ECONOMY, SERVICE DISTANCE AND PHYSICAL IMPAIRMENT AS THE MAIN FACTORS OF NON-ADHERENCE OF TUBERCULOSIS PATIENTS IN DISTRICTS/CITIES

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Abstract. Increased treatment adherence in tuberculosis patients can control and reduce the incidence of tuberculosis, thereby improving the quality of life of the community. TB control must be carried out jointly by involving all levels of society, including health workers, community organizations, religious organizations, government, and the private sector. Compliance of pulmonary tuberculosis patients in taking medication is the key to successful tuberculosis treatment. This study aimed to explore the main indicators causing non-compliance of tuberculosis patients in taking the medication regularly. This research is a qualitative study with a phenomenological approach. Data were collected using in-depth interviews and then analyzed with Atlas. The informants in this study consisted of fifteen people consisting of five people with tuberculosis, five patients' families, and five health workers. The results of this study found three themes, namely (1) Economy, (2) Distance of service, and (3) Impact of disease. It was concluded that these three indicators are the most important things that cause patients to finally decide to stop taking medicine even though they are basically willing to comply and routinely take medicine every day. It is suggested that there should be good cooperation between Puskesmas officers, village midwives, and village officials to facilitate this problem indicator.

Keywords: The main factors, nonadherence medication, tuberculosis
INTRODUCTION

The efforts to attain the above countrywide dreams are the eradication of infectious sicknesses, one in all that is the lung tuberculosis eradication program[1]. Tuberculosis (TB) is a disease because of Mycobacterium Tuberculosis and is an ailment that is nonetheless a big burden for Indonesia. The growing burden of TB is due to poverty, the failure of the TB software, which has been resulting from insufficient political commitment and funding, loss of community get entry to, non-standardized case finding/analysis, uninsured drug deliver, non-standardized tracking, recording, and reporting insufficient case control, and demographic modifications [2], [3]. The key components of the DOTS approach are political dedication, microscopic sputum exam, standardized short-time period remedy consisting of direct supervision of remedy, assured availability of OAT, and a recording and reporting machine capable of assessing affected person outcomes [1], [3], [4].

The sector TB manipulate software objectives to lessen the load of TB and comprehend a wholesome and TB-free international, WHO has created a new method that accompanies the SDGs below the name end TB approach[5], [6]. The principles of the approach used by who are 1. Include the role of government in comparing and tracking the route of this strategy ; 2. utilize coalitions with present social and community corporations ; 3. ensure the protection of human rights and sell equality between groups ; four. Adapt techniques and objectives in each country, with worldwide collaboration. Based on the achievements of the TB software, North Sumatra Province ranks 15th in case detection fee (CDR) in 2017. Many factors influence the fulfillment of TB treatment, including adherence, schooling, perceptions, socioeconomic fame of patients, medical examiners at the health center [7] –[10]. The information element has a enormous effect on the regularity of taking medication for TB sufferers [11]. Prevailing cultural beliefs, physical and mental stress, results of exertions disruption and fitness gadget demanding situations are barriers to caring for TB sufferers [9]. Psycho-emotional (PE) and socio-economic (SE) interventions supplied to TB patients and to evaluate the consequences of these interventions on medicinal drug adherence and remedy [12], [13].

The proportion of TB suffers taking habitual remedy for less than 6 months in Serdang Bedagai region amounted to 48.87% or decrease than North Sumatra Province (72.6%). The motives because TB sufferers do no longer mechanically take medicinal drug are most often tablets no longer to be had in health facilities using a percent of 5.00%, often forgetting 6.54%, not having the ability to shop for TB tablets frequently 12.4%, not often 27.28% and others which includes now not being capable of stand the facet consequences, the remedy duration feels previous and already feels healthful. extended remedy adherence in tuberculosis patients can manage and decrease the occurrence of tuberculosis, for this reason improving the pleasant of life of the network.

Tuberculosis control must be accomplished mutually by means of regarding all tiers of society, consisting of medical examiners, community groups, non secular organizations, government, and the non-public region. They all need to work together with the aim of removing tuberculosis. In step with [2] numerous facet outcomes that arise in tuberculosis sufferers encompass anorexia, nausea, belly pain, purple urine, flu syndrome, burning, numbness or tingling in the palms and feet and other aspect effects that make tuberculosis patients finally forestall their treatment. In this have a look at, tuberculosis sufferers additionally experienced facet consequences of treatment together with nausea, nausea, weak point, pores and skin itching, urine discoloration, and numbness. The incidence of these facet consequences requires motivation for tuberculosis sufferers to preserve their treatment. Consistent with [14], [15] social support such as circle of relatives help, peer support and help from medical examiners can motivate tuberculosis sufferers to stick to their remedy. Treatment of tuberculosis, which requires a long and long term for tuberculosis patients, will honestly cause diverse obstacles. These obstacles regularly motive patients to stop taking tuberculosis medicinal drug. This look at targets to explore monetary issues, service distance and physical impairment as reasons of non-adherence of tuberculosis sufferers in their treatment.

