencing treatment adherence, etc. Questions on training, experience of treating MDR-TB patients, challenges of providing treatment, reasons for successfully completion of treatment and their recommendations to improve adherence were included for providers. The interview guides for patients and providers were pilot tested and questions were readapted during concurrent analysis in accordance with a grounded theory methodological approach.

### 2.3. Theoretical framework

The social cognitive framework as conceptualised by Bandura was explored as a way to guide our understanding of the multiple factors affecting treatment adherence among MDR-TB patients. It incorporates personal factors, environmental factors, and behavioural factors.<sup>14–16</sup> It suggests, a multifaceted causal structure is linked with human motivation, action and well-being and offers both predictors of adherence and recommendations for its promotion.<sup>14</sup>

### 2.4. Data analysis

## Lampiran 18. Pencarian dengan identifikasi tujuan (artikel 10 : Factors contributing to non-adherence with treatment among TB patients in Sodo Woreda,



## Gurage Zone, Southern Ethiopia: A qualitative study)

JIPH-682; No. of Pages 7

ARTICLE IN PRESS

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2

C. Gugssa Boru et al. / Journal of Infection and Public Health xxx (2017) xxx–xxx

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 low-

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

## Lampiran artikel

### Lampiran 19. Artikel 1 (PubMed)

**ORIGINAL ARTICLE****The Effect of Psychosocial Factors and Patients' Perception of Tuberculosis Treatment Non-Adherence in Addis Ababa, Ethiopia**

Habteyes Hailu Tola<sup>1,2\*</sup>, Gholamreza Garmaroudi<sup>1</sup>, Davoud Shojaeizadeh<sup>1</sup>, Azar Tol<sup>1</sup>, Mir Saeed Yekaninejad<sup>3</sup>, Luche Tadesse Ejeta<sup>1</sup>, Abebaw Kebede<sup>2</sup>, Desta Kassa<sup>2</sup>

**OPEN ACCESS**

Citation: Habteyes Hailu Tola, Gholamreza Garmaroudi, Davoud Shojaeizadeh, Azar Tol, et al. The Effect of Psychosocial Factors and Patients' Perception of Tuberculosis Treatment Non-Adherence in Addis Ababa, Ethiopia. *Ethiop J Health Sci*. 2017;27(5):447. doi:<http://dx.doi.org/10.4314/ejhs.v27i5.2>

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Funding: Family Guidance Association of Ethiopia

Competing Interests: The authors declare that this manuscript was approved by all authors in its form that no

**ABSTRACT**

**BACKGROUND:** Although there are several studies reported on factors affecting tuberculosis (TB) treatment non-adherence, there is information gap on psychosocial and patients' perceptions aspects. Therefore, this study was aimed to investigate the effect of psychosocial factors and patients' perceptions on TB treatment non-adherence in Ethiopia.

**METHODS:** A cross sectional study was conducted in Addis Ababa from May to December, 2014. Thirty one health facilities were randomly selected and 698 TB patients, who had been on treatment, were enrolled consecutively using patient registration number. Structured questionnaire was used to collect data on demographics, knowledge, psychological distress, alcohol use, tobacco smoking and six HBM domains. Treatment adherence level was the main outcome variable, and it measured using visual analog scale. Statistical Package for Social Sciences version 20 was used for data analysis.

**RESULTS:** Non-adherence level within last one month prior to the study was 19.5%. After controlling for all potential confounding variables, Antiretroviral Therapy (ART) status (Adjusted Odds Ratio (AOR) = 1.79, 95% Confidence interval (CI) (1.09 -2.95)),

## Prevalence of and Factors Influencing Anti-Tuberculosis Treatment Non-Adherence Among Patients with Pulmonary Tuberculosis: A Cross-Sectional Study in Anhui Province, Eastern China

Authors' Contribution:  
Study Design A  
Data Collection B  
Statistical Analysis C  
Data Interpretation D  
Manuscript Preparation E  
Literature Search F  
Funds Collection G

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\* Xue-Hui Fang and Hui-Hui Shen contributed equally to this work and should be considered co-first authors

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Source of support: Departmental sources

**Background:** To assess the non-adherence rate among pulmonary tuberculosis (TB) patients in Anhui Province, eastern China and to explore the influential factors, so as to identify targets for intervention.

**Material/Methods:** A total of 339 TB patients were recruited from TB dispensaries in 8 counties of Anhui Province, eastern China using a stratified sampling method. All study subjects were surveyed using a structured questionnaire. Differences between groups involving categorical data were analyzed using the chi-square test.

**Results:** Overall, of the 339 patients, 33.63% missed medication. Divorced and widowed patients were more likely to miss medication compared with those who were married or unmarried ( $P<0.01$ ). Regarding the knowledge related to topics such as transmission route, preventive measures, and suspicious symptoms, the awareness rate in the group with good medication compliance was higher than in the group with poor compliance ( $P<0.05$ ). We found that compliance was not significantly associated with seeking medical treatment in professional institutions, the national free TB treatment policy, or discrimination ( $P>0.05$ ). The rate of non-compliance under supervision (26.10%) was lower than that without supervision (64.18%) ( $P<0.001$ ).

**Conclusions:** The anti-TB treatment non-adherence rate in TB patients is relatively high in Anhui Province, eastern China, and is associated with marital status, annual income, TB knowledge, and medical staff visits.

**MeSH Keywords:** Factor Analysis, Statistical • Patient Compliance • Tuberculosis

## RESEARCH NOTE

## Open Access



# Non-adherence to anti-tuberculosis treatment, reasons and associated factors among TB patients attending at Gondar town health centers, Northwest Ethiopia

Habtamu Sewunet Mekonnen\* and Abere Woretaw Azagew

## Abstract

**Objective:** The aim of this study was to assess the prevalence of non-adherence to anti-tuberculosis treatment, reasons and associated factors among TB patients attending at Gondar town health centers.

**Result:** A total of 314 participants were included with the response rate of 97.5%. The mean age of participants was 35.94 (SD ± 13.83) years. The overall rate of non-adherence to anti-TB treatment was 21.2% (95% CI 17.2, 26.1). Continuation phase of treatment (AOR = 2.27, 95% CI (1.54, 5.94)), presence of more than one co-morbidity (AOR = 6.22; 95% CI (2.21, 17.48)), poor knowledge about TB and anti-TB therapy (AOR = 4.11; 95% CI 1.57, 10.75), poor patient-provider relationship (AOR = 4.60, 95% CI 1.63, 12.97), and alcohol intake (AOR = 5.03; 95% CI 1.54, 16.40) were significantly associated with non-adherence. Forgetting 40 (23.1%), Being busy with other work 35 (20.2%), and being out of home/town 24 (13.9%) were the major reasons of participants for interruption of taking anti-TB medications.

