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Exploring Social Stigma and Awareness towards Tuberculosis in a Municipality in Southern Philippines: A Mixed-Methods Study

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ABSTRACT

Background: Social stigma and awareness are frequently associated with the low rate of clinical diagnosis, case detection, and successful treatment of patients with Tuberculosis (TB). In the Philippines, however, there have been few studies on TB stigma and awareness. **Objective:** The purpose of this study is to look into the level of social stigma and awareness about tuberculosis among patients, their relatives, and the community in a municipality in the southern Philippines. **Methods:** An institution-based survey was conducted among 244 participants from various Regional Health Units (RHU) to assess social stigma and awareness of the deadly disease. Participants were divided into three groups: patients diagnosed with tuberculosis (TB), family members of the patients, and community members. The researcher used an exploratory sequential mixed method design to get a deep understanding of the statistical relationships between the variables and their context, collecting quantitative data first and then qualitative data. **Results:** The findings revealed that the patient and the patient's relatives were more aware of the causes, clinical presentation, treatment, and mode of treatment of tuberculosis than members of the community, with a general mean of 1.60. This is attributed to the family's role as the primary caregiver, as well as a lack of general information and advertising about TB in the community. On the other hand, all three groups experienced high levels of social stigma, with a general mean of 1.90. Fear of transmission and discrimination were identified as the primary reasons. There is no significant relationship found between respondents' level of awareness and social stigma, which can be interpreted to mean that the stigma persists regardless of awareness. **Conclusion:** The study reveals that general awareness of TB among community members stems from rumour and gossip rather than legitimate sources. As a result, the patient's and family members' social stigma remains high, which can contribute to unsuccessful case detection and treatment. It is thus recommended that policymakers strengthen programmes aimed at identifying and addressing the problems that lead to stigma.

Keywords: Tuberculosis; Social Stigma; Awareness; Rural Health Center

INTRODUCTION

Tuberculosis is a major global health issue (WHO, 2013). Every year, it infects millions of people and is the world's second leading cause of death from an infectious disease, after HIV. Tuberculosis has a negative social impact, particularly in rural communities (Nidoi *et al.*, 2021), and is frequently associated with malnutrition and low social status (Gupta *et al.*, 2009).

According to the World Health Organization (WHO, 2013), the Philippines has the ninth highest number of tuberculosis cases in the world and the highest in Southeast Asia. It is estimated that more than 14 million Filipinos are infected with tuberculosis, which kills 75 people every day. It is also the sixth most common cause of morbidity and mortality (DOH, 2020).

The Directly Observed Treatment Short-course (DOTS) program is the government's attempt to reduce TB mortality and morbidity in the country. The relatively low rate of clinical diagnosis, case detection, and successful treatment, on the other hand, suggests that more needs to be done to reduce the burden of tuberculosis (Sisay *et al.*, 2014). One of the problems associated with tuberculosis is social stigma, which is still given little attention by academics and professionals today.

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It is unclear from the local literature whether the family members and friends of those with tuberculosis also suffer from stigma. The sparse findings from other countries suggest that stigma is contingent upon some factors. For example, people's knowledge of the cause, mode of transmission, and curability of a disease tends to define one's attitudes towards the sick (Zhang *et al.*, 2007) and immediate family members.

The stigma associated with tuberculosis is still a major concern. The negative social impact of tuberculosis on patients and the community as a whole frequently causes emotional stress as a result of feelings of rejection. When dealing with a disease like tuberculosis, it is critical to recognize that it necessitates treatment, and not just treatment, but continuous and close supervision treatment (Moscibrodzki *et al*., 2021).

TB is frequently associated with factors that can create stigma: HIV, poverty, drug and alcohol abuse, homelessness, a criminal record, and refugee status. People who face discrimination may become socially isolated, especially in small communities, and entire families may be shunned. Women are frequently blamed as the source of tuberculosis, and those affected by the disease may be divorced or deemed unworthy of marriage (Kipp *et al.*, 2011). In some cultures, TB is associated with witchcraft. TB can be considered a "curse" on a family because the illness often affects multiple generations (Mbuthia, 2018).

This stigma also has obvious consequences for health-care providers. Rural health centers provide a full course of medication for tuberculosis patients as long as the client follows the rules, which include visiting the health center on a regular basis to receive the medicine, which may result in stigma, discrimination, and suffering for the client. This study seeks to call attention to social stigma as an aspect of tuberculosis and reflects on TB's stigmatization in the Philippines, particularly in a rural community in Lanao del Sur, Philippines.

