

Research Article

Exploring Community Attitudes and Sociodemographic Determinants of Stigma and Support Towards Tuberculosis Patients: A Cross-Sectional Study in Nkoranza South Municipality, Ghana

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Abstract

Background: Tuberculosis (TB) continues to be a significant public health issue in Ghana, and stigma and compromised community support are intrinsic barriers to successful treatment, diagnosis, and control. Knowledge of community attitudes and sociodemographic factors that influence stigma is crucial for developing targeted interventions in Nkoranza South Municipality. **Methods:** This was a cross-sectional study that included 245 randomly selected TB patients aged 18 and older who were currently receiving or had completed treatment between 2016 and 2020 in the Nkoranza South Municipality. Data were collected using a semi-structured questionnaire, administered through the home and healthcare facility by trained enumerators. Using SPSS version 26, Fisher's Exact Test was used to examine association, and logistic regression was used to assess the impact of socio-demographic factors on stigma and support. Frequencies were used to explore suggestions for reducing stigma and improving TB care, with a statistical significance set at $p < 0.05$. **Results:** The study revealed that 71.4% of TB patients interviewed reported avoidance by the community. About 17% felt rejected, and only 12% felt accepted by the members of their communities. About 64% reported a lack of support, and 68.2% reported experiencing stigma. TB patients aged 20-39 years had higher odds of experiencing a lack of support (aOR = 3.15, 95% CI: 1.35-7.39, $p = 0.008$). Respondents practicing other religions, unlike Christianity, had lower odds of stigmatization (aOR = 0.08, 95% CI: 0.01-0.53, $p = 0.010$) and lack of support (aOR = 0.10, 95% CI: 0.02-0.68, $p = 0.019$) compared to those practising traditional religion. Ethnic groups such as the Dagaari had lower odds of experiencing stigmatizations (aOR = 0.10, 95% CI: 0.02-0.44, $p = 0.002$) and lack of support (aOR = 0.19, 95% CI: 0.05-0.74, $p = 0.016$). Educational level was not significantly associated with stigma or support. TB patients suggested community education, TB awareness creation, and improved staff professionalism as crucial steps to reduce stigma and enhance TB care. **Conclusion:** TB stigma and support gaps are prevalent in Nkoranza South Municipality, with predominant influences of age, occupation, religion, and ethnicity. The challenges need culturally adapted public health education, improved healthcare professionalism, and sustained community mobilization to optimize the TB outcome and combat stigma. Future studies should investigate whether community-based education and advocacy interventions can reduce stigma associated with TB and increase long-term support for patients.

Keywords

Tuberculosis, Stigma, Community Support, Sociodemographic Factors, Nkoranza South Municipality

1. Background

Tuberculosis (TB) remains a significant public health threat globally, according to the World Health Organization [1] (Desanto et al., 2023). Globally, it was estimated that 10 million individuals got infected with and 1.5 million died due to TB in 2021 alone [3, 4]. TB is preventable as well as curable, but at present, it remains unacceptably high in low- and middle-income countries such as Ghana, where there are deficiencies in healthcare systems in terms of early diagnosis, access to care, and patient retention in care [5].

In addition to medical and logistical issues, psychosocial issues like stigma and social exclusion also severely undermine TB control. Stigma associated with TB is complex, and often it relies on disease transmission myths, linkage with HIV/AIDS, and the perception that TB is caused by indecent conduct or personal failure [6, 7]. These attitudes foster fear, discrimination, and stigmatization, not just by the public but even by the family and medical practitioners themselves at times [8, 9]. Therefore, TB patients will deny care, likely abandon treatment, or hide their diagnosis, all leading to continued transmission and poor results [10].

In Ghana, some studies [4, 5] have established the existence

of stigmatizing attitudes towards TB patients, particularly among rural and semi-urban populations. Stigmatization and rejection of TB patients are governed by fear of infection, religious explanations of illness, and social misconceptions. Regardless of national efforts to create awareness and eliminate stigma, such attitudes continue to exist. Additionally, social support, a most critical variable in the improvement of treatment compliance and emotional well-being, is usually absent, adding another layer of complexity to the lives of TB patients.

