Family Support and Help-Seeking Behaviour among Tuberculosis Patients at Level 5 and 6 Hospitals in Nairobi County, Kenya

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Abstract

Tuberculosis (TB) remains a major public health concern in Kenya, particularly in urban counties such as Nairobi, and patients' help-seeking behaviour is an important influence on treatment outcomes. This study examined the relationship between family support and help-seeking behaviour among TB patients at Level 5 and 6 hospitals in Nairobi County, Kenya. A cross-sectional design was used at four hospitals: Kenyatta National Hospital, Mama Lucy Kibaki Hospital, Mbagathi County Referral Hospital and Mathari National Teaching and Referral Hospital. From a target population of 628 registered TB patients, a sample of 258 was calculated using Fisher's formula with a finite population correction and a 10% allowance for incomplete responses. The hospitals were purposively selected, the sample was allocated proportionately across them, and participants were chosen by systematic random sampling. Data were collected using a semi-structured questionnaire, key informant interviews and focus group discussions. Quantitative data were analysed in SPSS version 27 using descriptive statistics and simple linear regression. Respondents reported high levels of family support, most notably emotional support ($M = 4.64$) and guidance on taking medication ($M = 4.54$). Agreement was lower for consulting a provider when concerned about medication or symptoms ($M = 3.79$) and for attending all follow-up appointments ($M = 3.95$). Family support was a significant positive predictor of help-seeking behaviour ($R = .612$, $R^2 = .375$; $B = 0.624$, $p < .001$). Family support was significantly and positively associated with help-seeking behaviour among TB patients at the study hospitals. TB control interventions should integrate family-centred approaches to strengthen patient support systems, with the aim of improving help-seeking behaviour and treatment outcomes.

Keywords: *Tuberculosis, help-seeking behaviour, family support, treatment adherence, treatment outcomes*

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1.0 Introduction

Background

Tuberculosis (TB) remains a major global health problem. The World Health Organization (WHO) reports more than 10 million new TB cases annually, with marked disparities in diagnosis and treatment (World Health Organization [WHO], 2021). Psychosocial factors, including stigma, fear of discrimination and social isolation, strongly shape patients' help-seeking behaviour. Although effective treatment is available, many people delay or avoid seeking care because of these barriers, which prolongs transmission and worsens health outcomes (Sommerland et al., 2017; WHO, 2023).

In sub-Saharan Africa, where TB rates are high, cultural beliefs, economic hardship and gender-based barriers contribute to delayed diagnosis and treatment. These barriers are compounded by the region's high HIV prevalence and by health system constraints. Regional responses therefore need to address these psychosocial barriers.

In Kenya, the national TB prevalence survey estimated the prevalence of pulmonary TB among adults at 558 per 100,000 population, with higher prevalence in urban areas (760 per 100,000) than in rural areas (453 per 100,000). Among prevalent cases who reported TB-related symptoms, 64.9% had not sought health care before the survey. Fear of social ostracism and financial strain are common deterrents to care, and traditional beliefs and practices may lead people to seek alternative treatment first, further delaying diagnosis.

Family support has been linked to patients' help-seeking behaviour through active involvement in supervising medication, strengthening bonds among family members and providing spiritual encouragement (Chen et al., 2020). In contrast, fear of side effects, anxiety and depression are among the factors associated with poorer help-seeking and treatment outcomes (Agbeko et al., 2022). Knowledge, family support and health behaviour also influence individual and community health outcomes and are central to disease control programmes and the prevention of TB transmission (Bea et al., 2021).

In Indonesia, Soleman et al. (2023) used a cross-sectional design with purposive sampling of 123 respondents and the Spearman's rho test. They reported statistically significant associations between family support and patient behaviour (p = .025) and between family support and compliance with TB treatment (p = .042). In Kenya, Wekunda et al. (2021) examined determinants of TB treatment interruption in Vihiga County and found that interruption was high and occurred mainly during the intensive phase of treatment, but they did not examine psychosocial factors in relation to patients' help-seeking behaviour. Chebet et al. (2022) studied factors influencing treatment adherence in Malindi Sub-county, Kilifi County, and found that family support enhanced adherence to TB therapy; however, their study did not examine help-seeking behaviour at Level 5 and 6 hospitals in Nairobi County.

