



Analysis of the Screening Process for TB Case Detection in Gleno Health Centre, Letefoho and Railako in 2022

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ABSTRACT

Tuberculosis (TB) is a leading cause of death worldwide, killing about 1.5 million people annually. However, over 3 million TB cases are lost annually, not diagnosed or diagnosed but not informed. Pulmonary tuberculosis attacks the parenchyma of the lungs. This research aimed to analyze the TB case detection process at Gleno Health Centre and Letefoho Health Centre using the Analytic Observational method with a Transversal Approach (Cros-sectional). The population involved was all health personnel working at the Gleno Health Centre. The findings showed a significant association between the screening process for detecting tuberculosis cases in the community at Gleno Community Health Centre, Letefoho Community Health Centre, and the screening process for detecting tuberculosis cases in the laboratory at these health centers. There was also a significant association between the screening process for detecting tuberculosis cases in the community at Letefoho Community Health Centre and the screening process for detecting tuberculosis cases in the laboratory at Letefoho Community Health Centre. The research found significant effectiveness in detecting TB cases before and after screening.

INTRODDUCTION

Worldwide, tuberculosis (TB) remains one of the leading causes of death by a single infection agent, which kills about 1.5 million people a year. It is estimated that however, every year 3 million cases of TB are lost (not diagnosed or diagnosed but not informed). (Who 2020)

Therefore, it is important to immediately identify TB cases and link them to care. The World Health Organization recommends systematic screening of suspected TB patients who are active among those who visit health facilities. While many countries have made systematic TB screening on a scale-up basis, there is limited assessment of its integration into the health system.

The new guidelines put forward by the World Health Organization (WHO) in 2021 update some recommendations for systematic tuberculosis screening. This will help national TB programmes, public and private health providers, funders and other stakeholders to improve actions to detect early TB and closer to gaps in prevention and care.

It is estimated that almost three million people with TB are not diagnosed or reported worldwide. Improving TB screening using new tools and approaches to reach all those in need of care, measures such as examination need to be quickly increased to achieve the global goal of dealing with at least 40 million people with TB by 2022.

Over the past 25 years, global TB control has seen the adoption of three key strategies. The direct observed treatment strategy (DOTS) from 1994 to 2005 focused on passive cases (WHO 2002). The following is a STOP TB strategy from 2006 to 2015 which focuses on cases found in health facilities, communities and places in the congregation (WHO 2009). Currently, the END TB strategy since 2016 has proposed active cases of cases and contact tracing between at-risk populations (WHO 2015). Through these strategies, 58 million deaths of TB were prevented between 2000 and 2018 (WHO 2019).

Timor-Leste has the second highest incidence rate in the World Health Organization (WHO) Southeast Asia region after North Korea. According to WHO data from 2018, the total TB incidence rate in Timor-Leste was 498 per 100,000 population. As a comparison, the incidence rate per 100,000 population in Indonesia 316, India 199 and China 61 (Manual PTN 2020)

In Timor-Leste 2018, 487 patients (1 The total treatment coverage was only Malnutrition increases the associated risk of active TB disease three times (Lonroth et al, among mothers, an estimated 37% of pregnant mothers experience anaemia (DHS, 2016); 25% of women who are not pregnant are pregnant (UNICEF Nutrition Survey, 2013); while 38% of children aged 0-59 months have a lower weight, and 13% of children aged 6-11 months have acute malnutrition (wasting).

Based on the 2016 Health Statistics Report, the new pulmonary case review consists of a positive rate in 1837, a negative rate of 1157 cases, a new extra pulmonary case recorded in 386, and a return treatment case of 71 of the total 3451 cases, a new pulmonary case review in 2018 composed of a 1650, a negative rate of 1446, a new extra pulmonary case registered in 651, and a return treatment case of 15 of the total cases, a total of 3904, in 2019 a new

pulmonary case review composed of a total rate of 6531, a negative rate of 15 cases, a total rate of 15 cases, a total of 15 cases, a total of 3904 cases, a total rate of 1904 cases, a total rate of 646 cases, a total rate of total rate of 1631 cases, a total rate of total, and a total rate of 631 cases, a total rate of 15 cases, and a total rate of 15 cases treated, a total rate of 1504 cases, a total rate of 1504 cases, a total rate of 1504 cases, a total rate of 1546 cases, a total rate of 1504 cases, a total rate of 1546 cases, a new case of 1504 cases (Ms 2016).