Stigma and social support are not universally experienced by all groups [11]. Different studies have characterized sociodemographic variables like age, gender, education, religion, and occupation as the most critical determinants of experiencing and managing TB-related stigma [8, 10]. For instance, youngsters might be ostracized by others, whereas elderly people might receive more respect from society. Religious and cultural systems can also come between in how they influence explanations of illness as well as the level of support or rejection accorded a patient [12, 13].

Even as there has been increased consciousness of such

dynamics, few context-specific studies have explored the way such drivers shape stigma and support at the level of the community in Ghana and, more specifically, in rural areas such as Nkoranza South. The majority of research is conducted with urban dwellers or is too broad to guide focused intervention at the local level. Situational awareness is critical to the development of suitable, culturally appropriate strategies for stigma mitigation and patient support.

The purpose of this research is to examine community perceptions of TB patients and analyze sociodemographic determinants of stigma and support within Ghana's Nkoranza South Municipality. Findings will be used in the design of community-based, culturally appropriate public health interventions that, in addition to countering myths, create supportive communities that enable early detection, treatment compliance, and long-term cure.

2. Methodology

2.1. Study Population, Inclusion and Exclusion Criteria

The study population consisted of TB patients aged 18 years and above who were either currently receiving treatment or had received treatment between 2016 and 2020 and were residents of the Nkoranza South Municipality. Participants were clinically diagnosed with TB in the required age bracket and either actively undergoing or had completed treatment within the specified timeframe. TB patients who were severely ill, TB respondents or those who refused to participate were excluded from this study.

2.2. Sample Size Estimate

In this study, we use Cochran's formula to estimate the sample size, assuming a 95% confidence level ($Z = 1.96$), a 5% margin of error, and an estimated TB prevalence rate of 18.6% [14]. The sample size was calculated to be 233 respondents. A 5% non-response rate was calculated, resulting in an adjusted final sample size of approximately 245 respondents.

2.3. Sampling Method

A probability sampling technique, specifically simple random sampling, was used to select participants for this study. We assigned unique numbers to all registered TB participants in the TB register. We entered all the numbers into Microsoft Excel version 16. A random numbers formula was used to generate 245 random numbers from the Municipal TB register in the Nkoranza South Municipality. All eligible TB patients in the Municipal TB register were considered. The random selection ensured each individual had an equal chance of being included in the study.

2.4. Data Collection Tools and Techniques

A semi-structured questionnaire with open and closed-ended questions was used to capture respondents' socio-demographic data and experiences regarding stigma, support and the attitude faced in the community by TB patients. We pre-tested the questionnaire on a group of 10 TB patients who shared similar characteristics but were not part of the final sample. The pre-test was carried out to assess the clarity and relevance of the questions. Following the pre-test, the questionnaire was reviewed and refined to ensure its accuracy and appropriateness for the study objectives. We carried out the data collection through follow-up visits to participants' homes and healthcare facilities in the Nkoranza South Municipality. During these visits, trained research assistants administered the questionnaire in the face-to-face interview format, ensuring participants' understanding of the questions and enabling them to freely respond. All participants were provided with informed consent before participation, ensuring ethical standards were maintained throughout the data collection process.

2.5. Data Cleaning and Management, and Data Analysis

The data collected were entered into an Epi Info version 7. Validation checks were performed to identify inconsistencies and missing data. Missing data were addressed through participants' follow-ups. Consistency checks were applied across variables before being securely stored on password-protected devices, with a backup copy created to prevent loss. Preceding the cleaning and validation, the final dataset was exported into SPSS version 20 for statistical analysis.