Statement of the Problem

Delayed or interrupted help-seeking prolongs infectiousness and worsens TB outcomes, and a large proportion of symptomatic people in Kenya had not sought care before the national prevalence survey. Evidence that family support promotes adherence comes mainly from Indonesia (Soleman et al., 2023) and from Kenyan studies of treatment adherence and interruption in county-level facilities in Kilifi and Vihiga (Chebet et al., 2022; Wekunda et al., 2021). These settings differ from Nairobi's Level 5 and 6 hospitals, which are referral facilities serving an urban population, and the studies did not treat help-seeking behaviour as the outcome of family support. Evidence on whether family support is associated with help-seeking behaviour among TB patients in this urban referral setting is therefore limited. Such evidence is needed to inform family-centred components of TB care, and this study was undertaken to address that gap.

Purpose of the Study

The purpose of the study was to examine the relationship between family support and TB patients' help-seeking behaviour at Level 5 and 6 hospitals in Nairobi County, Kenya.

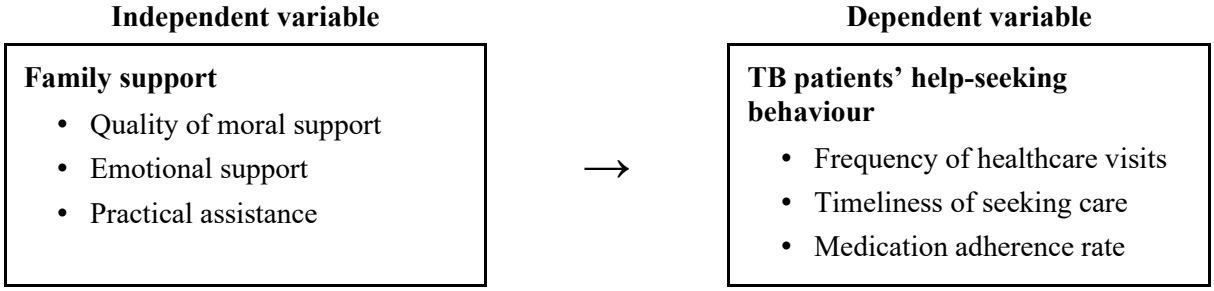


Conceptual Framework

The study was guided by the conceptual framework in Figure 1. Family support, comprising the quality of moral support, emotional support and practical assistance, was the independent variable. TB patients' help-seeking behaviour, comprising the frequency of healthcare visits, the timeliness of seeking care and the medication adherence rate, was the dependent variable. The framework proposes that access to family support enables patients to adhere to TB medication and to seek care through moral, emotional and practical assistance.

Figure 1

Conceptual Framework



Source: Author (2023).

2.0 Materials and Methods

Research Design

A cross-sectional design, combining quantitative and qualitative data collection, was used to examine the relationship between family support and help-seeking behaviour among TB patients at Level 5 and 6 hospitals in Nairobi County, Kenya. The design allowed data to be collected from patients at a single point in time.

Study Location

The study was conducted at four Level 5 and 6 hospitals in Nairobi County: Kenyatta National Hospital, Mama Lucy Kibaki Hospital, Mbagathi County Referral Hospital, and Mathari National Teaching and Referral Hospital. These hospitals were selected because they provide healthcare services, including the diagnosis and treatment of TB, and register a significant number of TB patients.

Target Population

The study population comprised all TB patients identified in the TB4 register who were attending clinics at the four hospitals. Based on hospital registry records, the target population was 628 patients (Table 1). Eligible participants were patients aged 18 years or older who were receiving anti-TB treatment, in either the intensive or the continuation phase, who had been registered for treatment within the previous six months and who agreed to participate. Patients who were severely ill during the study, those with hearing or speech impairments, and those who declined to participate were excluded.

Table 1

Target Population Distribution

Name of facility	No. of patients
Kenyatta National Hospital	319
Mama Lucy Kibaki Hospital	134
Mbagathi County Referral Hospital	102
Mathari National Teaching and Referral Hospital	73
Total	**628**

Note. Source: hospital TB registry records.

Sampling Procedure and Sample Size

Both probability and non-probability sampling were used. The four hospitals were purposively selected because they register a significant number of TB patients. Within the hospitals, the sample was allocated in proportion to each hospital's share of the target population (Table 2), and participants were selected by systematic random sampling, beginning with a random start and proceeding at a fixed interval of every second eligible patient.

The sample size was determined using the formula of Fisher for populations larger than 10,000:

$n = Z^2pq/d^2$

where n is the minimum sample size; Z is the standard score for the 95% confidence level ($Z = 1.96$); p is the prevalence of TB help-seeking behaviour (0.42); $q = 1 - p$ $(1 - 0.42 = 0.58)$; and d is the precision limit (0.05). Thus:

$n = (1.96)^2(0.42)(0.58)/(0.05)^2 \approx 375$

Because the target population ($N = 628$) was smaller than 10,000, the finite population correction was applied:

$nf = n/(1 + n/N) = 375/(1 + 375/628) \approx 235$

The sample was increased by 10% to allow for incomplete questionnaires, giving a final sample of 258 (Table 2).