**Keywords:** Prevalence, Reasons, Non-adherence, Tuberculosis treatment, Ethiopia

## Lampiran 22.Artikel 4 (PubMed)

## The prevalence and factors associated for anti-tuberculosis treatment non-adherence among pulmonary tuberculosis patients in public health care facilities in South Ethiopia: a cross-sectional study



Tadele Teshome Woimo<sup>1</sup>, Wondwossen Kassahun Yimer<sup>2</sup>, Temesgen Bati<sup>3</sup> and Hailay Abrha Gesesew<sup>4,5\*</sup>

### Abstract

**Background:** Evidence exists pointing out how non-adherence to treatment remains a major hurdle to efficient tuberculosis control in developing countries. Many tuberculosis (Tb) patients do not complete their six-month course of anti-tuberculosis medications and are not aware of the importance of sputum re-examinations, thereby putting themselves at risk of developing multidrug-resistant and extensively drug-resistant forms of tuberculosis and relapse. However, there is a dearth of publications about non-adherence towards anti-Tb medication in these settings. We assessed the prevalence of and associated factors for anti-Tb treatment non-adherence in public health care facilities of South Ethiopia.

**Methods:** This was a cross-sectional survey using both quantitative and qualitative methods. The quantitative study was conducted among 261 Tb patients from 17 health centers and one general hospital. The qualitative aspect included an in-depth interview of 14 key informants. For quantitative data, the analysis of descriptive statistics, bivariate and multiple logistic regression was carried out, while thematic framework analysis was applied for the qualitative data.

**Results:** The prevalence of non-adherence towards anti-Tb treatment was 24.5%. Multiple logistic regression analysis demonstrated that poor knowledge towards tuberculosis and its treatment (AOR = 4.6, 95%CI: 1.4-15.6), cost of medication other than Tb (AOR = 4.7, 95%CI: 1.7-13.4), having of health information at every visit (AOR = 3, 95% CI: 1.1-8.4) and distance of DOTS center from individual home (AOR = 5.7, 95%CI: 1.9-16.8) showed statistically significant association with non-adherence towards anti-tuberculosis treatment. Qualitative study also revealed that distance, lack of awareness about importance of treatment completion and cost of transportation were the major barriers for adherence.

**Conclusions:** A quarter of Tb patients interrupted their treatment due to knowledge, availability and accessibility of DOTS service. We recommend creating awareness about anti-Tb treatment, and decentralization of drug pick-ups to the lowest level of health institutions.

**Keywords:** Prevalence, anti-tuberculosis, non-adherence, cross-sectional survey, mixed method, qualitative method, Ethiopia

## Lampiran 23.Artikel 5 (PubMed)

## RESEARCH ARTICLE

## Open Access



## Factors influencing adherence to tuberculosis treatment in Asmara, Eritrea: a qualitative study

Frezghi Hidiray Gebreweld<sup>1</sup>, Meron Mehari Kifle<sup>2\*</sup>, Fitusm Eyob Gebremicheal<sup>1</sup>, Leban Lebahati Simel<sup>2</sup>, Meron Mebrahtu Gezae<sup>1</sup>, Shewit Sibhatu Ghebreyesus<sup>1</sup>, Yordanos Tesfamariam Mengsteab<sup>1</sup> and Neblat Ghirmay Wahd<sup>1</sup>

### Abstract

**Background:** Non-adherence to tuberculosis (TB) treatment is an important barrier for TB prevention and control. Poor adherence may result in prolonged disease infectiousness, drug resistance, relapse and death. The aim of this study was to assess factors influencing adherence to tuberculosis treatment in selected health facilities in Asmara, Eritrea.

**Methods:** A qualitative study which included in-depth interviews with 12 TB patients, three focus group discussions in selected health facilities in which one group comprised eight patients and key informant interviews with three health workers. Data analysis was done by translating and transcribing the verbatim of the interviews and focus group discussions. Transcribed data was then analysed using thematic framework procedure.

**Results:** This study found that patients lacked knowledge about the cause, transmission and duration of treatment of TB. The most common reason mentioned for discontinuing treatment was the patient "felt cured". Almost half of the respondents did not know the standard treatment duration and the consequences they face if they halt treatment. Patients reported losing their job when their diagnosis was known, were too ill to continue working or unable to find daily work due to time-consuming treatment arrangements. With few exceptions, the majority of patients reported that the short distance to the clinic encouraged them to attend regular treatment follow-up. Most of the respondents were unable to get enough food, leading to stress and feelings of hopelessness. Lack of social support for most of the patients was a critical factor for adherence as were stigma, medication side effects and long treatment duration. Recognized as an enabler to treatment adherence, health workers had good communication and positive attitude towards their patients.

**Conclusion:** Lack of knowledge, loss of income, stigma and lack of social support, drug side effects and long treatment duration emerged as important barriers for treatment adherence. Short distances to health facilities, good communication and accepting attitude of health care providers emerged as enablers for treatment adherence. For better treatment adherence, comprehensive health education at treatment sites, patient's family members and the community at large and strengthening of social support structures need to be addressed.

**Keywords:** Tuberculosis, DOTS, Barriers to treatment adherence, Asmara, Eritrea

## Lampiran 24. Artikel 6 (PubMed)

## Self-reported adherence and associated factors to isoniazid preventive therapy for latent tuberculosis among people living with HIV/AIDS at health centers in Gondar town, North West Ethiopia

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[Number of times this article has been viewed](#)

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 Seyfe Asrade Atnafie<sup>2</sup>  
 Demis Driba Balcha<sup>1</sup>  
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**Purpose:** This study aimed to assess self-reported adherence and associated factors to isoniazid preventive therapy (IPT) for latent tuberculosis among people living with HIV/AIDS (PLWHA) at health centers in Gondar town, North West Ethiopia.

**Patients and methods:** An institution-based prospective cross-sectional study was conducted from March 10 to June 11, 2016. A total of 154 eligible participants were included in the study, using the simple random sampling method, from the available four health centers and one teaching referral hospital that provided antiretroviral therapy (ART) for HIV/AIDS patients. Adherence was measured by self-report of isoniazid (INH) tablets taken for the preceding 7 days. Participants were recruited through in-depth interviews. The collected data were entered and analyzed using the statistical packages for social sciences (SPSS) version 20.