The total number of cases in Ermera Municipality from 2019 to 2020 is as follows: in 2018 the total number of cases was reviewed in 463 positive cases in 2019, in 2020 the total number of cases was 276. SSM Ermera report (2020)

The following are the rates for the detection of TB cases at the 5 Health Centres in Ermera Municipality in 2020: Atsabe Health Centres with a total of 96 cases, Ermera Health Centres with a total of 172 cases, Gleno health centres 120 cases, Hatolia Health centres 112 cases, Letefoho health centres 116 cases and Railako health centres with a total of 64 cases.

LITERATURE REVIEW

According to Notoatmodjo 2005 the framework is a relationship or something that is linked, as a concept for another problem that we want to investigate as a summary that is formed by the practicalization of a definition. This concept cannot be seen and measured but this concept can be illustrated in the variables.

Figure 1. Conceptual Framework

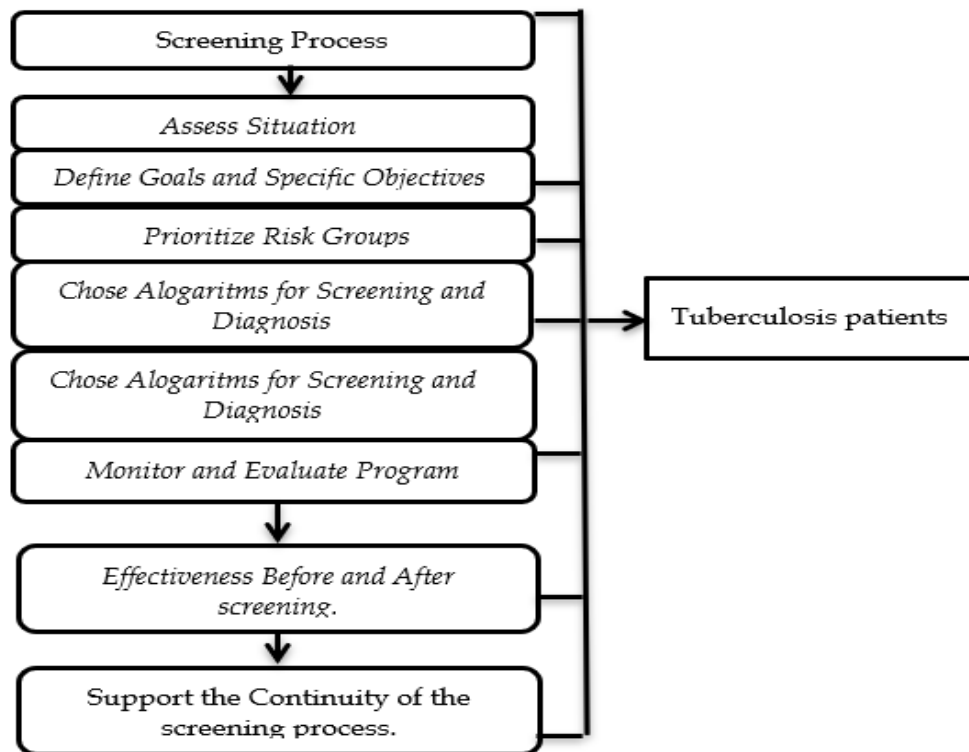
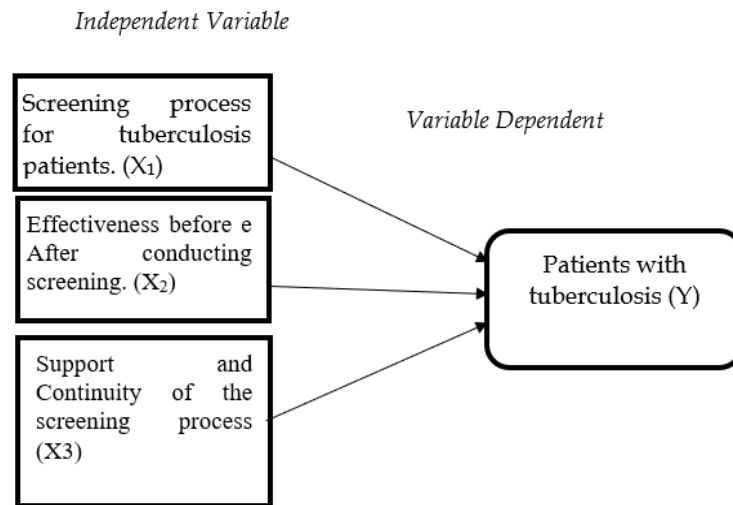