Table 2

Sample Size Distribution

Name of facility	Target population	Proportion	Sample size
Kenyatta National Hospital	319	0.508	131
Mama Lucy Kibaki Hospital	134	0.213	55
Mbagathi County Referral Hospital	102	0.162	42
Mathari National Teaching and Referral Hospital	73	0.116	30
Total	**628**	**1.000**	**258**

Note. Sample size = proportion × 258, rounded to the nearest whole number.

Data Collection Instruments

Three instruments were used to collect quantitative and qualitative data.

Questionnaire. Quantitative data were collected from TB patients using a semi-structured questionnaire with three sections: general information, help-seeking behaviour and family support. Statements in the second and third sections were rated on a five-point scale (1 = strongly disagree to 5 = strongly agree). The questionnaire was self-administered at a place chosen by the participant and agreed with the researcher.

Key informant interviews. An interview guide was used to collect qualitative data from healthcare staff at the clinics, to gain deeper insight into the psychosocial factors that influence TB patients' help-seeking behaviour. Creswell and Creswell (2022) note that key informant interviews yield comprehensive data and allow more nuanced inferences than many other approaches.

Focus group discussions. Two homogeneous focus group discussions (FGDs) were held, one with eight female and one with nine male discussants. A moderator introduced the topics and encouraged active participation, using an FGD guide (Appendix V). The discussions covered the influence of family support, drug use, patients' mental health status and socioeconomic status on TB patients' help-seeking behaviour at Level 5 and 6 hospitals in Nairobi County. Both sessions were audio-recorded using a digital recorder.

Ethical Considerations

The study observed the required ethical standards governing research involving human participants. Ethical approval was obtained from the relevant Institutional Ethics Review Committee before commencement of data collection. A research licence was also obtained from the National Commission for Science, Technology and Innovation (NACOSTI). In addition, permission to conduct the study was sought and obtained from the relevant institutional authorities and participating facilities.

Informed consent was obtained from all respondents before their participation in the study. The respondents were informed about the purpose of the study, the nature of their participation, and their right to decline participation or withdraw at any stage without any negative consequences. Participation was entirely voluntary.

Confidentiality and anonymity were maintained throughout the research process. Respondents were not required to provide personally identifiable information, and the information collected was used strictly for academic research purposes. Completed questionnaires and electronic data were securely stored, with access restricted to the researcher. The findings were presented in aggregate form to ensure that individual respondents could not be identified

Data Analysis

Data were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 27 for analysis. Percentages and frequencies were used to describe TB patients' help-seeking behaviour and family support, together with means and standard deviations. Descriptive statistics, according to Mugenda and Mugenda (2019), provide the essential characteristics of the data obtained. Simple linear regression was used to assess the relationship between family support and help-seeking behaviour.

3.0 Results and Discussion

Response Rate and Respondent Characteristics

The study targeted a total of 258 respondents, comprising the participants identified for data collection. Out of the 258 questionnaires administered, 216 were successfully completed and returned, representing a response rate of 83.7%. The remaining 42 questionnaires, equivalent to 16.3%, were not returned or were not completed.

The response rate was considered adequate for the analysis and presentation of the study findings. The analysis was therefore based on the 216 successfully completed questionnaires.

Regarding respondent characteristics, the section presents the demographic and relevant background information of the respondents, including their gender, age, educational qualifications, and other characteristics relevant to the study. These characteristics provide a contextual understanding of the respondents and help establish the basis for interpreting the study findings

TB Patients' Help-Seeking Behaviour

Respondents rated their agreement with statements on help-seeking behaviour on a five-point scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Table 3 presents the findings.

Table 3

TB Patients' Help-Seeking Behaviour

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	*M*	*SD*
I initiate the first dose of my prescribed TB medication as advised by the doctor	0.0	1.4	3.2	24.8	70.6	4.666	0.482
I have never missed any injection or pill during my TB medication period	1.4	5.1	18.5	45.6	29.4	4.032	0.815
I always take my anti-TB medication as prescribed	2.3	4.6	10.6	37.5	45.0	4.305	1.052
I fully comply with the length of time between initiation and the last dose of my medication	3.2	7.4	19.9	39.8	29.6	4.027	1.137
My actual TB medication dosing corresponds to the prescribed regimen	0.0	2.3	5.6	25.5	66.7	4.607	0.593
I follow instructions regarding diet and lifestyle changes during my TB treatment	1.9	6.5	14.8	49.1	27.8	4.009	0.868
I seek help or consult a provider when I have concerns about TB medication or symptoms	3.2	9.7	25.5	39.4	22.2	3.791	0.919
I attend all scheduled follow-up appointments during my TB treatment	4.2	9.3	17.6	35.6	33.3	3.953	1.168

Note. Values are percentages of respondents. SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree.
Source: Field data (2025).