This study goals to explore financial issues, provider distance and bodily impairment as causes of non-adherence of tuberculosis sufferers of their remedy.
MATERIAL & METHODS

This study was conducted in the operating place of the Serdang Bedagai health office in 2022. This examine used a qualitative technique with information evaluation strategies the usage of qualitative content evaluation. Facts collection utilized in-depth interviews.

The sampling technique used purposive sampling. There have been 15 informants inclusive of 5 humans with tuberculosis, 5 humans from the affected person's family and 5 medical examiners. The researcher first produced an outline of the problem count that would be conveyed to the informant within the shape of an interview guideline.

The designed transcripts have been analyzed the use of qualitative content material evaluation. Qualitative content analysis is executed using the Atlas application by describing or filtering textual content or word terms into several categories that represent a variety of unique content. The outcomes of content evaluation are a way for analyzing textual content material flexibly. The qualitative results of content material evaluation may be used to assess the findings because of the evaluation itself.

RESULTS

This study used 15 members from five people with tuberculosis and 5 humans from the patient's circle of relatives and five human beings from medical experts. details can be visible inside the following demographic statistics.

<table>
<thead>
<tr>
<th>Partisipan</th>
<th>Gender</th>
<th>Age (years)</th>
<th>Education</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Male</td>
<td>22</td>
<td>High School</td>
<td>Not working</td>
</tr>
<tr>
<td>P2</td>
<td>Female</td>
<td>24</td>
<td>Vocational high school</td>
<td>Not working</td>
</tr>
<tr>
<td>P3</td>
<td>Female</td>
<td>20</td>
<td>Junior High</td>
<td>Not working</td>
</tr>
<tr>
<td>P4</td>
<td>Male</td>
<td>19</td>
<td>Vocational high school</td>
<td>Not working</td>
</tr>
<tr>
<td>P5</td>
<td>Male</td>
<td>23</td>
<td>High School</td>
<td>Not working</td>
</tr>
<tr>
<td>KP1</td>
<td>Female</td>
<td>52</td>
<td>Junior High</td>
<td>Housewife</td>
</tr>
<tr>
<td>KP2</td>
<td>Female</td>
<td>64</td>
<td>Junior High</td>
<td>Trade</td>
</tr>
<tr>
<td>KP3</td>
<td>Female</td>
<td>50</td>
<td>Elementary</td>
<td>Housewife</td>
</tr>
<tr>
<td>KP4</td>
<td>Male</td>
<td>53</td>
<td>High School</td>
<td>Workshop</td>
</tr>
<tr>
<td>KP5</td>
<td>Male</td>
<td>58</td>
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<td>Teacher</td>
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<td>PK1</td>
<td>Female</td>
<td>32</td>
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<td>Health worker</td>
</tr>
<tr>
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<td>30</td>
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<td>Health worker</td>
</tr>
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<td>Health worker</td>
</tr>
<tr>
<td>PK4</td>
<td>Female</td>
<td>30</td>
<td>Bachelor of health</td>
<td>Health worker</td>
</tr>
<tr>
<td>PK5</td>
<td>Female</td>
<td>36</td>
<td>Bachelor of health</td>
<td>Health worker</td>
</tr>
</tbody>
</table>

The results of the analysis and verbatim transcripts found 3 themes and 13 categories. The details can be seen in table 2.
TABLE 2. Theme And Categorical

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy</td>
<td>1. Not working</td>
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<tr>
<td></td>
<td>2. lack of support</td>
</tr>
<tr>
<td></td>
<td>3. Poor (no money)</td>
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<tr>
<td>Service distance</td>
<td>1. No supporting facilities</td>
</tr>
<tr>
<td></td>
<td>2. Access/broken road</td>
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<tr>
<td>Impact of disease</td>
<td>1. Physical impact</td>
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<tr>
<td></td>
<td>2. Psychological impact</td>
</tr>
<tr>
<td></td>
<td>3. Social impact</td>
</tr>
</tbody>
</table>

Economy

*Not working.* Nearly all tuberculosis sufferers when they have been identified with tuberculosis right away decided now not to paintings anymore. patients with tuberculosis had been right away locked up inside the residence and no longer allowed to depart the residence because there has been an assumption that the sickness could get worse and the sickness might be transmitted to others if the tuberculosis patient left the house.