Figure 2. Variable Independent and Dependent



Annotation:

X₁: Independent Variable X₁

X₂: Independent Variable X₂

X₃: Independent Variable X₃

Y: Variable dependent Y

Hypothesis 1:

H_a: In the Association between the Screening process for TB case detention

H₀: There is no association between the screening process for TB case detention

Hypothesis 2:

H_a: In the Association between the effectiveness before and After conducting TB case detention

H₀: There is no Association between previous effectiveness e After conducting TB case detention screening

Hypothesis 3:

H_a: In the Association between Support and Continuity of TB case detention

H₀: There is no Association between Support and Continuity of TB case detention.

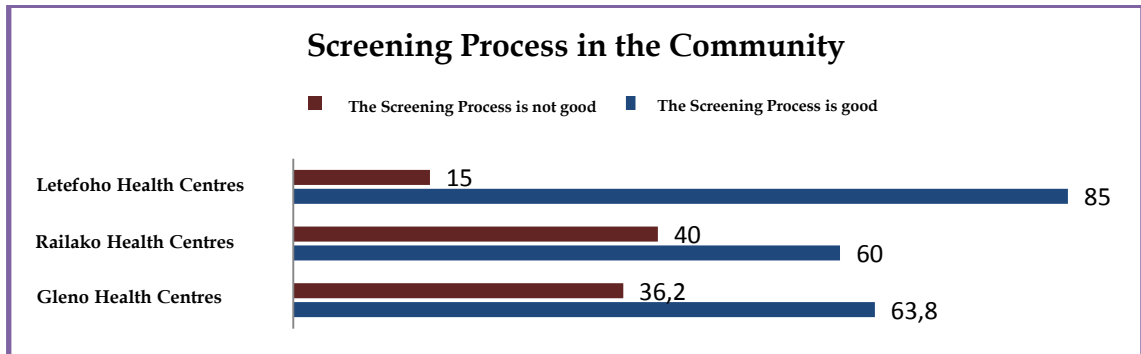
METHODOLOGY

The research method used in this research was the Analytical Observational method with a Cro-sectional approach according to Sugiyono (2008). The use of this Method aims to be able to describe any objective situation. And this research was conducted using descriptive methods with stages such as data collection, data classification, data management, data analysis, conclusion and reporting.

RESEARCH RESULT

Through the results of the analysis above, the following will be analysed the comparison between the results of 3 health centres namely the Gleno Community Health Centre, Letefoho Community Health Centre, and Railako Community health centres in the year 2022 as follows;

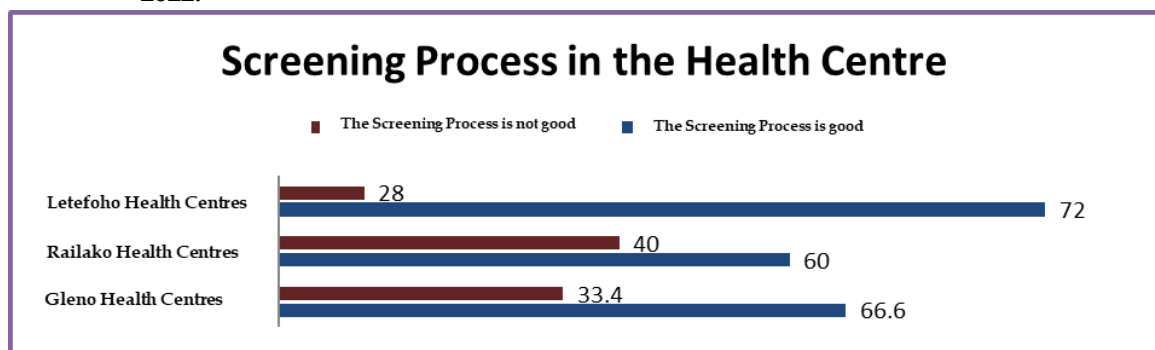
Graph 1: Analysis of the comparison of Variable X1 The Community Screening Process has three health centres: the Gleno Community Health Centre, the Letefoho Community Health Centre, and Railako Community health centres in the year 2022.