**Results:** The adherence level to IPT was 90.3% for the last 7 days of the study. ART was initiated for 84.4%, and all of them were on a first-line regimen. Isoniazid-related side effects were reported by 48 (31.2%) participants, of which the most commonly identified were abdominal pain, vomiting, skin rash, jaundice, and numbness. Only 3 (2%) participants discontinued from the study. In the bivariate logistic regression analysis, respondents who had received an explanation about IPT were 83% times more likely to be adherent compared to those who had not received it (95% CI, AOR: 0.266 [0.23–3.127]). Respondents who had taken IPT for  $\geq 5$  months were more likely to be adherent than those who had taken it for 1–2 months [95% CI, COR: 1.484]. On the other hand, respondents who experienced side effects were 36% less likely to be adherent compared to those who did not experience any.

**Conclusion:** The level of adherence to IPT among PLWHA was high. Among the predictors reported, carelessness and/or forgetfulness, side effects, and absence from home were the major factors identified for being nonadherent. Health professionals and the Ministry of Health should design and deliver appropriate health education tips and messages. Moreover, counseling of patients who are in their first 2 months of therapy should be strengthened further.

**Keywords:** adherence, isoniazid, preventive therapy, HIV/AIDS, side effects

## Lampiran 25. Artikel 7 (PubMed)

## RESEARCH ARTICLE

## Open Access

# Psychological changes and associated factors among patients with tuberculosis who received directly observed treatment short-course in metropolitan areas of Japan: quantitative and qualitative perspectives



Kae Nagahiro Shiratani

## Abstract

**Background:** The directly observed treatment short-course (DOTS) is one of the most effective tuberculosis (TB) control measures worldwide. However, despite its aim of providing comprehensive and humanistic care, few studies have examined its psychological effects from the patient's perspective. Thus, this study aimed to evaluate the psychological changes and identify associated factors among patients with TB undergoing the DOTS program in Japan.

**Methods:** This cross-sectional study recruited patients with TB receiving the DOTS program via 32 public health centers in four metropolitan cities in Japan. Surveys were administered to the patients and their attending public health or clinical nurses, who were responsible for their care and the DOTS program. Data were collected regarding the patients' demographic and clinical characteristics, post-traumatic growth (using the Post-Traumatic Growth Inventory-Short Form [PTGI-SF]), and medication adherence, alongside open-ended questions, from 2014 to 2015. Additionally, the patients' appraisal of the DOTS program's efficacy and nurses' assessment of the program's practices were measured using two original questionnaires. Factors associated with post-traumatic growth were analyzed using variable estimation, correlation analysis, and logistic regression. Thematic analysis was conducted on the open-ended responses.

**Results:** Questionnaires were returned by 127 patients (125 valid answers); 98 (78.4%) of the respondents were men. Their mean age was 63.3 (standard deviation: 15.8) years. The mean PTGI-SF score was 21.7 (standard deviation: 11.1). The logistic regression analysis found that post-traumatic growth was significantly associated with the patients' appraisal of the program's efficacy (odds ratio [OR] = 1.157, 95% confidence interval [CI] = 1.026–1.304) and nurses' assessment of the practices (OR = 1.307, 95% CI = 1.065–1.603). In the qualitative analysis, "Non-acceptance," "Frustration," and "Anxiety" were extracted as barriers to treatment; "Fear," "Acquiring a partner," "Relief," and "Belief" were extracted as treatment drivers; and "Life changes" and "Rebuilding oneself" were extracted as treatment outcomes.

**Conclusions:** The DOTS program in Japan improves patients' treatment adherence and leads to recovery and psychological growth. Even in other regions, it may be effective to incorporate this program's practices that place importance on partnerships with patients. It is also necessary to continue refined quantitative and qualitative evaluations.

**Keywords:** Tuberculosis, Post-traumatic growth, Directly observed treatment short-course, Patient-centered care, Recovery, Public health nurse, Japan



## Lampiran 26. Artikel 8 (Science Direct)

# Drug adherence and efficacy of smear microscopy in the diagnosis of pulmonary tuberculosis after 2 months of medication in North-western Tanzania



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Mwanza

Tanzania

### ABSTRACT

**Objectives:** The study aimed at assessing the Tuberculosis (TB) medication adherence level and the efficacy of smear microscopy in the diagnosing pulmonary TB at month 2.

**Methods:** A prospective study was conducted at the four sites located in the Northern-western Tanzania. New smear positive, pulmonary TB patients were followed up and their adherence to TB medication assessed after 2 months of the treatment. In addition, the acid fast bacilli (AFB) smear microscopy was performed after 2 and 5 months of the treatment. All smear positive samples were subjected to geneXpert (MTB/RIF) assay and culture on the Lowenstein Jensen (LJ) media.

**Results:** A total of 331 smear positive, newly diagnosed patients with pulmonary TB were enrolled. The median age was 36 [Interquartile range (IQR): 28–45] years and males formed the slightly majority, 187 (56.5%) of the participants. A total of 105 (31.7%) patients were infected with HIV. Out of 331 patients, 36 (10.9%) were still AFB smear positive at the end of two month. Of these 19 (52.8%) were positive on GeneXpert MTB RIF and none was Rifampicin resistant. Of note, only 13 (31.1%) were culture positive (viable). None of the patients was positive at month 5. Poor adherence to TB medications in the first 2 months of treatment was observed in 56/331 (16.9%) [95% CI = 12.9–21.0] of the patients.

## Lampiran 27. Artikel 9 (Science Direct)



## Original Article

## Social support a key factor for adherence to multidrug-resistant tuberculosis treatment

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## ABSTRACT

**Background:** Multidrug-resistant tuberculosis (MDR-TB) is emerging as a major public health problem globally. Treatment success rates in MDR-TB across the globe are not encouraging as completing MDR-TB treatment successfully is challenging due to high proportion of lost to follow up.

**Methods:** Using qualitative methods and grounded theory approach, in-depth interviews were conducted with MDR-TB patients and treatment providers. The social cognitive

framework was explored as a way to guide understanding of the factors affecting treatment adherence among MDR-TB patients.

**Results:** Multiple factors influenced patient's decision to adhere to MDR-TB treatment. Self-

motivation, awareness about disease and treatment, counselling support, family support, nutritional support and social support were important drivers for successful treatment. Providers related that motivational counselling, nutritional support, family support and social support encouraged treatment adherence.

**Conclusion:** To improve MDR-TB treatment adherence, a patient-centric approach should be considered at the programmatic level. There is a need to formulate strategy that includes motivational counselling, nutritional supplementation and social support mobilisation for treatment adherence. Participants suggested a Patient Support Group led treatment care model for better adherence and treatment success rates in MDR-TB treatment.