The data for this study were analyzed using descriptive and inferential statistics to examine factors influencing stigmatization and lack of support among TB patients. Community attitudes towards TB patients were explored using frequencies and proportions, and were presented in a bar chart. Descriptive statistics summarized respondents' demographics and the prevalence of community attitudes towards TB patients, stigmatization and support and were presented with bar charts. We used Fisher's Exact Test to assess the association between respondents' socio-demographics and stigmatization and support for TB patients. The data used in this study violated the Chi-Square rule, which requires expected cell counts to be less than 5; therefore, Fisher's Exact Test was used. Logistics regression was used to assess the impact of socio-demographic variables on stigmatization and the lack of support faced by TB patients. All predictor variables that showed statistical significance in Fisher's Exact test were included in the bivariate logistic regression. Statistically significant predictor variables identified in the bivariate regression analysis were included in the multivariate logistic regression to control for confounding factors. Only the ad-

justed odds ratios were used for discussion, as they account for potential confounding factors, and 95% confidence intervals (CI) and p-values were reported to assess the statistical significance of the results. We used frequencies to explore TB patients' suggestions for reducing stigma and im-

proving TB case detection. All bivariate and multivariate analyses were set at a statistical significance of $p < 0.05$. All descriptive and inferential statistics were done using SPSS version 20.

Table 1. Sociodemographic Characteristics of TB Patients in the Study (n = 245).

Variables	Frequency (n=245)	Percent
Age Level		
<20 yrs	10	4.1
20 – 39 yrs	137	55.9
40 – 59 yrs	59	24.1
60 yrs and above	39	15.9
Sex		
male	174	71.0
female	71	29.0
Educational level		
Middle / JHS	52	21.2
No formal education	52	21.2
Primary	33	13.5
SHS/Vocational	71	29.0
Tertiary	37	15.1
Occupation		
Civil servant	33	13.5
Farmer	85	34.7
Other	56	22.9
Trader	71	29.0
Religion		
Christianity	201	82.0
Others	35	14.3
Traditional	9	3.7
Ethnicity		
Bono	165	67.3
Dagaari	33	13.5
Dagomba	20	8.2
Mamprusi	8	3.3
Others	19	7.8
Marital status		
Cohabitation	17	6.9
Divorced	7	2.9

Variables	Frequency (n=245)	Percent
Married	155	63.3
Single	55	22.4
Widowed	11	4.5

3. Result

3.1. Socio-demographic Characteristics

Table 1 presents the socio-demographic characteristics of the study respondents (n = 245). The majority of respondents were aged 20-39 years (55.9%), with a larger proportion of males (71%) compared to females (29%). Most respondents had either a Senior High School/Vocational qualification or had no formal education (21.2%). The most common occupations were farming (34.7%) and trading (29%). Christianity is the dominant religion (82%), and the Bono make up the

largest proportion (67.3%). Most respondents (63.3%) were married, while 22% were single.

3.2. Perceived Stigma, Community Attitudes, and Support Toward TB Patients

Figure 1 illustrates the attitudes of community members towards TB patients in the study. A majority of TB patients (71.4%) reported being avoided by community members, while about 17% felt rejected. Only about 12% of TB patients felt accepted by the community.

