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# Quality of Life among Patients with Tuberculosis Enrolled in the National Tuberculosis Program in Selected Barangays in Zamboanga City: A Cross-Sectional Study"

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***ABSTRACT***

*This cross-sectional study enrolled 106 pulmonary tuberculosis patients receiving treatment under the national tuberculosis program in Zamboanga City, Philippines, to assess their health-related quality of life. In the study sample, the 18–25 and ≥46 age groups each accounted for 27.4% of participants; 63.2% were male, 47.2% were unemployed, and 74.5% had a monthly income of less than 10,000 PHP. Quality of life was measured via the WHOQOL-BREF scale. Participants scored the lowest on the physical health domain and the highest on the social relationships domain. Non-parametric analysis showed that gender and education level did not lead to significant differences in quality of life (QOL). Social relationship scores showed some real differences by age and marital status (both with a p-value of 0.013). Adults between 26 and 35 and people who were separated tended to score lower. In addition, people earning less than 10,000 PHP reported lower environmental quality of life than those earning between 10,000 and 20,000 PHP (p = 0.007). Spearman's correlation showed that overall health satisfaction did not strongly relate to physical health, but it did have a clear, positive connection with the environmental ($r_s$ = 0.401), psychological ($r_s$ = 0.392), and social relationships ($r_s$ = 0.275) areas. So, health satisfaction for people undergoing tuberculosis treatment depends on a mix of factors. It's not just about sticking to the medical routine—public health efforts need to factor in economic, emotional, social, and environmental support.*

***Keywords:*** *Domains, Tuberculosis, Quality of Life*

## INTRODUCTION

This study aimed to assess the Quality of Life (QOL) among tuberculosis patients enrolled in the national tuberculosis program in selected barangays of Zamboanga City using the WHOQOL-BREF model. The research examines how clinical factors—including smear status, treatment phase, and adherence—correlate with patients' well-being, while also evaluating the impact of programmatic elements such as Directly Observed Treatment (DOT) support, nutritional supplementation, and access to social protection. Furthermore, the study explores the role of social determinants, specifically addressing income loss, housing stability, stigma, and perceived social support, to identify the key predictors of QOL. Ultimately, these findings are intended to generate actionable recommendations for integrating targeted, QOL-focused strategies into the NTP at the local barangay level.

### Statement of the Problem

This study aimed to assess the quality of life (Qol) among tuberculosis patients enrolled in the National Tuberculosis Program within selected barangays of Zamboanga City through the application of the WHOQOL-BREF model. The study sought to answer the following questions:

1. What is the profile of the respondents in terms of age, sex, marital status, and employment status?
2. What is the level of quality of life of TB patients based on the WHOQOL-BREF domains in terms of physical health, psychological health, social relationships, and environment?
3. Is there a significant difference in the quality of life of respondents according to their profile?
4. Is there a significant relationship between the respondents' overall quality of life, overall satisfaction with health, and the WHOQOL-BREF domains?

**Scope and Delimitations**

To ensure data integrity, this study applies strict eligibility criteria. The study includes consenting adults (18 years and older) enrolled in the NTP in selected barangays of Zamboanga City who have resided locally for at least six months and have undergone a minimum of two weeks of treatment. It excludes patients with multidrug-resistant tuberculosis (MDR-TB), those with acute physical, cognitive, or psychiatric conditions that limit participation, individuals with insufficient program exposure, and those unable or unwilling to provide informed consent.

**Review of Related Literature**

Pulmonary Tuberculosis (PTB) remains a severe public health crisis in the Philippines, yet national control programs historically prioritize microbiological cures over patients' health-related quality of life (HRQOL). While Philippine TB research is heavily concentrated in Luzon, a critical empirical void exists regarding how localized community dynamics, geographic disparities, and socioeconomic stressors affect patient well-being in the Zamboanga Peninsula. To address this gap, this descriptive-correlational, cross-sectional study uses the WHOQOL-BREF model to evaluate patient well-being across physical, psychological, social, and environmental domains in selected Zamboanga City barangays. The study examines the influence of programmatic, clinical, and psychosocial factors on the health-related quality of life of tuberculosis patients. It aims to provide a localized evidence base for promoting a patient-centered approach to tuberculosis care that supports holistic recovery and successful community reintegration.

**Theoretical Framework -**

This study is anchored in three foundational nursing theories that collectively explain how sociodemographic, clinical, and programmatic variables influence the health-related Quality of Life (HRQOL) of Pulmonary Tuberculosis (PTB) patients across the physical, psychological, social, and environmental domains. The primary structural anchor is Dorothea Orem's self-care deficit theory (1959). The psychological and interpersonal dimensions of the patient's journey are guided by Callista Roy's adaptation model (1970). Nola Pender's health promotion model (1982) contextualizes the behavioral and programmatic determinants of

health outcomes.