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**Lampiran 28. Artikel 10 (Science Direct)**

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**Factors contributing to non-adherence with treatment among TB patients in Sodo Woreda, Gurage Zone, Southern Ethiopia: A qualitative study**Cherinet Gugssa Boru<sup>a</sup>, Tariku Shimels<sup>b,\*</sup>, Arebu Issa Bilal<sup>c</sup><sup>a</sup> *Kolfe Keranyo Sub-City Food, Medicine and Health Care Administration and Control Authority, Addis Ababa, Ethiopia*<sup>b</sup> *Ethiopian Federal Police Commission Health Service Directorate, Medical Logistics and Pharmaceutical Service Coordination, P.O. Box 21652, Addis Ababa, Ethiopia*<sup>c</sup> *Departement of Pharmaceutics and Social Pharmacy, School of Pharmacy, College of Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia*

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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

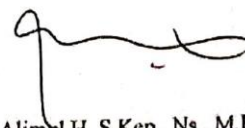
### BERITA ACARA REVISI SKRIPS

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**Judul** : FAKTOR YANG MEMPENGARUHI KEPATUHAN MNUM OBAT  
 PADA PENDERITA TUBERKULOSIS

No.	Proposal	Perbaikan
1	Bab 1	<ul style="list-style-type: none"> <li>- Angka keberhasilan pasien</li> <li>- Tingkat kepatuhan berapa persen</li> <li>- Identifikasi faktor di latar belakang</li> </ul>
2	Bab 3	<ul style="list-style-type: none"> <li>- Artikel minimal 5 tahun</li> </ul>
3	Bab 4	<ul style="list-style-type: none"> <li>- Kaitkan dengan teori</li> <li>- Tambahkan teori yang menjelaskan</li> <li>- Artikel dikerucutkan</li> <li>- Jelaskan kelemahan artikel</li> <li>- Diperkuat dipembahasan</li> <li>- Jelaskan proses pencarian</li> </ul>
4	Bab 2	<ul style="list-style-type: none"> <li>- Tambahkan teori yang berkaitan dengan pembahasan</li> </ul>

Surabaya 01 September 2020

Penguji



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PADA PENDERITA TUBERKULOSI

No.	Proposal	Perbaikan
1	Bab 2	- Refrensi tambahkan artikel - Tambahkan teori yang berkaitan dengan pembahasan
2	Bab 1,2,3	- Sistematika penulisan
3	Bab 4	- Pembahasan : tambahkan dan perjelas teori yang digunakan dan kaitkan dengan pembahasan

Surabaya 01 September 2020

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 OBAT PADA PENDERITA TUBERKULOSI

No.	Proposal	Perbaikan
1	Bab 2	- Dispesifikan faktor apa - Lengkapi dengan teori yang mendukung di BAB 2
2	Bab 1,2,3	- Sistematika penulisan
3	Bab 3	- Jelaskan pencarian
4	Bab 4	- Artikel 4&5 sebutkan instrumen yang jelas - Pembahasan : opini belum tampak - Jelaskan teori yang berkaitan
5	Bab 5	- Kesimpulan ; lengkapi kalimatnya
6	Abstrak	- Fokuskan masalah - Metode : tambahkan keyword

Surabaya 01 September 2020

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NO	Hari/Tanggal	Catatan Pembimbing	Hasil Revisi	TD
1	02-12-2019	Konsul Judul	Revisi masalah	f
2	17-12-2019	Konsul Bab 1	Revisi masalah	f
3	30-12-2019	Konsul Bab 2	Revisi masalah	f
4	14-01-2020	Konsul Bab 1 & 2	Revisi bab 1 & 2	f
5	22-01-2020	Konsul Bab 1 & 2	Revisi bab 2	f
6	12-02-2020	Konsul Bab 1, 2 & 3	Revisi bab 2 & 3	f
7	28-02-2020	Konsul bab 1, 2, 3	Revisi bab 3	f
8	11-03-2020	Konsul bab 1, 2, 3	Revisi bab 3	f
9	23-05-2020	Konsul literatur review	revisi	f
10	20-05-2020	Konsul judul literatur review	Revisi judul	f
11	23-05-2020	Konsul literatur review bab 1 & 2	Revisi bab 2	f
12	13-07-2020	Konsul literatur review bab 1, 2 & 3	revisi bab 1 & 3	f
13	16-07-2020	Konsul literatur review bab 1, 2 & 3	revisi bab 3	f
14	22-07-2020	Konsul literatur review bab 1, 2 & 3	revisi bab 3	f




15	03-08-2020	konsul Bab 3	ACC proposal	Ph.
16	12-08-2020	Revisi sempro	Revisi bab 1	Ph.
17	14-08-2020	Revisi sempro	Lanjut bab 4	Ph.
18	19-08-2020	Konsul literatur review bab 4 & 5	Revisi bab 4 & 5	Ph.
19	22-08-2020	Konsul literatur review bab 4 & 5	Revisi bab 4	Ph.
20	22-08-2020	Konsul literatur review bab 4 & 5	Revisi bab 4	Ph.
21	27-08-2020	Konsul literatur review bab 4 & 5	ACC ujian	Ph.



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NO	Hari/Tanggal	Catatan Pembimbing	Hasil Revisi	TTD
1	30-12-2019	konsul Bab 1	Revisi bab 1	
2	14-01-2020	konsul Bab 1 & 2	Revisi bab 1 & 2	
3	22-01-2020	konsul Bab 1 & 2	Revisi bab 2	
4	12-02-2020	konsul bab 1, 2 & 3	Revisi bab 2 & 3	
5	28-02-2020	konsul bab 1, 2 & 3	revisi bab 3	
6	11-03-2020	konsul bab 1, 2 & 3	Revisi bab 3	
7	23-05-2020	konsul literatur review	revisi	
8	01-07-2020	konsul literatur review bab 1 & 2	revisi bab 1	
9	14-07-2020	konsul literatur review bab 1 & 2	revisi bab 1	
10	16-07-2020	konsul literatur review bab 1, 2 & 3	Revisi bab 2	
11	21-07-2020	konsul literatur review bab 1, 2 & 3	ACC proposal	
12	12-08-2020	konsul revisi sempro	lanjut bab 4	

13	21-08-2020	Revisi Literatur review bab 4 & 5	Revisi bab 4 & 5	
14	25-08-2020	Revisi Literatur review bab 4 & 5	revisi bab 4	
15	27-08-2020	Revisi Literatur review bab 4	ACC Ujian	