Most respondents reported starting treatment as advised. Of the respondents, 70.6% strongly agreed and 24.8% agreed that they took the first dose of their prescribed medication as instructed (M = 4.666, SD = 0.482), indicating that most patients began treatment promptly with little variation in responses. Similarly, 66.7% strongly agreed and 25.5% agreed that their actual dosing corresponded to the prescribed regimen (M = 4.607, SD = 0.593), suggesting that most patients followed dosage instructions consistently.

On regular intake, 45.0% strongly agreed and 37.5% agreed that they always took their anti-TB medication as prescribed, whereas 10.6% were neutral and 6.9% disagreed (2.3% strongly disagreed and 4.6% disagreed). The mean of 4.305 indicates good adherence, and the relatively high standard deviation (1.052) points to a wider range of experiences. Regarding missed doses, 29.4% strongly agreed and 45.6% agreed that they had not missed any injection or pill, 18.5% were neutral, and 6.5% reported lapses (1.4%

strongly disagreed and 5.1% disagreed; *M* = 4.032, *SD* = 0.815).

In terms of treatment duration, 29.6% strongly agreed and 39.8% agreed that they fully complied with the length of time between the first and last dose, while 19.9% were neutral, 7.4% disagreed and 3.2% strongly disagreed (*M* = 4.027, *SD* = 1.137). The relatively high standard deviation indicates variability in completing the full course. For lifestyle and dietary instructions, 49.1% agreed and 27.8% strongly agreed that they followed the recommendations, 14.8% were neutral, and 8.4% did not fully adhere (1.9% strongly disagreed and 6.5% disagreed; *M* = 4.009, *SD* = 0.868).

Agreement was lowest for seeking help from a provider when concerned about medication or symptoms: 22.2% strongly agreed and 39.4% agreed, 25.5% were neutral, and 12.9% disagreed (3.2% strongly disagreed and 9.7% disagreed; *M* = 3.791, *SD* = 0.919). Although most respondents reported consulting providers, a substantial minority did not. For follow-up appointments, 33.3% strongly agreed and 35.6% agreed that they attended all scheduled visits, 17.6% were neutral, and 13.5% reported missing some (4.2% strongly disagreed and 9.3% disagreed). This item had the largest standard deviation in the table (*M* = 3.953, *SD* = 1.168), indicating notable variability among respondents.

Overall, respondents generally reported adherence to their prescribed regimen, but the lowest mean scores were for seeking help from providers (*M* = 3.791) and attending follow-up appointments (*M* = 3.953). Addressing the psychosocial factors that influence these behaviours could improve adherence and treatment outcomes.

These findings are consistent with the literature on the importance of treatment adherence in TB management. Musau et al. (2020) found that stigma is one of the major barriers to timely diagnosis and treatment, and Courtwright and Turner (2010) emphasised that fear of social ostracism can prevent TB patients from seeking timely help. The lower agreement on consulting providers in the present study is compatible with these reports, although stigma was not measured here and cannot be confirmed as the explanation.

Family Support and TB Patients' Help-Seeking Behaviour

Respondents indicated the extent to which they agreed with statements on the family support they received, using the same five-point scale (1 = strongly disagree to 5 = strongly agree). Table 4 presents the findings.

Table 4

Family Support for TB Patients

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	*M*	*SD*
My family provided direction on how best to take the anti-TB medication during my treatment period	0.9	2.3	5.6	31.0	60.2	4.542	0.681
My family always gave advice on how to prevent disease transmission to other family members	2.3	6.9	17.1	42.1	31.5	4.046	0.851
My family provided assistance to meet the costs associated with TB treatment	3.2	5.6	11.6	36.1	43.5	4.306	1.065
My family helped in witnessing first-hand me taking TB medication according to schedule	4.2	7.9	20.4	35.6	31.9	4.037	1.157
My family provided emotional support by showing empathy, concern and care	0.0	1.9	3.2	30.6	64.4	4.639	0.545

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	*M*	*SD*
My family encouraged me to complete my full TB treatment course as prescribed	4.2	9.3	19.0	39.4	28.2	3.838	0.996
My family helped remind me of my medication schedule to ensure I did not miss any dose	2.8	6.0	10.6	38.9	41.7	4.292	1.045
My family accompanied me to medical appointments or check-ups during my TB treatment period	4.2	8.3	17.1	40.3	30.1	4.042	1.134

Note. Values are percentages of respondents. SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree. *Source:* Field data (2025).