Source: Primary Data from Gleno Health Centre, Letefoho and Railako Centre in the year 2022.

The graph of the above comparison analysis shows that the community screening process of the 3 health centres has made good progress by the Gleno health centre, followed by the Letefoho health centre and the Railako health centre. According to the above findings, the progress of the three health centres is good, but it is also necessary to know that the Gleno health centre has sufficient human resources and facilities to carry out its own screening process.

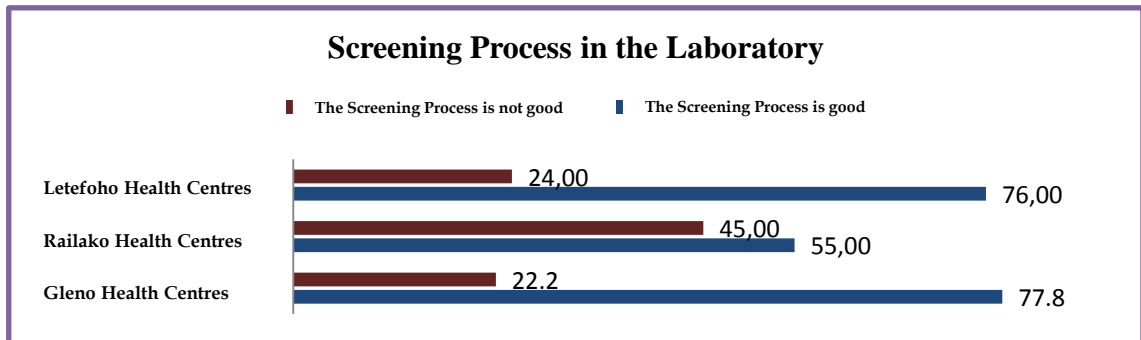
Graph 2: Analysis of the comparison of Variable X2 The Community Screening Process has three health centres: the Gleno Community Health Centre, the Letefoho Community Health Centre, and Railako Community health centres in the year 2022.



Source: Primary Data from Gleno Health Centre, Letefoho and Railako Centre in the year 2022.

The graph of the graph analysis above shows that the screening process at the health Centre of the 3 health centers has been well progressed by the Gleno health Centre, followed by the Letefoho and the Railako Heath Centre. The above findings conclude that at the health Centre health personnel are easily able to carry out the screening process for the community with a certain amount of non-sharvest expenditure on screening activities but the most needed are adequate facilities.

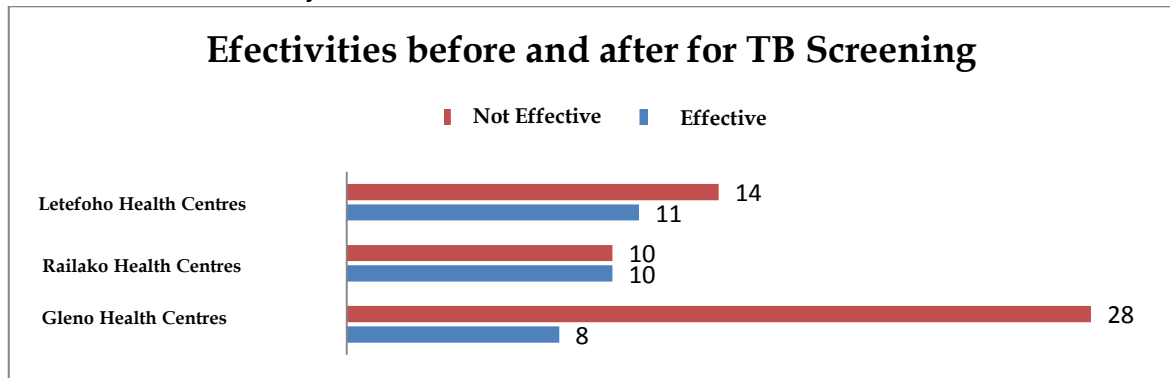
Graph 3: Analysis of the comparison of the X3 Variables of the Laboratory. There are three health centers: the Gleno Community Health Centre, the Letefoho Community Health Centre, and the Railako Community Health Centre in the year 2022.