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NIM : 20161660031

Fakultas : Ilmu Kesehatan

Program Studi : S1 Keperawatan

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Pada tanggal : 01 September 2020

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**Nur Aini Lailatus Sadiya**

## ABSTRAK

### FAKTOR YANG MEMPENGARUHI KEPATUHAN MINUM OBAT PADA PENDERITA TUBERKULOSIS

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**Latar belakang** : Tuberkulosis (TB) merupakan salah satu masalah kesehatan yang menjadi perhatian bagi bangsa Indonesia dan dunia. Dalam rangka mencapai tujuan pengobatan tuberkulosis diperlukan kesadaran dari penderita tuberkulosis. Waktu yang dibutuhkan untuk pengobatan adalah 6-8 bulan. Hal ini sering mengakibatkan penderita kurang patuh dan minum obat secara tidak teratur. **Tujuan** : Mendeskripsikan penelitian terdahulu tentang faktor-faktor yang mempengaruhi kepatuhan pengobatan pada penderita tuberkulosis dengan melakukan literatur review. **Metode** : Tinjauan sistematis melalui review jurnal mengenai faktor yang mempengaruhi kepatuhan pengobatan pada pasien TB. Pencarian artikel diakses menggunakan database Pubmed dan Science Direct dengan keyword Adherence, therapy, tuberculosi. Dari Pubmed ditemukan 7 jurnal dan database ditemukan 3 jurnal yang sesuai dengan kriteria inklusi. Sistematis review dimulai dari tahun 2015-2020 dengan tipe artikel jurnal, *full text*, spesies yang diteliti manusia dan membahas tentang faktor yang mempengaruhi kepatuhan berobat pada pasien TB. **Hasil** : Berdasarkan analisa ditemukan faktor yang mempengaruhi kepatuhan pengobatan adalah faktor pengetahuan faktor psikologis, faktor stigma, faktor dukungan sosial, faktor komunikasi dengan tenaga kesehatan, faktor motivasi diri, faktor dukungan keluarga, dan faktor informasi tentang penyakit. **Kesimpulan** : Pengetahuan, psikologis, stigma, dukungan sosial, komunikasi dengan tenaga kesehatan, motivasi diri, dukungan keluarga, dan informasi tentang penyakit adalah faktor yang mempengaruhi kepatuhan pada pasien TB.

**Kata Kunci** : *Adherence, therapy, tuberculosi.*

**ABSTRACT****FACTORS AFFECTING THE MEDICATION TAKING CONSISTENCY OF TUBERCULOSIS PATIENTS**

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**Background:** Tuberculosis (TB) is a health problem that is of concern to Indonesia and the world. In order to achieve the goal of tuberculosis treatment, awareness of tuberculosis sufferers is needed. The time required for treatment is 6-8 months. This often results in sufferers being less obedient and taking medication inconsistently. **Objective:** To describe the previous research on the factors that influence treatment consistency of tuberculosis patients by conducting a literature review. **Methods:** Systematic review through journal reviews of factors affecting treatment consistency of TB patients. The articles are accessed using the Pubmed and Science Direct databases with the keywords Adherence, therapy, tuberculosis. It is found 7 journals from Pubmed and 3 journals are matched to the inclusion criteria. Systematic reviews start from journals published in 2015 to 2020 with article types, full text, humans based studies and discusses factors that influence treatment compliance of TB patients. **Results:** Based on the analysis, it is found that the factors that influence medication adherence/ consistency are knowledge of psychological factors, stigma, social support, communication with health workers, self-motivation, family support, and information about disease. **Conclusion:** Knowledge, psychological, stigma, social support, communication with health workers, self-motivation, family support, and information about disease are factors that influence medication consistency of TB patients.

**Keywords:** Adherence, therapy, tuberculosis.

## Latar Belakang

Tuberkulosis (TB) merupakan salah satu masalah kesehatan yang menjadi perhatian bagi bangsa Indonesia dan dunia. Tuberkulosis adalah suatu penyakit infeksi yang menular disebabkan bakteri *Mycobacterium tuberculosis*, yang dapat menyerang berbagai organ, terutama paru-paru. Penyakit ini bila tidak diobati atau pengobatannya tidak tuntas dapat menimbulkan komplikasi berbahaya hingga kematian. *World Health Organization* (WHO) dalam *Global Tuberculosis Report 2015* menyatakan terdapat 22 negara dikategorikan sebagai *high-burden countries* terhadap TB, termasuk Indonesia (WHO, 2015).

Menurut (WHO, 2015) jumlah kasus TB di Asia sebanyak 58%, Afrika sebanyak 28%, Mediterania Timur 8%, wilayah Eropa 3%, dan Amerika 3%. Terdapat enam negara yang memiliki jumlah kasus terbesar yaitu India, Indonesia, Cina, Nigeria, Pakistan, dan Afrika Selatan.

Indonesia menduduki peringkat keempat di dunia dengan negara kasus TB baru terbanyak dengan 460.000 jumlah kasus TB baru per tahun dan tercatat 67.000 kematian per tahun (WHO, 2013). Jumlah kasus tertinggi di Indonesia tingkat provinsi saat ini yang dilaporkan Kemenkes RI (2017) dengan jumlah penduduk yang besar yaitu Jawa Barat, Jawa Timur, dan Jawa Tengah. (RISKESDAS, 2013).

Salah satu usaha untuk menurunkan kasus TB di Indonesia adalah dengan pengobatan. Adapun indikator evaluasi pengobatan TB adalah angka keberhasilan pengobatan (sucess rate) yakni angka yang menunjukkan presentase pasien TB paru terkonfirmasi bakteriologis yang menyelesaikan pengobatan ( baik yang sembuh maupun pengobatan lengkap). Diantara pasien Tb paru terkonfirmasi bakteriologis yang tercatat. Pada tahun 2014 angka keberhasilan pengobatan TB di Indonesia sebesar 87%. Tahun 2015 angka keberhasilan pengobatan TB di Indonesia menurun menjadi 84%, sedangkan pada tahun 2016 meningkat menjadi 85. Penanggulangan TB secara nasional dengan Obat Anti Tuberculosis (OAT) diberikan kepada penderita secara cuma-cuma dan dijamin ketersediaannya. Waktu yang dibutuhkan untuk pengobatan adalah 6-8 bulan. Hal ini sering mengakibatkan penderita kurang patuh dan minum obat secara tidak teratur. Penggunaan obat yang tidak teratur dan pengobatan yang tidak lengkap dapat mengakibatkan kekebalan pada kuman TB terhadap obat anti tuberculosis (Wulandari 2015). (Wulandari, 2015) Oleh karena itu penting sekali bagi penderita untuk menyelesaikan program terapi dengan baik, dengan kata lain kepatuhan penderita bagi kesembuhan penyakit tuberculosis.