METHODOLOGY

Research Design

This study utilized the exploratory sequential mixed method design in order to determine the nature of awareness and social stigma. Exploratory sequential mixed methods are an approach to combining qualitative and quantitative data collection and analysis in a sequence of phases (Creswell & Plano Clark, 2017).

The first phase is qualitative and focused on the investigation of possible causes of social stigma and a description of potential discrimination associated with TB among respondents using an interview guide. For the quantitative method, descriptive correlation design was used to determine the respondents' socio-demographic profile, level of awareness about tuberculosis (TB), and level of social stigma about TB, as well as any significant relationships between the variables.

Participants

This study's respondents were divided into three groups. The total enumeration method was used to select the 44 TB patients who were receiving or had completed TB treatment at the study location and met the inclusion criteria. The other two groups were drawn from a convenience sample of 30 adult (18-year-old) family members of TB patients and 30 adult (18-year-old) community members who were not current TB patients or family members of TB patients.

Research Instrument

To determine the level of awareness about tuberculosis (TB) and the level of social stigma related to TB among the respondents, the researcher utilized a self-developed, structured, four-part questionnaire for each group of respondents. The prevalence of tuberculosis was assessed using 20 questions divided into four sections: causes, clinical presentation, treatment, and mode of treatment. These questions were developed from information routinely provided to patients as part of the Department of Health's (DOH) tuberculosis (TB) program. Finally, Part III of the research instrument addresses respondents' level of social stigma associated with tuberculosis. Ten questions were used to assess TB stigma.

Validity and Reliability of the Instruments

The triangulation method was used to assess the validity and reliability of mixed method research. The goal of triangulation is to achieve accuracy in measurement between two points that require a reliable method of measurement.

The theory of triangulation provides some degree of control over the accuracy of the data. Furthermore, a pilot study was conducted on ten (10) individuals who were not part of the study but shared similar characteristics as the respondents in order to identify problems or flaws in the questionnaire.

Data Collection

This study was conducted at the Municipality of Ditsaan Ramain, a rural and economically deprived region in southern Philippines. The primary data for this study were gathered using two methods: (1) a survey in which quantitative data on respondents' personal characteristics, level of awareness about TB, and level of social stigma associated with TB were elicited; and (2) in-depth interviews with TB patients, their family members, and members of the community who were not current TB patients or family members of TB patients to gain insight on the possible causative factors. Following the researcher's pilot testing and the statistician's approval, we began distributing the questionnaire to respondents.

Data Analysis

In this study the quantitative data was analyzed using Statistical tools such as the Statistical Product and Service Solution (SPSS) to perform all data computations. Frequency and Percentage Distribution were used to determine the response distribution of profile of the respondents in terms of the demographic characteristics such as age, sex, civil status, highest educational attainment, employment status, and monthly family income. Meanwhile, median was used to describe the respondents' level of awareness on TB and the level of social stigma associated with TB.

The qualitative data was analyzed using content analysis. A preliminary analysis of this data was performed. The beliefs about the causes of TB stigma and descriptions of TB discrimination were identified. Emerging themes were identified based on their frequency of occurrence and/or wider significance. Some of the respondents' quotes were used to illustrate the most important themes. The results of the qualitative data collected through interviews were incorporated and used to support the quantitative data findings.

Ethical Considerations

Ethical review and approval were not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients /participants provided their written informed consent to participate in this study. To ensure that this research study was conducted in full compliance with research ethical norms, an application for full ethical approval was submitted to the Research Ethics Committee of Mindanao State University, and it was subsequently approved on November 20, 2021, with record number 185/2021-25.

RESULTS

Respondent's Sociodemographic characteristics

The 244 participants were divided into three groups: patients, relatives of TB patients, and members of the community. The participants range in age from 17-60. In all three groups, the age group 41 – 50 and above 50 received the most responses, with 18 patients (17.30%), 8 family members (7.69%), and 11 community members (10.57%), for a total of 37 respondents (35.58%) in the 41 – 50 age range, and 32 respondents aged 50 above (30.77%).

An overwhelming majority of the participants are female (65.38 %), and more than half were married (64.42%). It was also revealed that 34 (32.69%) of the participants has no formal education. Moreover, nearly two-thirds of the participants (64.42 %) were unemployed with more than half of the respondents (83.65%) reporting a family income of less than 10,000 a month.

Level of Awareness on Tuberculosis

The table below depict the participants' level of understanding of the causes, clinical presentation, treatment, and mode of treatment of tuberculosis.