"...When I first started coughing up blood, I never went out of the house because I was afraid that I wouldn't be able to breathe in the wind, it got worse, so I stayed at home..." (P3; P4-5)

"...So now I'm at home, sir, his father said not to go out in the wind and then the cough will recur..." (P2; P5)

"...Sometimes it's because of the tightness too, sir, and then someone said I shouldn't catch a cold first, so he said, that's why if there are activities in the village, I never participate anymore..." (P1; P3; P5)

"...I don't want to do it bang, how could anyone accept me if I'm sick, especially if I have lung disease..." (P2; P4-P5)

*Lack of support.* Guide for tuberculosis patients is wanted, which include accompanying them to the health center for treatment, offering desirable and nutritious food, and reminding them to take their medication regularly. however, sometimes as soon as a family member is recognized with tuberculosis, the circle of relatives also isolates the affected person by means of now not being allowed to depart the house, no longer being allowed to transport inside the network and no longer even being allowed to participate in circle of relatives activities.

"...Just can't be close to other families..." (P1-P5)

"...So if you count it, it's been more than 6 months, I don't think sir, but I only knew about TB when I started treatment here, sir..." (P3; P4-5)

"...Like that sir...the cup, plate and glass must be played..." (P1-P5)

"...So if we look at it sir...this TB patient if from the beginning of treatment he is accompanied by his family to seek treatment here, and then visits here, even if the family is diligent in asking questions, most of the time the patient will recover, but if only at the beginning the family participates and then the next visit does not participate anymore...never mind...the patient will definitely not come again..." (PK1; PK2; PK4; PK5)

"...If we want to help too sir, sometimes it's hard for us to eat. If I buy 3-4 eggs for him, what will our family eat? We understand that the puskesmas people mean that our child will get better quickly, but no matter...this is our situation, you have seen it...this is our house..." (KP2; KP3; KP4; KP5)
Poor (no money). Poverty is intently associated with whether or not a remedy is executed. The common tuberculosis patient has a financial background underneath the poverty line. This once in a while makes the treatment of tuberculosis sufferers now not reach the target as anticipated. Sufferers with tuberculosis are not unwilling to take medicinal drug frequently, but their inability to return to the health facility for manage is due to the shortage of money or price to attain the health facility. The distance among the location of house and the puskesmas made tuberculosis patients ultimately no longer keep their treatment.

"...If the place is possible sir, we are far from here, we live in the village sir, how much is the fare, it's hard too sir..." (P1; P2-3; P4-5)
"...Because our house is far away sir, so sometimes it's difficult if the walk is long sir, if we take a rickshaw, it can take more than half an hour before we reach the puskes sir..." (KP1; KP2; KP3; KP4; KP5)
"...If you want to come here (puskesmas) it's not bad, about 45 minutes..." (KP1; KP3; KP4)
"...Sometimes I'm worried too, sir...this person actually wants to come here (puskesmas) regularly, wants this person to take his medicine regularly but yes, that's what it was...I don't know where the most TB infected people are on average people who can't afford it, so just wanting to come here the person doesn't have money for the fare. Not to mention that the road is destroyed, if it rains it floods and we cannot pass anymore. So, there are many problems that need to be solved sir..." (PK1; PK2; PK3; PK4; P5)

Service distance
Supporting facilities do not exist. The absence of facilities along with cars contributed to the tuberculosis sufferers now not complying with the pointers given by health workers on the puskesmas. This need to were resolved due to the fact there are currently village budget allotted with the aid of the authorities which includes for street enhancements; however this obstacle continues to be maximum felt by using tuberculosis sufferers. The shortage of assisting centers makes tuberculosis patients subsequently determine no longer to preserve their remedy.

"...Sometimes, we can't blame them sir, they live far away, they sometimes don't even have the money to pay for the fare, how else would they come here..." (PK1)

"...There are also those who are stubborn sir, told to come on Monday, they come on Friday, how could they try..." (PK2)
"...For those who don't come, I usually call them sir, but that's the thing sir, sometimes if they say there's no money, you can't talk. Sometimes you leave it with the village midwife if you want, if you don't want it...we have to go down and deliver the medicine sir..." (PK4)
"...Actually, if you look at it sir, they are actually obedient and want to seek treatment, it's just that this person's village is far away sir, sometimes it can take an hour to arrive, not to mention the rain, flooding..." (PK3; PK5)

Broken access/roads. Broken roads, potholes or even flooding when it rains become a first-rate trouble when tuberculosis sufferers are required to perform remedy manipulate on the puskesmas.