Ketidakpatuhan berobat merupakan salah satu

masalah perilaku. Menurut Green (1980) dalam Notoatmodjo (2007) mengidentifikasi tiga faktor yang mempengaruhi perilaku kesehatan yaitu faktor predisposisi, faktor pemungkin, faktor penguat. Yang termasuk faktor predisposisi antara lain adalah pengetahuan, sikap, keyakinan, nilai persepsi. Yang termasuk faktor pemungkin adalah ketersediaan sumber daya. Sedangkan yang menjadi faktor penguat adalah petugas kesehatan teman dan orang tua (Notoatmodjo, 2007).

Berdasarkan latar belakang tersebut peneliti ingin melakukan penelitian dengan mendeskripsikan penelitian terdahulu tentang faktor-faktor yang mempengaruhi kepatuhan pengobatan pada penderita tuberculosis dengan melakukan literatur review.

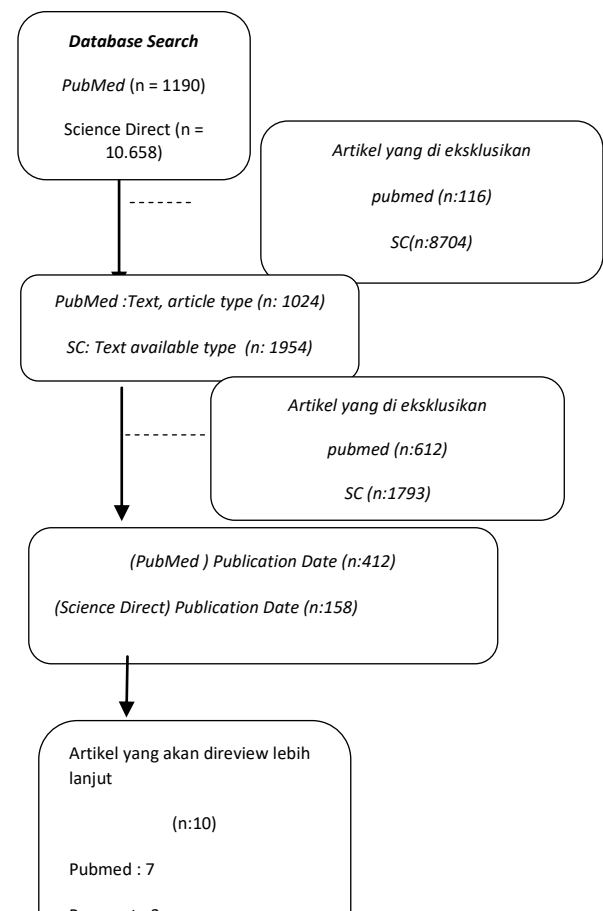
## Strategi Atau Data Base

Pencarian artikel menggunakan kata kunci : dherence therapy, tuberculosis. Artikel yang sesuai dengan kriteria diambil untuk selanjutnya dianalisis. Literatur review ini menggunakan literatur terbitan tahun 2017-2020 yang dapat diakses full text. Penelusuran artikel publikasi PubMed dan Science Direct

## Kriteria Inklusi

- Diterbitkan dari tahun 2017 hingga 2020 (3 tahun terakhir)
- Tipe artikel yaitu artikel jurnal
- Dipublikasikan dalam bahasa Inggris
- Ketersediaan teks yaitu Full text
- Spesies yang diteliti manusia

## Sintesis Tematik



## Hasil

Berdasarkan hasil tabel hasil pencarian artikel dari dua database dengan keyword yang sesuai dengan literatur review. Dari kedua database setelah difilter type article, ketersediaan dan publication date ditemukan 570 artikel. Kemudian dianalisis berdasarkan abstrak dan tujuannya sehingga ditemukan 10 artikel. Kesepuluh jurnal yang sudah ditemukan membahas tentang faktor yang mempengaruhi pengobatan pada pasien TB. Faktor faktor tersebut diantaranya, faktor pengetahuan, faktor psikologis, faktor stigma, faktor dukungan sosial, faktor komunikasi dengan tenaga kesehatan, faktor motivasi diri, faktor dukungan keluarga, dan faktor informasi tentang penyakit.

## Pembahasan

### 1. Faktor pengetahuan

Pengetahuan yang baik tentang tuberkulosis dan terapi anti-TB memiliki hubungan yang signifikan dengan kepatuhan (Mekonnen, 2018). Pasien Tb yang memiliki pengetahuan yang buruk tentang Tb dan pengobatannya adalah 5 kali lebih tinggi berisiko terhadap ketidakpatuhan pengobatan anti-Tb daripada mereka yang memiliki pengetahuan yang baik (Woimo et al, 2018).

### 2. Faktor psikologis

Tekanan psikologis 95% secara independen terkait dengan ketidakpatuhan pengobatan TB. Pasien tuberkulosis menghentikan pengobatannya karena tekanan psikologis maka dari itu konseling penting untuk meningkatkan kepatuhan pengobatan TB. (Habteyes, 2017).

### 3. Faktor stigma

Banyak pasien percaya bahwa mereka cenderung mengalami stigma karena penyakit tersebut. Beberapa berbagi pengalaman mereka, seperti ditunjukkan di lingkungan mereka, tetangga bergosip tentang penyakit mereka dan dikeluarkan dari acara sosial. Pengalaman aktual dan stigma yang dirasakan ini mengakibatkan banyak pasien menyembunyikan diagnosis mereka atau hanya mengungkapkannya kepada orang-orang tertentu, kebanyakan kepada teman dekat dan keluarga. Beberapa pasien enggan pergi ke klinik karena mereka terlalu takut dikenali oleh tetangga (Gebreweld et al, 2018).

### 4. Faktor Dukungan Sosial

Studi yang dilakukan oleh (Gebreweld et al, 2018) mengungkapkan bahwa dukungan keluarga dan masyarakat adalah faktor yang sangat penting selama perawatan karena sebagian besar mereka mengkompensasi hilangnya pendapatan. Kurangnya dukungan sosial ditemukan menjadi salah satu hambatan utama untuk kepatuhan pengobatan TB. Dukungan sosial adalah pendorong penting untuk keberhasilan pengobatan (Deshmukh, 2017). Dukungan dapat mempengaruhi keyakinan pasien dalam menentukan pengobatannya.