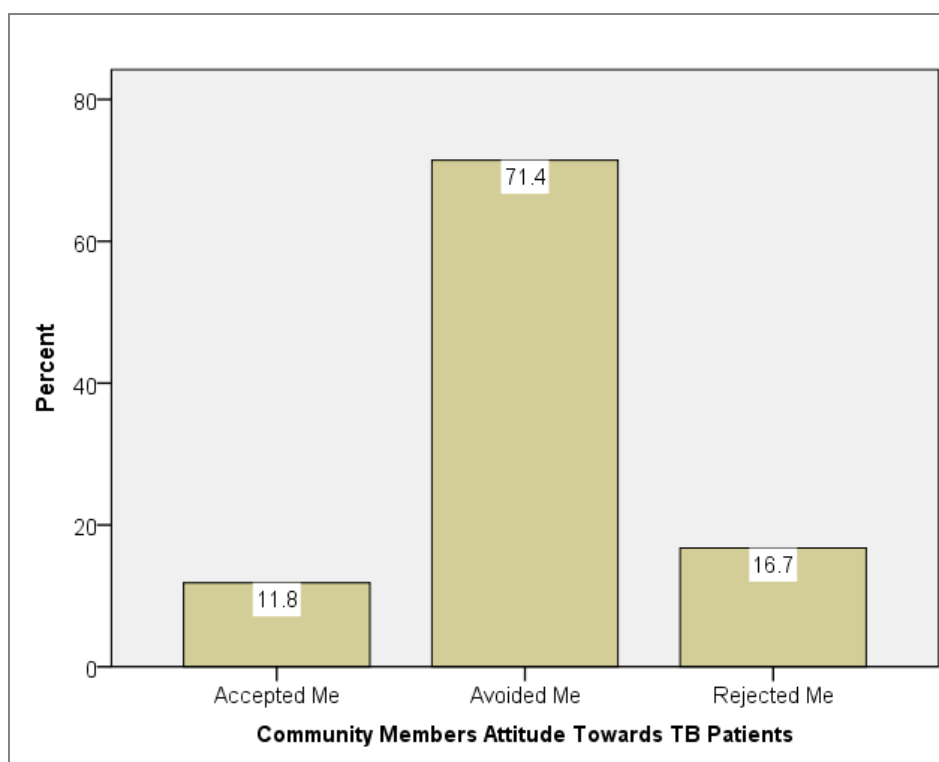


Figure 1. Community Attitudes Toward TB Patients in the Study Area (n = 245).

Figure 2 shows the extent of stigmatization experienced by TB patients in this study. Most respondents (68.2%) reported

experiencing stigmatization, while about 32% indicated they did not face stigma.

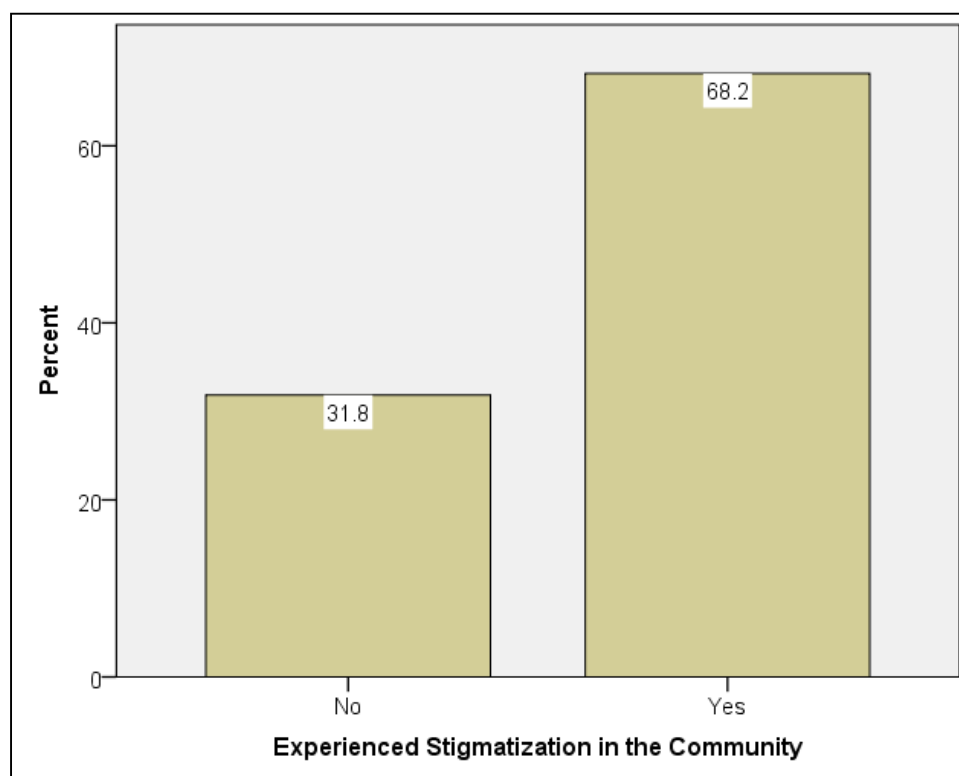


Figure 2. Proportion of TB Patients Reporting Experiences of Stigmatization (n = 245).

Figure 3 illustrates the level of support experienced by TB patients in this study. A majority of respondents (63.7%) reported a lack of support, while 36.3% indicated they did receive support.