Source: Primary Data from Gleno Health Centre, Letefoho and Railako Centre in the year 2022.

The graph of the above comparison analysis shows that the screening process in the Laboratory of 3 health centers has been well progressed by the Gleno health Centre, followed by the Letefoho health Centre and the Railako Health Centre.

Graph 4: Analysis of the comparison of Variable X4 Effectivities before and after the screening of TB cases in three health centers namely the Gleno Community Health Centre, Letefoho Community Health Centre, and the Railako Health Centre in the year 2022.



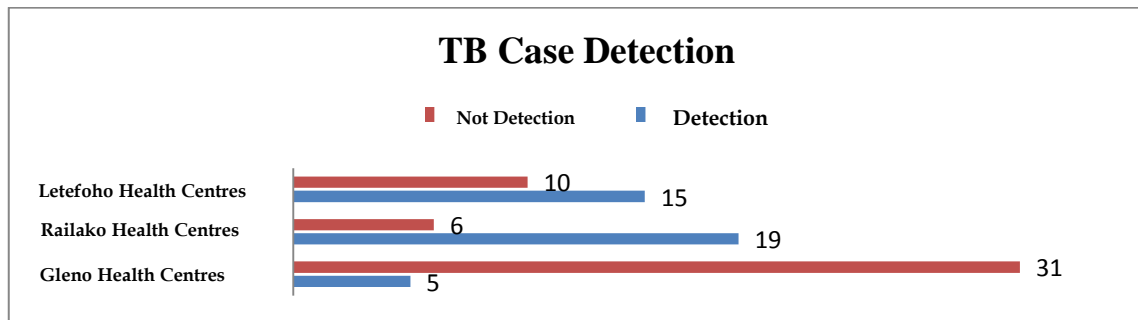
Source: Primary Data from Gleno Health Centre, Letefoho and Railako Centre in the year 2022.

Based on the results of the analysis of the comparison of the pre and post Screening effectiveness variable shows that at the Gleno Community Health Centre for the pre- and post-screening effectiveness variable it shows that the 8-screening effectiveness with a percentage of 22.2% and non-effective with a total of 28 with a percentage of 77.8% in relation to this result shows that 77.8% was not effective for the detection of TB cases at the Gleno Health Centre in 2022.

In the Community Health Centre Railako for pre and post Screening effectiveness shows that effective with a total of 10 with a percentage of 50% non-effective with a total of 10 with a percentage of 50% in relation to this result shows that 50% is not effective for the detection of TB cases at the Railako Health Centre in 2022.

At the Letefoho Community Health Centre for the Effectivities Variable before and after the screening showed that the effect of the total 11 with a percentage of 44% and non-effective with a total of 14 with a percentage of 56% in relation to this result showed that 56% did not have the effectiveness of TB case detection at the Letefoho Health Centre in 2022.

Graph 5: Analysis of the comparison of Variable Y TB case detection in three health centres namely the Gleno Community Health Centre, Letefoho Community Health Centre, and the Railako Health Centre in the year 2022.



Source: Primary Data from Gleno Health Centre, Letefoho and Railako Centre in the year 2022.

The table 4 analysis of the comparison above shows that the detection of TB cases in the 3 health centres is different, although the screening process shows good results, in the Gleno health centres it shows a much more remote difference than in the Railako and Letefoho health centres with 86% of non-detecting TB cases compared to the Letefoho health centres 60% of new TB cases were detected, and in comparison, with the health centres 76% of new TB cases were detected. These results show that the screening process at the 3 Health Centre is ongoing with the Serious but will continue to detect new TB cases. This result is also strengthened by the statistical hypothesis test which shows that there is a significant association.