### 5. Komunikasi dengan tenaga kesehatan

Penelitian yang dilakukan oleh (Gebreweld et al, 2018) menyebutkan bahwa komunikasi dengan petugas kesehatan dan sikap positif adalah sumber motivasi bagi pasien untuk tetap dengan pengobatan. Keramahataman yang diterima oleh penyedia layanan kesehatan, termasuk apakah komunikasi yang efektif terjadi, tampaknya berdampak besar pada pasien. Mayoritas pasien dalam penelitian yang dilakukan oleh Gebreweld et al, pasien senang dengan cara para profesional kesehatan menerima dan merawat mereka di pusat-pusat kesehatan. Studi yang dilakukan (Boru, 2018) mengungkapkan bahwa hubungan antara petugas kesehatan dan pasien merupakan kontributor penting untuk kepatuhan pengobatan yang baik.

### 6. Faktor Motivasi Diri

Dalam penelitian yang dilakukan (Deshmukh, 2017) selama wawancara, faktor motivasi yang kuat untuk kepatuhan dan mengatasi hambatan untuk menyelesaikan pengobatan adalah motivasi diri dan harapan dan aspirasi kualitas hidup yang baik. Kepedulian terhadap anggota keluarga dan hidup untuk orang yang mereka cintai memotivasi pasien untuk menyelesaikan perawatan dalam beberapa kasus.

### 7. Faktor Dukungan Keluarga

Menurut penelitian yang dilakukan oleh (Deshmukh, 2018) dalam wawancara disebutkan bahwa dukungan oleh keluarga dan anggota masyarakat termasuk teman sebaya, merupakan faktor penting dalam memengaruhi kepatuhan pengobatan secara positif. Dukungan keluarga disebut sebagai faktor pendorong utama untuk penyelesaian perawatan. 26,27% Perawatan dan dukungan oleh pemerintah, teman sebaya, relawan masyarakat, tetangga, dan anggota keluarga dicatat sebagai faktor pendorong yang paling penting untuk menyelesaikan pengobatan.

### 8. Informasi Tentang Kesehatan

Menurut penelitian yang dilakukan (Woimo et al,

2018) ketidakpatuhan di antara pasien yang tidak mendapatkan informasi kesehatan pada setiap kunjungan adalah 3 kali lebih tinggi daripada di antara mereka yang mendapat informasi kesehatan. Kesadaran pasien mengenai penyakitnya dapat mempengaruhi kepatuhan pasien dalam berobat.

### **Kesimpulan**

Berdasarkan hasil analisa diatas dapat disimpulkan bahwa yang menjadi faktor yang mempengaruhi kepatuhan adalah faktor pengetahuan tentang penyakit dan pengobatannya, faktor psikologis, faktor stigma, faktor dukungan sosial, faktor komunikasi dengan tenaga kesehatan, faktor motivasi diri, dukungan keluarga, dan informasi tentang kesehatan.



Tabel 1. Hasil pencarian artikel

No.	Penulis, Tahun	Judul	Ukuran sampel penelitian dan teknik sampling	Desain dan Metodologi			Hasil Temuan (Outcome)
				Metode	Instrumen	Analysis	
1.	(Habteyes 2017)	The Effect of Psychosocial Factors and Patients' Perception of Tuberculosis Treatment Non-Adherence in Addis Ababa, Ethiopia	Sampel : 698 pasien tb.  Teknik ampling : Simple random sampling	studi cross sectional	Instrumen mengenai data demografi, sosial ekonomi dan pengetahuan tentang penyakit.	Analisis bivariat	Tingkat ketidakpatuhan dalam satu bulan terakhir sebelum penelitian adalah 19,5%. Setelah mengendalikan semua variabel perancu potensial, status Terapi Antiretroviral (ART) (Adjusted Odds Ratio (AOR) = 1,79, Interval Keyakinan 95% penggunaan alkohol (AOR = 2,11, 95% CI , status ekonomi (AOR = 0,53, 95% CI (0,33-0,8 2)), hambatan yang dirasakan (AOR = 1.21, 95% CI (1.10-1.47)) dan tekanan psikologis (AOR = 1,83, 95% CI (1,47-2,29)) secara independen terkait dengan ketidakpatuhan pengobatan TB.
2	(fang et al., 2019)	Prevalence of and Factors Influencing AntiTuberculosis Treatment Non-Adherence Among Patients with Pulmonary Tuberculosis: A CrossSectional Study in Anhui Province, Eastern China.	Sampel : 339 pasien tb  Teknik sampling : Stratified cluster sampling	CrossSectional Study	Kuesioner terdiri dari 4 bagian: informasi umum, status pengobatan, pengetahuan tentang pencegahan dan pengobatan TB,	Uji chi square	Mengenai pengetahuan yang terkait dengan topik seperti rute penularan, tindakan pencegahan, dan gejala yang mencurigakan, tingkat kesadaran dalam kelompok dengan kepatuhan pengobatan yang baik lebih tinggi daripada kelompok dengan kepatuhan yang buruk ( P < 0,05). Kami menemukan bahwa kepatuhan tidak secara signifikan terkait

					dan akses ke informasi tentang TB		dengan mencari perawatan medis di lembaga profesional, kebijakan pengobatan TB gratis nasional, atau diskriminasi ( $P > 0,05$ ). Tingkat ketidakpatuhan di bawah pengawasan (26,10%) lebih rendah daripada tanpa pengawasan (64,18%) ( $P < 0,001$ ).
3	(Mekonnen & Azagew, 2018)	Non-adherence to anti-tuberculosis treatment, reasons and associated factors among TB patients attending at Gondar town health centers, Northwest Ethiopia	Sampel : 314 pasien tb  Teknik sampling : simple random sampling	cross-sectional	Kuesioner terstruktur dengan 12 item pertanyaan.	Analisis regresi regresi logistik multivariat	Sebanyak 314 peserta dilibatkan dengan tingkat tanggapan 97,5%. pengetahuan yang buruk tentang TB dan anti-TB terapi (AOR = 4,11; 95% CI 1,57, 10,75), hubungan penyedia pasien yang buruk (AOR = 4,60, 95% CI 1,63, 12,97),
4	(Woimo et al., 2017)	The prevalence and factors associated for anti-tuberculosis treatment non-adherence among pulmonary tuberculosis patients in public health care facilities in South Ethiopia: a cross-sectional study	Sampel : 261 pasien tb  Sampling : simpel random sampling.	cross-sectional	Instrumen mengenai data demografi pasien, pengetahuan tentang penyakit dan pengobatan dengan metode wawancara.	regresi logistik biner	Prevalensi ketidakpatuhan terhadap pengobatan anti-Tb adalah 24,5%. Analisis regresi logistik berganda menunjukkan bahwa pengetahuan yang buruk terhadap TBC dan pengobatannya 95%, biaya pengobatan selain Tb 95% , memiliki informasi kesehatan pada setiap kunjungan 95% dan jarak pusat DOTS dari rumah pasien 95% menunjukkan hubungan yang bermakna secara statistik dengan ketidakpatuhan terhadap anti-TB. pengobatan. Studi kualitatif juga mengungkapkan bahwa jarak, kurangnya