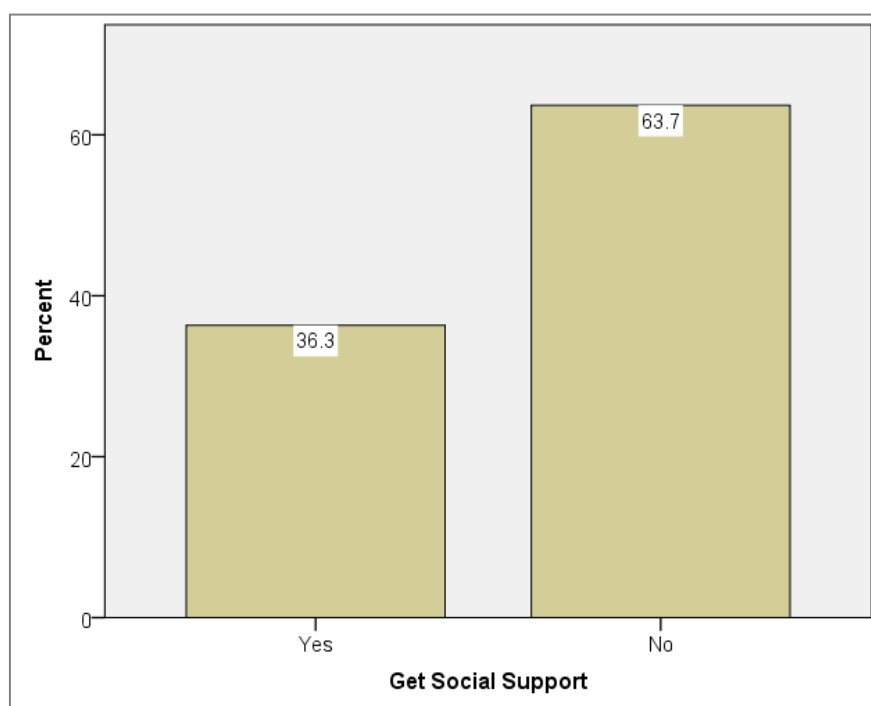


Figure 3. Reported Levels of Support Received by TB Patients (n = 245).

3.3. Association Between Demographic Factors and Stigmatization and Support Among TB Patients

Table 2 presents the results of a Fisher's exact test conducted to examine the relationship between demographic factors and stigmatisation and support for TB patients. The

analysis revealed that age ($P < .001$), educational level ($p = 0.009$), occupation ($p = 0.003$), religion ($P < .001$) and ethnicity ($p = 0.003$) were significantly associated with stigmatization. Again, respondents' age ($P < .001$), occupation ($P = 0.008$), religion ($P < .001$) and ethnicity ($P < .001$) were significantly linked to support for TB patients.

Table 2. Association Between Sociodemographic Characteristics and Experiences of Stigmatization and Support Among TB Patients ($n = 245$).

Variables/Categories	Experience Stigmatization $n=245(\%)$		Fisher's Exact Test p-value	Lack of support $n=245(\%)$		Fisher's Exact Test p-value
	No	Yes		No	Yes	
Age Group			$P < .001$	no	yes	$P < .001$
<20 yrs	3(30.0)	7(70.0)		4(40.0)	6(60.0)	
20 – 39 yrs	29(21.2)	108(78.8)		35(25.5)	102(74.5)	
40 – 59 yrs	24(40.7)	35(59.3)		28(47.5)	31(52.5)	
60 yrs and above	22(56.4)	17(43.6)		22(56.4)	17(43.6)	
Sex			0.546			1.000
male	53(30.5)	121(69.5)		63(36.2)	111(63.8)	
female	25(35.2)	46(64.8)		26(36.6)	45(63.4)	
Educational level			0.009			0.244
Middle / JHS	18(34.6)	34(65.4)		18(34.6)	34(65.4)	
No formal education	24(46.2)	28(53.8)		24(46.2)	28(53.8)	
Primary	14(42.4)	19(57.6)		15(45.5)	18(54.5)	
SHS/Vocational	15(21.1)	56(79.9)		21(29.6)	50(70.4)	
Tertiary	7(18.9)	30(81.1)		11(29.7)	26(70.3)	
Occupation			0.003			0.008
Civil servant	6(18.2)	27(81.8)		9(27.3)	24(72.7)	
Farmer	30(35.3)	55(64.7)		32(37.6)	53(62.4)	
Other	27(48.2)	29(51.8)		30(53.6)	26(46.4)	
Trader	15(21.1)	56(78.9)		18(25.4)	53(74.6)	
Religion			$P < .001$			$P < .001$
Christianity	51(25.4)	150(74.6)		63(31.3)	138(68.7)	
Others	25(71.4)	10(28.6)		24(68.6)	11(31.4)	
Traditional	2(22.2)	7(77.8)		2(22.2)	7(77.8)	
Ethnicity			0.003			$P < .001$
Bono	44(26.7)	121(73.3)		46(27.9)	119(72.1)	
Dagaari	20(60.6)	13(39.4)		22(66.7)	11(33.3)	
Dagomba	8(40.0)	12(60.0)		11(55.0)	9(45.0)	
Mamprusi	1(12.5)	7(87.5)		3(37.5)	5(62.5)	