"...The road is difficult sir, because our road is still dirt sir, especially when it rains sir, we can't pass anymore sir because the water is already thigh-high. Even those of us from the village cannot get out, let alone those from outside the village, we can't get in. So that is what makes me lazy to bring my child to the puskesmas..." (KP1; KP3-4; KP5)
"...For us sir, we want our child to be healthy quickly sir, yes, we are told to take the medicine every month but that's what it is sir...we already have a bad road, we don't have a bicycle. If we take a rickshaw, no one wants to come here, the
rickshaw could be damaged. You saw it when you passed by earlier..." (KP1; KP3; KP4; KP5)
"...Actually, if you look at it sir, they are actually obedient and want to seek treatment, it's just that this person's village is far away sir, sometimes it can take an hour to arrive, not to mention the rain, flooding..." (PK3; PK5)

Impact of disease

Physical impact. Bodily effect is the maximum felt by humans with tuberculosis. The average patient studies shortness of breath and difficulty in doing activities. Breathing distress is regularly due to extended coughing, decreased appetite, and trouble resting. This physical disability makes tuberculosis sufferers not able to paintings and affects the own family's economic decline.
"...Because I've been coughing for a long-time sir...so my body is getting thinner, I don't want to eat, sleeping is difficult sir...so now even walking is already ngap-ngapan (tightness) sir...how else would I work sir..." (P1; P2; P3; P4; P5)
"...So yesterday when the doctor at the health center said I had TB, I immediately stopped working, he said that if I work, the treatment will take a long time, and then it won't be good, so I immediately quit my job. Now I am focusing on treatment..." (P1; P2; P3; P4; P5)
"...What are you doing sir...I want to work, it's a pity that there is no one at home who can work but me, but that's what sir...every time I work, the pain continues to be tight, coughing and sometimes it comes out too sir, that's why now I can't work anymore sir...I can't stand this tightness sir..." (P1; P2; P3; P4; P5)

Psychological impact. The mental impact of tuberculosis patients, on common, is that after they may be identified with tuberculosis, they right now feel inferior and embarrassed to meet different human beings. Tuberculosis patients feel that their ailment is a shameful disorder and that other people will no longer need to satisfy them. Eventually, at some stage in the six months or greater of treatment before being declared cured, tuberculosis sufferers did not dare to show their faces in the front of others, even in their personal households, tuberculosis patients felt ashamed and shunned.
"...Immediately like being locked up, sir, just at home for up to 6 months..." (PK1-PK3 ; PK4-PK5; KP1-KP5)
"...All activities were immediately prohibited, sir, for fear of relapse so it became more difficult..." (PK1-PK3 ; PK4-PK5; KP1-KP5)
"...In general, when they are told about TB, everyone stays away sir, even later if you want to control here alone, sir..." (PK1-PK3 ; PK4-PK5; KP1-KP5)
"...When we were told that sir, we were ashamed to leave the house sir...After all, where would anyone want to be close to us sir because they said it was contagious sir, so yes...we also know ourselves sir...that's why we stay at home sir. Even this time I went out because I wanted to come here (puskesmas) sir...I wanted to take the medicine..." (PK1-PK3 ; PK4-PK5; KP1-KP5)

Social impact. The social effect felt by using tuberculosis sufferers is they tend to withdraw from the social surroundings via restricting their sports in the network. Patients with tuberculosis have a tendency to feel inferior and believe that they'll be refrained from through others. All community activities are stopped by way of patients while they're recognized with tuberculosis.
"...I've never participated in wiritan again sir, I'm embarrassed sir to be seen by people and then shunned...no one wants to be close to us anymore sir. So, when it's wiritan, people are reciting the Quran and then we cough...then people see us sir, they say all kinds of things...like Covid...yes...so instead of being talked about by people, it's better to stay at home sir..." (PK1-PK3; PK4-PK5; KP1-KP5)
"...For village activities such as cleaning in the villages, I don't participate anymore, sir...that's because I'm embarrassed, sir. People do not talk about us, but it seems like their eyes are kind of strange, sir...not to mention if I cough, never mind...where is this still covid, right sir...we're finished. So yes...I know myself, sir, I do not participate in any community activities anymore, including sports..." (PK1-PK3; PK4-PK5; KP1-KP5)

Discussion

Tuberculosis manage should be carried out mutually by using related to all ranges of society, such as medical experts, community corporations, non secular businesses, authorities and the personal quarter. All of them must work together with the intention of removing tuberculosis.