DISCUSSIONS

In view of the Ministry of Health policy taken from the 2022 PTN manual that using the PTN laboratory format, the health facility staff sent the suspected TB to the microscopic or diagnostic centre laboratory (DMC) is about to examine the marriage rate. In the laboratory the DDC / DDC the patient receives a sputum container with instructions to give a sample of a couple, which is then subject to sputum examination. The patient can refer to the DMC / DDC closer, or even get married the patient collected there and transport it to the DMC / DDC closer.

It is important to follow the sputum collection guidelines. Clinic / health workers / laboratory technicians (LT) should teach the patient to collect sputum properly. If sputum is collected in an impaired manner and the patient is suffering from pulmonary tuberculosis, the diagnosis may be wrong, and the patient may continue to spread infection to others. Sputum test results should be reported within one day.

Give No. Laboratory series are written in its form. The sputum collectors show how the container is opened and closed, take the patient to an open place far from the others, and show how to remove the sputum. Tell the patient to calm down the normal water to clean the rest of the food or other water, draw a long breath 2-3 times with an open mouth, a strong breath from the anger of the eyes, open the container and cover it, and close the container's eyes.

To obtain a good quality sputum sample and to prevent contamination, health workers must perform some work before, during and after sputum collection.

CONCLUSIONS AND RECOMMENDATIONS

Through the results of the analysis and the final discussion it was concluded that there was an association of the screening process for the detection of TB cases at the Gleno Health Centre, Letefoho, and Railako as follows:

The Gleno Community Health Centre has a significant association between the screening process for the detection of tuberculosis cases in the community at the Gleno Community Health Centre with a value of P. Value 0.028, In the Association of the screening process for the detection of tuberculosis cases at the Gleno Community Health Centre with a value of P. Value 0.017. In the Association of the screening process for the detection of tuberculosis cases in the laboratory at the Gleno Community Health Centre with a value of P. Value 0.029.

Community Health Centre Railako There is a significant association between the screening process for the detection of tuberculosis cases in the community at the Railako Community Health Centre with the value of P. Value 0.0176. In the Association the screening process for the detection of tuberculosis cases at the Railako Community Health Centre was worth P. Value 0.010. In the Association the screening process for the detection of tuberculosis cases in the laboratory at the Community Health Centre in

Community Health Centre Letefoho There is a significant association between the screening process for the detection of tuberculosis cases in the community at the Letefoho Community Health Centre with the value of P. Value 0.01, In the Association of the screening process for the detection of tuberculosis cases at the Letefoho Community Health Centre with a value of P. Value 0.011. In the Association the screening process for the detection of tuberculosis cases in the laboratory at the Letefoho Community Health Centre is worth P. Value 0.02. There is significant effectiveness prior to and After screening TB at the Gleno Community Health Centre, with a significance value of P. Value 0.01, the Railako Community Health Centre with a value of P. Value 0.01, and the Letefoho Community Health Centre with a value of P. Value 0.01.

It is recommended that the Ministry of Health, through the National Tuberculosis Program (PTN), continue to carry out control of the implementation of TB disease control policies and strategies in Timor-Leste, through assessment meetings to see progress and challenges in order to provide solutions through, supporting resources such as human resources, transportation facilities resources, and equipment for health facilities, especially in the laboratory. In addition, it seeks strategies to improve inter-ministry cooperation to support specific TB combat policies in the Municipality of Ermera, and generally for Timor-Leste

Through this research it is important to improve the screening process in the community through the involvement of local leaders to support health workers looking for the family who is suspected of TB, in health centres there is a need to improve the process that is not regular from patient registration, facilities, and equipment. In the laboratory there needs to be improvement in the pre-analytical stage, as well as the analytical post. The effectiveness of the process requires regular meetings to assess the progress of the screening process. The most important issue is that routine screening tests should be carried out for health workers who are tasked with health facilities because they also include in the risk section for transmission of TB disease

Through this research, communities have not yet had good cooperation with Health Professionals to provide solutions to TB case detection. Therefore, it is necessary to ask for support from the community where the family is suffering from TB so that they can cooperate in the screening process because this is a good way to minimize the treatment of TB in our community.

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