Variables/Categories	Experience Stigmatization n=245(%)		Fisher's Exact Test p-value	Lack of support n=245(%)		Fisher's Exact Test p-value
	No	Yes		No	Yes	
Others	5(26.3)	14(73.7)	0.311	7(36.8)	12(63.2)	0.520
Marital status						
Cohabitation	3(17.6)	14(82.4)		6(35.3)	11(64.7)	
Divorced	3(42.9)	4(57.1)		4(57.1)	3(42.9)	
Married	50(32.3)	105(67.7)		54(34.8)	101(65.2)	
Single	16(29.1)	39(70.9)		19(34.5)	36(65.5)	
Widowed	6(54.5)	5(45.5)		6(54.5)	5(45.5)	

A logistic regression analysis was conducted to examine the effect of the association between demographic factors and stigmatization and support for TB patients, as illustrated in Table 3. After controlling for possible confounding, the results indicated that respondents aged 20-39 years had significantly higher odds of experiencing a lack of support (aOR = 3.15, 95% CI: 1.35-7.39, $p = 0.008$) compared to those aged 60 years and above. Respondents in the 'other' occupation category had significantly lower odds of experiencing stigmatization (aOR = 0.15, 95% CI: 0.05-0.42, $P < .001$) and lack of support (aOR =

0.22, 95% CI: 0.10-0.55, $P = 0.001$) compared to traders. Compared to those practising traditional religion, respondents who belong to other groups had lower odds of facing stigmatization (aOR = 0.08, 95% CI: 0.01-0.53, $p = 0.010$) and lack of support (aOR = 0.10, 95% CI: 0.02-0.68, $p = 0.019$). Ethnic groups such as Dagaari had significantly lower odds of experiencing both stigmatization (aOR = 0.10, 95% CI: 0.02-0.44, $p = 0.002$) and lack of support (aOR = 0.19, 95% CI: 0.05-0.74, $p = 0.016$) compared to respondents in the 'other' group. Education level was not significantly associated with either outcome.

Table 3. Adjusted Logistic Regression Analysis of Demographic Factors Associated with Stigmatization and Lack of Support Among TB Patients.

Variables/ Categories	Stigmatization				Lack of support			
	cOR (95%CI)	P-value	aOR (95%CI)	P-value	cOR (95%CI)	P-value	aOR (95%CI)	P-value
Age Group								
<20 yrs	3.02(0.68-13.44)	0.147	3.82(0.92-6.52)	0.145	1.94(0.47-7.99)	0.358	3.29(0.66-16.37)	0.146
20 – 39 yrs	4.82(2.27-10.24)	$P < .001$	2.4(0.92-6.52)	0.072	3.77(1.80-7.91)	$P < .001$	3.15(1.35-7.39)	0.008
40 – 59 yrs	1.89(0.83-4.28)	0.128	1.64(0.62-4.31)	0.318	1.43(0.64-3.23)	0.386	1.60(0.64-4.00)	0.314
60 yrs and above	Ref		Ref		Ref		Ref	
Educational level								
Middle / JHS	0.44(0.16-1.20)	0.109	0.46(0.10-2.13)	0.323				
No formal education	0.27(0.10-0.73)	0.010	0.38(0.7-2.02)	0.259				
Primary	0.32(0.11-0.93)	0.036	0.39(0.07-2.04)	0.263	-	-	-	-
SHS/Vocational	0.87(0.32-2.37)	0.787	1.07(0.26-4.45)	0.923				
Tertiary	Ref		Ref					
Occupation								