							kesadaran tentang pentingnya penyelesaian pengobatan dan biaya transportasi adalah hambatan utama untuk kepatuhan.
5	(Gebreweld et al., 2018)	Factors influencing adherence to tuberculosis treatment in Asmara, Eritrea: a qualitative study	Sampel :12 pasien tb Teknik sampel : purposive sampling	Studi kualitatif	Kuesioner mengenai data demografi pasien, pengetahuan pasien tentang penyakit menggunakan metode wawancara.	Analisis data dilakukan dengan menerjemahkan dan menyalin kata demi kata dari wawancara dan diskusi kelompok fokus. Data yang ditranskrip kemudian dianalisis menggunakan prosedur kerangka kerja tematik.	Hampir setengah dari responden tidak mengetahui durasi pengobatan standar dan konsekuensi yang mereka hadapi jika mereka menghentikan pengobatan. Dengan sedikit pengecualian, sebagian besar pasien melaporkan bahwa jarak pendek ke klinik mendorong mereka untuk menghadiri tindak lanjut perawatan rutin. Sebagian besar responden tidak bisa mendapatkan makanan yang cukup, menyebabkan stres dan perasaan putus asa. Kurangnya dukungan sosial untuk sebagian besar pasien adalah faktor penting untuk kepatuhan seperti stigma, efek samping obat dan durasi perawatan yang lama. Diakui sebagai pendukung kepatuhan pengobatan, petugas kesehatan memiliki komunikasi yang baik dan sikap positif terhadap pasien mereka.
6	(Ayele et al., 2017)	Self-reported adherence and associated factors to isoniazid preventive therapy for latent tuberculosis among people living with HIV/AIDS at health centers in Gondar town,	Sampel : 154 pasien tb Teknik sampling : simple random sampling	cross-sectional	Kuisisioner mengenai data demografi pasien, pengetahuan	Regresi logistik biner	Tingkat kepatuhan adalah 90,3% selama 7 hari terakhir penelitian. ART dimulai untuk 84,4%, dan semuanya memakai rejimen lini pertama. Efek samping terkait isoniazid

		North West Ethiopia			tentang penyakitnya dengan 15 item pertanyaan.		dilaporkan oleh 48 (31,2%) peserta, yang paling umum diidentifikasi adalah sakit perut, muntah, ruam kulit, sakit kuning, dan mati rasa. Hanya 3 (2%) peserta yang tidak melanjutkan studi. Dalam analisis regresi logistik bivariat, responden yang telah menerima penjelasan tentang IPT adalah 83% lebih mungkin untuk patuh dibandingkan dengan mereka yang belum menerimanya (95% CI, AOR: 0,266 [0,23-3,127]).
7	(Shiratani, 2019)	Psychological changes and associated factors among patients with tuberculosis who received directly observed treatment short-course in metropolitan areas of Japan: quantitative and qualitative perspectives	Sampel :127 pasien  Teknik sampling : purposive sampling	cross-sectional	Kuisisioner (PTGI-SF) dengan 10 item pertanyaan	Analisis regresi logistik	Program DOTS di Jepang meningkatkan kepatuhan pengobatan pada pasien dengan TB dan meningkatkan pertumbuhan pasca trauma. Para pasien ' penilaian program DOTS Keberhasilan dan perawatan, konfirmasi program DOTS ' Implementasi dapat menjadi kontributor penting bagi pertumbuhan psikologis positif ini.
8	(Ali & Prins, 2016)	Patient non adherence to tuberculosis treatment in Sudan: socio demographic factors influencing non adherence to tuberculosis therapy in Khartoum State	Sampel : 328 pasien  Teknik sampling : total sampel.	case kontrol observasional	Kuisisioner mengenai sosiodemografi pasien.	analisis regresi logistik multivariat	Pada analisis multivariat adalah : variabel lokalitas permukiman (rural area) (OR 2,58; 95% CI 1,4 -4,67), pasien pindah atau pindah alamat (OR 5,47; 95% CI 2,90-10-35), tidak adanya dukungan keluarga (OR

							2,14; 95% CI 1,12 - 4,11),
9	(Deshmukh et al., 2018)	Social support a key factor for adherence to multidrugresistant tuberculosis treatment	Sampel : 10 pasien tb Sampling : total sampling	kualitatif	Kuisisioner mengenai data pasien, diagnosis, riwayat perawatan dan hal yang mempengaruhi ketaatan berobat. Data diambil dengan metode wawancara	Data audio yang direkam dari wawancara pasien dan penyedia ditranskripsikan secara kata demi kata dan ditranskripsi ke dalam bahasa Inggris.	Berbagai faktor yang memengaruhi keputusan pasien untuk mematuhi pengobatan TB-MDR. Motivasi diri, kesadaran tentang penyakit dan pengobatan, dukungan konseling, dukungan keluarga, dukungan nutrisi dan dukungan sosial adalah pendorong penting untuk keberhasilan pengobatan. Penyedia terkait bahwa konseling motivasi, dukungan gizi, dukungan keluarga dan dukungan sosial mendorong kepatuhan pengobatan.
10	(Gugssa Boru et al., 2017)	Factors contributing to non-adherence with treatment among TB patients in Sodo Woreda, Gurage Zone, Southern Ethiopia: A qualitative study	Sample : 22 pasien tb Sampling : purposive sampling	Studi kualitatif	Kuisisioner dengan metode wawancara	analisis data dilakukan secara bersamaan setelah setiap pengumpulan data wawancara, dan peneliti	jumlah dari dua puluh dua peserta berhasil diwawancarai, dari yang 14 perempuan dan delapan laki-laki. Usia rata-rata dari peserta berusia 36 tahun (kisaran 15-60 tahun) dan 18 tahun itu pasien baru dalam pengobatan anti-TB. Sebagian besar peserta studi adalah pedesaan penghuni . Di ini studi, satu tema utama dan empat sub-tema dikembangkan.Tema utamanya adalah; faktor yang berkontribusi ketidakpatuhan terhadap dan pengobatan tuberkulosis sub-tema adalah; (1) terkait klien. (2) pelayanan

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