Table 1: Summary of Responses in Terms of Causes of Tuberculosis

Causes	Frequency	Percentage
High Awareness		
Patient Respondents	151	68.63
Family Respondents	86	57.33
Community Respondents	76	50.66
Total	**313**	**60.19**
Low Awareness		
Patient Respondents	69	31.36
Family Respondents	64	42.67
Community Respondents	74	49.33
Total	**207**	**39.80**

Mean: 1.60Median: 2.00Mode: 2

The majority of respondents (82 or 78.8%) were aware that TB can be spread through air droplets and prevented by covering the mouth and nose, with 37.5% percent of patient respondents, 20.19% of family respondents, and 22% of community respondents.

The findings revealed that 56.7% of respondents were aware that TB is spread in ways like those by which AIDS is spread such as unsafe sexual practices or by transmission of infected blood. On the other hand, more people were unaware that TB can be spread through handshakes and sharing food with an infected and that TB is caused by Mycobacterium Tuberculosis. With a mean of 1.60, it can be assumed that respondents were somewhat aware of the causes for tuberculosis. This also indicates that the patient and family respondents, had a higher level of awareness than the community respondents.

As to the treatment of Tuberculosis, figures present again a unanimous unawareness response among the five indicators on both family respondents and community respondents while patient respondents show awareness, especially on the B12 (TB treatment is always free in all RHU in the Philippines) and B15 (TB is incurable), in which both were 100% or 44 of the respondents answered correctly. More than half of the respondents were unaware as to the five indicators. In general, with a mean of 1.40, it can therefore be interpreted that respondents were equally unaware as to the treatment of tuberculosis.

However, the patient respondents were aware that they could seek available and free treatment at the Rural Health Center. "It's good that the health center explained the disease thoroughly to me and that it's free because it's paid for by the government," one patient respondent said.

Level of Social Stigma

Table 2: Summary of Responses in Terms of Indicators of level of Social Stigma

Social stigma	Frequency	Percentage
High Stigma		
Patient Respondents	322	73.18
Family Respondents	204	68
Community Respondents	212	70.67
Total	**738**	**70.96**
Low Stigma		
Patient Respondents	118	26.82
Family Respondents	96	32
Community Respondents	88	29.33
Total	**302**	**29.04**

Mean: 1.60Median: 2.00Mode: 2

As illustrated in the table, the respondents show a high level of social stigma, with a general mean of 1.90. It could be interpreted to mean that communities in a rural area still believe in rumors such as TB being spread by sharing utensils.

The three respondent groups exhibit a high level of social stigma. This finding can be attributed to the respondents' lack of awareness and information, which affects their knowledge of tuberculosis.

Furthermore, the findings revealed that, regardless of the causes of tuberculosis, respondents remain convinced that it is communicable. Alarmingly, a number of community members believe that all family members living in the same household with a TB patient are already infected. "It's so scary because look at her children, they're all thin, maybe they've already been infected by her," one respondent laments. There is also a widespread belief among community members that tuberculosis is incurable.

Table 3: Summary Correlation, General Level of Awareness on Tuberculosis and Level of Social Stigma

Level of Awareness on tuberculosis and Level of Social Stigma	**Spearman's rho**	**Significant value**	**Interpretation**
Patient respondents	0.065	0.514	**NS**
Family Members	-0.120	0.226	**NS**
Community Members	0.097	0.326	**NS**

Interpretation: S: SignificantNS: Not Significant

As shown in the table above, the level of awareness on all the 3 groups of respondents were found out not to have a significant relationship with the level of social stigma. This implies that regardless of the level of awareness on tuberculosis, the level of social stigma remains.

However, the data showed that the greater their level of awareness of TB, the more cautious they were in dealing with TB patients. This can be interpreted to mean that their awareness of the disease does not eliminate fear of the disease. One may be educated and aware of the causes of tuberculosis, and its clinical presentation, treatment, and mode of treatment, but one may still be among those who are afraid of sharing a plate or even conversing with a TB patient. "When my family found out about my illness, they separated everything, like plate, spoon, cup. I understand why they're scared, but it still hurts," one patient respondent said. Another patient stated, "Even though they said we couldn't transfer it, I am still shy, and I run sometimes because I am afraid and shy." This presupposes that knowing that TB cannot be transmitted does not reduce the stigma he faces.

Concerning the perceived causes of stigma, the overwhelming majority of respondents (85.6 percent) ranked fear of transmission and fear of discrimination (52.9%) as the most prominent causes of stigma, while punishment by God was ranked last (14.4%). Pity, disgust, denial, pain, and fear of loss were added to the respondents' list of perceived causes of social stigma.