Variables/ Categories	Stigmatization				Lack of support			
	cOR (95%CI)	P-value	aOR (95%CI)	P-value	cOR (95%CI)	P-value	aOR (95%CI)	P-value
Civil servant	1.21(0.42-3.45)	0.728	0.56(0.11-2.86)	0.482	0.91(0.36-2.31)	0.835	0.66(0.23-1.87)	0.432
Farmer	0.49(0.23-1.01)	0.054	0.69(0.27-1.79)	0.443	0.56(0.28-1.12)	0.103	0.67(0.30-1.47)	0.316
Other	0.29(0.13-0.62)	0.002	0.15(0.05-0.42)	P<.001	0.29(0.14-0.62)	0.001	0.22(0.10-0.55)	0.001
Trader	Ref		Ref		Ref		Ref	
Religion								
Christianity	0.84(0.17-4.18)	0.832	0.42(0.07-2.58)	0.351	0.63(0.13-3.10)	0.566	0.25(0.41-1.56)	0.139
Others	0.11(0.02-0.65)	0.014	0.08(0.01-0.53)	0.010	0.13(0.02-0.74)	0.021	0.10(0.02-0.68)	0.019
Traditional	Ref		Ref		Ref		Ref	
Ethnicity								
Bono	0.98(0.33-2.89)	0.974	0.25(0.07-0.98)	0.046	1.51(0.56-4.07)	0.416	0.67(0.21-2.14)	0.503
Dagaari	0.23(0.67-0.80)	0.021	0.10(0.02-0.44)	0.002	0.29(0.90-0.95)	0.041	0.19(0.05-0.74)	0.016
Dagomba	0.54(0.14-2.08)	0.368	0.22(0.04-1.12)	0.068	0.48(0.13-1.72)	0.258	0.20(0.05-0.92)	0.039
Mamprusi	2.50(0.24-25.72)	0.441	2.09(0.10-45.28)	0.639	0.97(0.18-5.37)	0.974	0.66(0.10-4.54)	0.676
Others	Ref		Ref		Ref		Ref	

Table 4 presents the suggestions from TB patients on reducing stigma and improving case detection. The most common recommendations made by TB patients were community education and advocacy (98.8%), the creation of

awareness (99.6%), and support to TB patients (99.2%). All respondents (100%) emphasized the importance of good staff professionalism as a key factor in improving TB care and reducing stigma.

3.4. TB Patients' Suggestions for Reducing Stigma and Improving TB Case Detection

Table 4. TB Patients' Recommendations for Reducing Stigma and Enhancing Case Detection.

TB patients' suggestions for reducing stigma and improving TB case detection	Frequency	Percent
Community education and advocacy	242	98.8
Creation of awareness	244	99.6
Support for TB patients	243	99.2
Good staff professionalism	245	100

4. Discussion

Experiences of stigmatization, support from the community among TB patients were studied in Ghana, Nkoranza South Municipality, along with basic sociodemo-

graphic determinants of the region. The results indicate high levels of stigmatization and poor support from the community, as witnessed in such environments of the sub-Saharan region of Africa [8].

Our study revealed that most community members socially excluded TB patients, and 68.2% reported stigmatization.

This conforms with previous studies that illustrate that the longstanding resilience of stigma remains a stumbling block towards TB control [9, 15-17]. Parallel rejection by community members was underscored by Desanto et al. (2023), but focusing on fear and misconception as the impetuses of stigma [2]. The low rate of community acceptance (12%) revealed in this current study illustrates these trends. It indicates that despite continued awareness campaigns for TB, stigma is firmly entrenched in Nkoranza South Municipality, which underscores the need for targeted intervention to reduce the menace of TB stigmatization.