Respondents reported substantial family support. The most prominent form was emotional support: 64.4% strongly agreed and 30.6% agreed that their family showed empathy, concern and care, and only 5.1% were neutral or disagreed (M = 4.639, SD = 0.545). The next most common was guidance on taking anti-TB medication, with 60.2% strongly agreeing and 31.0% agreeing, a combined 91.2% (M = 4.542, SD = 0.681). These means and the low standard deviations indicate high and consistent levels of emotional and instructional support.

Practical support was also widely reported. About four in five respondents agreed or strongly agreed that their family helped meet treatment costs (79.6%; M = 4.306, SD = 1.065) and reminded them of their medication schedule (80.6%; M = 4.292, SD = 1.045). Smaller majorities reported family advice on preventing transmission (73.6%), accompaniment to appointments (70.4%), observation of medication-taking (67.5%) and encouragement to complete treatment (67.6%). Encouragement to complete treatment had the lowest mean of the eight items (M = 3.838, SD = 0.996).

In summary, respondents reported strong family involvement, particularly in emotional support, guidance on taking medication and financial assistance, although some forms of support, such as encouragement to complete treatment, were reported less often.

The FGDs provided further depth from the perspective of TB patients. Patients with strong family support networks described how family members helped them remain on track with their treatment.

The findings are consistent with Soleman et al. (2023) and Nezenega et al. (2020), who reported that family support is a significant predictor of TB treatment adherence and that family members who provided medication reminders and emotional support were linked to better adherence. Those studies concerned adherence, whereas the present study examined help-seeking behaviour more broadly.

Regression Analysis

Simple linear regression was used to assess the extent to which family support is associated with help-seeking behaviour among TB patients. The model was statistically significant, indicating that family support predicts help-seeking behaviour in this population.

Table 5

Model Summary

Model	*R*	R^2	Adjusted R^2	Std. error of the estimate
1	0.612	0.375	0.371	0.563

Note. Predictor: family support. Dependent variable: help-seeking behaviour.

The model summary shows a moderate positive correlation between family support and help-seeking behaviour (R = .612). The R^2 of .375 indicates that about 37.5% of the variation in help-seeking behaviour is explained by differences in family support. The adjusted R^2 of .371 is close to R^2, indicating little loss of explanatory power after adjusting for sample size.

Table 6

Analysis of Variance

Source	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	34.215	1	34.215	107.76	< .001
Residual	57.285	214	0.267		
Total	91.500	215			

Note. Predictor: family support. Dependent variable: help-seeking behaviour.

The analysis of variance showed that the regression model was statistically significant, $F(1, 214) = 107.76$, $p < .001$, so family support significantly contributes to the prediction of help-seeking behaviour.

Table 7

Regression Coefficients

Model	Unstandardised *B*	Std. error	Standardised *β*	*t*	Sig.
(Constant)	1.895	0.173	—	10.96	< .001
Family support	0.624	0.060	0.612	10.38	< .001

Note. Dependent variable: help-seeking behaviour.

The unstandardised coefficient for family support was 0.624 (SE = 0.060), meaning that each one-unit increase in perceived family support was associated with a 0.624-unit increase in the help-seeking behaviour score. The relationship was statistically significant, t = 10.38, $p < .001$. Higher perceived family support was therefore associated with higher help-seeking behaviour scores, which included adherence to medication, attendance at appointments and consultation with providers. Because the design was cross-sectional, the findings show an association and do not establish that family support causes help-seeking. Strengthening family engagement may nonetheless be a useful approach to improving TB treatment outcomes in the public hospitals studied.

4.0 Conclusion

The study concluded that family support was significantly and positively associated with TB patients' help-seeking behaviour at Level 5 and 6 hospitals in Nairobi County, Kenya: higher levels of family support were associated with higher help-seeking behaviour scores, and family support accounted for 37.5% of the variation in those scores. The study adds evidence from urban referral hospitals to a literature drawn largely from other settings. Because of the cross-sectional design and reliance on self-reported data, the findings indicate association rather than causation.

5.0 Recommendations

Because the study found a statistically significant positive relationship between family support and help-seeking behaviour, which included medication adherence, TB care interventions should focus on strengthening family involvement in treatment. These could include educational programmes that inform families about TB treatment and the importance of adherence, together with practical support such as medication reminders and assistance with medication management.

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