DISCUSSION

The majority of respondents in all three groups (patients, family members, and community members) were elderly, specifically aged 41-50 and above. This indicates that in the rural area, the elderly people typically stay at home and are familiar with almost all their neighbors, where they spend majority of their time chatting with. According to Chan Yeung *et al.*, (2005) study, the elderly population has a significant impact on the rate of tuberculosis patients.

There was also a high rate of respondents who were married and had no formal education. All of the respondents identify as Meranaw, a tribe in the southern Philippines whose members are traditionally encouraged to marry at a young age. Because they live in a rural area with few schools and institutions, this is primarily due to the low value placed on education at the time, as well as the limited resources available.

The patient and family respondents were more aware about the causes, clinical presentation, treatment, and mode of

treatment of tuberculosis than the community. The family provides physical and psychological support to make sure that the TB treatment is successful (Kristinawati, 2019). The patient's family is the primary caregiver, and they frequently accompany the tuberculosis patient to the health center to learn something from the staff, giving them more access to a source of information about the disease that they can share to others (Sukumani *et al.*, 2012). As to the community, the rural health center provided the majority of the information about TB. The community rarely hears any advertisements or information about TB, despite the fact that television and radio were available in the area. This also indicates that most community members obtain their information / awareness through gossip or hearsay which agrees with previous studies in a rural community in southwest Ethiopia (Abebe *et al.*, 2021), in northeast Ethiopia (Legesse *et al*., 2010) and Iran (Yousif, 2009).

On the other hand, community awareness of tuberculosis treatment is low, mainly attributed to a lack of resources and disease advertising. According to a study by Peabody *et al.,* (2005), only 28% of patients with incident active TB were diagnosed and treated successfully, while 20% died before being diagnosed, and 6% more will die after diagnosis due to insufficient care and treatment.

The majority of respondents were aware that TB can be transmitted through air droplets and that it can be prevented by covering one's mouth and nose. In different studies, it was found that the most perceived modes of transmission are through the air when a person with tuberculosis sneezes or coughs, and sharing cups with the patientMushtaq et al., 2011; Legesse *et al*., 2010; Yousif 2009). The reported communities' knowledge of TB symptoms and transmission methods has significant implications for the TB control programs, as well as the country as a whole, because it could reduce diagnosis and treatment delays, as well as disease spread. (Tolossa, 2014).

In terms of social stigma, three groups of respondents agree that the level of social stigma is high. This could be due to the respondent's lack of awareness as a result of limited information, which affects their understanding of tuberculosis. According to Phillips *et al*., (2012), the mark of stigma gravitates around the stigmatized person's attribute, and even if they do not have the attribute, family members, friends, or caregivers experience stigma. According to Lawn (2000), the person who is not sick is always perceived to be in danger, not the person who is sick. As a result, the more visible the "mark," the more people will feel threatened, and avoidance behavior will increase. This means that everyone is aware of the importance of protecting themselves from diseases spread by family members or the community at large.

Respondents identified fear of transmission, discrimination, gossip, shyness, God's punishment, and witchcraft as causes of social stigma. According to the respondents, the top reasons for stigma are fear of transmission and discrimination. Given that tuberculosis is a communicable disease, fear of transmission is understandable. Similarly, fear of TB stigma can lead infected individuals to hide their TB status from their families. As TB-infected individuals internalize their community's negative judgments about the disease, they experience feelings of shame or guilt, leading to self-isolation (Courtwright, 2010).

CONCLUSION

In general, there is awareness among the respondents about the causes, clinical presentation, treatment, and mode of treatment of tuberculosis. The patient diagnosed with TB and their family got their awareness from the health center or hospital where they seek assistance for the treatment of TB. On the other hand, the general community's source of information was heavily reliant on gossip and hearsay. Due to a lack of appropriate sources, their knowledge of the disease is limited, which may lead to social stigma, particularly in rural areas where almost everyone knows each other.

Social stigma is present and felt by the patient, family members, and community members regardless of their level awareness of TB. This stigma is commonly exhibited by the presence of guilt, pity, disgust, and fear of transmission. Thus, it is strongly recommended that a study be conducted to determine the effectiveness of government programs in raising community awareness and achieving their objectives and goals. Other diseases could be included in stigma research. A study on the possible prevention or treatment of diseases that are fatal killers due to the stigma associated with them, such as tuberculosis, HIV, leprosy, and other diseases, is also strongly recommended.

Conflict of Interest

The authors declare no conflict of interest in preparing this research.

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