As expected, the most recent estimates of stigmatization against TB patients are fractionally higher in rural and peri-urban areas than in urban areas, as evidenced in our finding, placing rural or peri-urban ones like Nkoranza South more at risk of stigma [4, 5, 16]. Conversely, other studies recorded higher stigmatization prevalence in urban areas compared to rural settings [1, 18]. This may be due to more formal public health education and increased exposure to TB interventions in these urban areas.

Consensually, in our study, most respondents had no support from society and the community. This corroborates other studies, which documented stigma and lack of support for TB patients and attributed it to fear of transmission to others, leading to rejection by society [8, 11]. Lack of support demotivates adherence to drugs and outcomes, as established in the literature [8, 19]. However, our finding contradicts the revelation documented by Carvalho et al., which stipulated that most respondents felt supported in their communities [20].

We must recognise that although conceptual links between support and stigma were identified, they do not need to occur simultaneously. For instance, patients might be protected from visible stigma but still lack adequate emotional or financial support. This subtle distinction is critically important when designing interventions that not only aim to reduce stigma but also bolster family and community systems [6].

In this current study, strong correlations were found among stigmatization/support and different sociodemographic indicators, such as religion, work status, ethnic origin, and age. Young adults aged 20-39 years had lower levels of support, and this could be because of increased social mobility and peer pressure, perhaps adding to stigmatization [21, 22]. Older generations are likely to be more valued by peers or have more consistent patterns of support.

We further observed that occupation, religion and ethnicity were also key predictors of stigmatization among TB patients. Members of the 'other' ethnic group and religious conservative believers were more likely to be stigmatized and less likely to be helped. These can be understood as evidence of a higher incidence of more embedded cultural misbeliefs and faith-based interpretation of illness. In contrast, our finding is not in conformity with another study in South Africa and Kenya, which documented no relations between region, occupation and stigmatization against TB patients [12, 13]. This

variation can be explained by such factors as the type of education at various levels or the impact of social norms created on the basis of individuals' knowledge level in South Africa. Furthermore, the variation for occupation with studies elsewhere could be an indication of the probability that traders, having contact with a wide proportion of the populace, are under more public observation and scrutiny.

We found no correlation between education status and stigma against TB patients or support offered to them in their communities. This is in line with another study in South Africa, where stigmatization against TB patients did not correlate with higher education [12].

Our study found that, across all groups, respondents strongly demanded community education, awareness, and enhanced professionalism among healthcare workers. The findings again validate the necessity of comprehensive, community-oriented interventions that address the WHO End TB Strategy's emphasis on social protection and stigma mitigation [23]. Worldwide focus on professionalism among health workers brings into focus the role of health workers not only as providers of service but also as planners who influence popular attitudes towards TB [24].

5. Conclusion

Our study suggests the widespread prevalence of TB stigma and poor support in the Nkoranza South Municipality. Sociodemographic determinants, particularly age, occupation, religion, and ethnicity, are key drivers of the patient experience. Findings necessitate a focus on culture-sensitive interventions, long-term public health education, and better healthcare professional conduct to end stigma and improve TB control in Nkoranza South Municipality and other comparable settings. Future studies should investigate whether community-based education and advocacy interventions can reduce stigma associated with TB and increase long-term support for patients.

Strengths and Limitations

The strength of this research lies in its focus on a relatively understudied rural Ghanaian population, providing valuable insights into how sociodemographic determinants influence TB stigma and support. However, its cross-sectional nature limits causal inference, and the use of self-reported data may introduce social desirability bias.

Abbreviations

cOR	Crude Odds Ratio
aOR	Adjusted Odds Ratio
Ref	Reference Category
CI	Confidence Interval
TB	Tuberculosis

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Author Contributions

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Ethics Approval and Consent to Participate

This was a cross-sectional survey of patients with TB that had been approved and reviewed by the Nkoranza South Municipal Health Research Committee. The study adhered to the Declaration of Helsinki (1964) and all subsequent

amendments.

Consent was received from all participants before data was collected. The participants were informed about the voluntariness of their participation, the ability to withdraw at any time, and that all information provided would be kept confidential and only used for research purposes.

Conflicts of Interest

The authors declare no conflicts of interest.

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