Remedy of tuberculosis, which requires a long and lengthy duration for tuberculosis patients, will in reality cause various barriers. Those obstacles regularly motive sufferers to forestall taking tuberculosis medication. Based on the consequences of the observe, contributors stated that carrier distance, economy, and bodily disturbances consisting of shortness of breath and weakness had been matters that really disturbed members to make visits/controls. In step with [16] longue distance and absence of transportation centers are the highest barriers for human beings with tuberculosis to stick to their treatment. TB treatment compliance may be as a result of patient-associated factors, social factors, economic factors and health and health care machine factors [17]–[19]. In step with [20], [21], poverty and TB are carefully associated. They declare that poor humans may additionally lack flexibility in phrases of administrative center and medical institution attendance and much less potential to pay for medicines and transportation. Research [20]–[24], stated that their TB sufferers came from poor socioeconomic conditions and lived some distance from the medical institution. a number of them do no longer have right housing as they live in huts, their dietary reputation is terrible and they're unemployed and have no cash to journey to the medical institution.

This observe discovered that each one those elements make contributions to low adherence to TB treatment [20]–[24]. In step with [25], [26] the psychological effect is a barrier that tuberculosis sufferers feel after they searching for remedy at the health facility, further to the results of the ailment on efforts to effectively whole treatment along with economic losses from misplaced profits all through TB treatment, which might be exacerbated by means of the additional costs of extra pills and transportation to outpatient TB clinics.

In step with [27] limitations to get entry to to fitness centers are lengthy distances, poor street conditions, and costs related to journey. Further, the lack of awareness of TB and its outcomes, and the notion in it, advocated many respondents to visit conventional healers. Early diagnosis of TB was hampered with the aid of the dearth of educated health personnel to use the device, loss of gadget and abnormal attendance of medical experts. Additional boundaries that impede adherence and remedy finishing touch are the need to go to fitness facilities every day for DOTS remedy and associated constraints, complicated treatment regimens, and stigma. In step with [28], [29] there are five foremost obstacles skilled by means of humans with tuberculosis, particularly lack of TB knowledge, stigmatization, long distance to health centers, facet outcomes of medicine and lack of family earnings. As an effort to overcome limitations in line with [18] it is necessary to strengthen verbal exchange talents and the position of TB cadres in decreasing boundaries to TB treatment. Consistent with [30] own family guide has a substantial dating with the compliance of TB patients in complying with taking medicinal drug.

Consistent to [31] psychosocial assist may be used as an effort to overcome barriers at some point of remedy in tuberculosis patients. According to analyze [32]–[34] own family is the most important cause for human beings with tuberculosis to comply with their remedy. Consistent with [33], [35] sociodemographic traits, treatment elements, information approximately TB, mental health, and behavioral characteristics can be the motives for TB sufferers to comply with remedy. In step with [36], [37] enhancing counseling, presenting education, carrying out domestic visits and far-flung monitoring thru communication tools are methods to encourage TB sufferers to comply with their remedy. Family is the nearest factor in enhancing the compliance of tuberculosis patients.
In step with [38] treatment compliance of tuberculosis sufferers is intently related to the implementation of own family capabilities. The circle of relatives encourages tuberculosis sufferers to comply with remedy and ordinary visit schedules. In accordance to investigate [39], [40] said that own family social help become inside the properly class, particularly 86% as an effort to assist patient compliance in addition to own family motivation to motivate sufferers to save you transmission of tuberculosis germs to other own family participants, specifically 93%. This suggests that the function of the own family and circle of relatives mechanisms in handling ill circle of relatives individuals assist tuberculosis patients observe their remedy often. In improving the healing of tuberculosis patients, the vitamins of sufferers additionally wishes to be considered. according to analyze [27], [41], [42] there may be a tremendous dating among the dietary fame of tuberculosis sufferers and compliance with taking medication often for the healing of tuberculosis sufferers.

**Conclusion**

Presently, the treatment of tuberculosis nevertheless focuses only on providing free pills however does no longer see the limitations skilled via tuberculosis patients. Regularly, whilst TB sufferers sooner or later decide not to hold taking medication, health workers right away penalize TB sufferers who are lazy to are seeking for treatment, while a more in-depth appearance famous that there are 3 essential signs that are maximum felt with the aid of TB sufferers. they may be commonly inclined and compliant to take medicine often, but the 3 indicators above pose a severe threat to TB sufferers' compliance in completing their remedy.

**References**


N. Sriyanah *et al.*, “Relationship of Knowledge, Attitudes with Family Support as Monitoring Compliance with Taking Medication in Patients with Pulmonary Tuberculosis,” *An Idea Health Journal*.