**Conceptual Framework**

This study used the WHOQOL-BREF model to explore four main areas that shape the quality of life for TB patients: physical health, mental well-being, social connections, and environment. The framework is organized into the input-process-output (IPO) model. This illustrates how the patient's background and the assessment tool lead to a comprehensive understanding of their well-being**.**

**METHODOLOGY**

This descriptive cross-sectional research study examined the quality of life among patients with tuberculosis enrolled in the national tuberculosis program in a selected barangay in Zamboanga City using the WHOQOL-BREF developed by the World Health Organization, providing an overview of a patient's well-being through four primary sections: physical health, psychological health, social relationships, and the environment.

**Research Design**

This study utilized a descriptive cross-sectional research design to assess the quality of life (QOL) of patients with tuberculosis (TB) enrolled in the NTP in a selected barangay of Zamboanga City. It sought to describe the respondents' quality of life across the four domains of the World Health Organization Quality of Life–Brief Model (WHOQOL-BREF)—physical health, psychological well-being, social relationships, and environment.

**Research Steps -**

This study commenced with an extensive review of the current literature available regarding the different aspects involved in the lives of patients diagnosed with pulmonary tuberculosis and its effect on their quality of life.

**Data Collection and Sample Selection**.

The data collection process commenced with the use of an adopted questionnaire to ensure that a comprehensive profile of the patients' quality of life is established. A sample of 106 TB patients was selected using a random sampling technique to ensure that the findings were reliable and valid. Data collection was conducted through face-to-face interviews, utilizing the WHOQOL-BREF questionnaire and a socio-demographic profile form**.**

**Data Analysis Methods**

The data analysis employed descriptive and inferential statistics. Descriptive statistics (mean scores, standard deviations, and frequency distributions) were used to assess the quality of life in each of the four domains (physical health, psychological health, social relationships, and environment). Inferential statistics (correlation analysis and regression analysis) were used to identify relationships between socio-demographic variables and quality of life.

**Research Hypotheses and Validation**

This study aimed to test the hypothesis that there is a significant difference in the quality of life of patients enrolled in the TB-DOTS program in Zamboanga City across age, gender, and duration of treatment. The hypothesis was validated by observing, assessing, and analyzing the data gathered against the factors used as parameters in the study, namely physical health, psychological well-being, social relationships, and environment.

**Study Limitations and Ethical Considerations**

The study adhered to ethical protocols by obtaining informed consent from all participants, ensuring anonymity and confidentiality, and allowing participants to withdraw at any time. Furthermore, ethical considerations included ensuring the respectful portrayal of participants' views in the final analysis and reporting.

## RESULTS AND DISCUSSION -

***SOP 1.***—What is the profile of the respondents?

The patient population demonstrated a balanced age distribution between emerging young adults aged 18 to 25 years and mature adults aged 46 years and above, with each cohort representing 27.4% of the sample. Meanwhile, a profound gender disparity was present, as males comprised 63.2% of the surveyed cohort. Socioeconomically, the patients exhibited acute financial vulnerability, with 47.2% of the participants being completely unemployed and an overwhelming 74.5% surviving on a monthly household income of less than 10,000 php, placing them well below national poverty indicators.

***SOP 2.*** What is the level of quality of life of tb patients based on the whoqol-bref domains in terms of physical health, psychological health, social relationships and environment?

The physical health domain yielded the lowest overall score (m = 14.09, sd = 0.97), pointing to persistent bodily pain, treatment fatigue, and energy depletion as the primary daily struggles of the patients. conversely, the social relationships domain achieved the highest score (m = 16.82, sd = 1.93), followed closely by the environmental domain (m = 16.54, sd = 1.41) and the psychological health domain (m = 16.12, sd = 1.12).

***SOP 3.*** Is there a significant difference in the quality of life of respondents according to their profile?

Inferential non-parametric analyses indicated no significant variations in quality of life scores when patients were grouped by gender or educational attainment. However, statistically significant differences were verified within the social relationships domain when respondents were grouped by age. Furthermore, the environmental domain varied significantly by socioeconomic status. In terms of statistical correlations, Spearman's rank-order correlation demonstrated that a patient's broad perception of their overall quality of life did not significantly correlate with any specific WHOQOL-BREF domain. However, overall health satisfaction (q2) displayed significant, positive, and moderate correlations with the environmental, psychological, and social relationship domains.

## SUMMARY

The study found that tuberculosis patients generally reported the lowest quality of life in the physical health domain and the highest in social relationships. While gender and educational attainment were not significantly associated with quality of life, age, marital status, and income influenced specific QOL domains, highlighting the importance of socioeconomic and social factors in patients' well-being.

## CONCLUSIONS

This study concludes that public health success in tuberculosis management cannot be measured solely by clinical markers like sputum conversion or medication compliance; true recovery requires a holistic, patient-centered approach that actively addresses the physical, psychological, social, and environmental dimensions of a patient's life.

## RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations are suggested: Public health authorities should mitigate economic and physical barriers by providing transport subsidies and food vouchers to patients earning under 10,000 PHP, alongside distributing protein-rich nutritional packages. Public health nurses must transition to holistic patient assessments—and provide proactive education on managing medication side effects. Simultaneously, barangay LGUs must launch localized anti-stigma campaigns and upgrade health center infrastructure to foster positive health-seeking behaviors, while future researchers should employ longitudinal, mixed-methods designs across broader geographic scopes to strengthen regional policy.

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## AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

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