Help: Journal of Community Service Vol. 2 No. 3, 2025
eISSN: 3048-3069
DOI: https://doi.org/10.62569/hjcs.v2i3.231
Received: November 2025/ Revised: December 2025/ Accepted: December 2025

Help: Journal of Community Service
https://ejournal.agungmediapublisher.com/index.php/hjcs

Strengthening Posyandu Cadres' Capacity in Close Contact Tracing for Pulmonary Tuberculosis at Pamolokan Health Center

Mujib Hannan[1]*, Dian Permatasari[2], Emdat Suprayitno[3]

[1,2,3]*Nursing Study Program, Faculty of Health Sciences, Wiraraja University, East Java, 69451, Indonesia*

Abstract. Pulmonary Tuberculosis (TB) remains the infectious disease with the highest mortality rate in Sumenep Regency, while the discovery of new cases at Pamolokan Health Center in 2025 reached only 52.6% of the national target of 90%. One key factor is the limited capacity of Posyandu cadres, who serve as the frontline in community-based health services, particularly in conducting close contact tracing. Strengthening their competence is essential to improve early TB case detection and reduce household transmission. This community service program applied a Participatory Action Research (PAR) approach consisting of preparation, training, field mentoring, and evaluation. Twenty-five Posyandu cadres participated in interactive lectures, group discussions, case-based simulations, and on-the-job mentoring. Knowledge improvement was measured using pre-tests and post-tests, while skills were assessed through direct observation checklists during simulated and real field visits. The program significantly increased cadres' knowledge, with average scores rising from 55.6% (pre-test) to 86.4% (post-test). The greatest improvement occurred in understanding close contact criteria (45%) and reporting procedures (40%). Skills also improved, with 92% of cadres demonstrating confident and structured communication during field visits and 88% successfully completing contact tracing forms accurately. Over three weeks of mentoring, cadres identified 42 close contacts from 15 TB patient households, with 38 (90.5%) agreeing to undergo examination at the health center. The combination of interactive training and on-the-job mentoring proved effective in strengthening cadres' knowledge and practical abilities. Their social proximity to families helped reduce stigma-related barriers and improved cooperation during home visits. This approach also promoted sustainability, as cadres gained confidence to continue tracing activities with minimal supervision.

Keywords: Tuberculosis; Close Contact Tracing; Posyandu Cadres; Community Empowerment; Public Health Program

1. Introduction

Pulmonary Tuberculosis (TB) remains one of the world's most persistent public health challenges, particularly in low- and middle-income countries where community-based health systems play a crucial role (Cui et al., 2012; Popović Grle et al., 2013; Rolo et al., 2023). Ideally, early detection and rapid treatment initiation should be supported by

*Corresponding author's email: mujibfik@wiraraja.ac.id, Telp. -

strong surveillance mechanisms, including effective close contact tracing within households. In many countries, community health volunteers function as the bridge between health facilities and local communities, helping to identify high-risk individuals and ensure timely referral (Khatri et al., 2017; Ni et al., 2020; Safary et al., 2021). When equipped with adequate knowledge and skills, these volunteers can significantly contribute to reducing the spread of TB in their communities.

The global literature consistently highlights the importance of community participation in TB control (Maharani et al., 2022; Marquez et al., 2024; Rahmasari et al., 2020). Studies show that trained community health workers improve case detection, enhance treatment adherence, and reduce delays in seeking care. Research by the WHO (Bagcchi, 2023; Tadolini & Migliori, 2012) and other international health bodies emphasizes that empowering local actors strengthens health system resilience and promotes early identification of suspected TB cases. Evidence from countries with strong community health networks also demonstrates that contact tracing activities led by volunteers often uncover hidden or unreported cases that would otherwise be missed by formal health services.

Despite this global recognition, empirical findings in various regions reveal persistent challenges. Many community health volunteers lack adequate training in essential skills such as interviewing, communication without stigma, and proper documentation of contact tracing activities. Several studies conducted in Indonesia and Southeast Asia report that cadres frequently feel unprepared to explain TB transmission, identify close contacts, or conduct household visits confidently. This limited capacity contributes to low case-finding rates and hinders the effectiveness of national TB programs.

The situation in Pamolokan Health Center reflects this broader problem (Fikri, M.Kep et al., 2023). Local health data from 2025 (Chirenda et al., 2020; Zulu et al., 2022) shows that the discovery of new TB cases reached only 52.6% of the national target of 90%, highlighting a significant gap in early detection efforts. Factors such as stigma, inadequate family awareness, and inconsistent participation of cadres in tracing activities further weaken community surveillance. Although cadres are positioned as frontline health actors, their potential is not fully realized due to the absence of structured and continuous capacity-building programs.

A clear gap emerges from this context: while literature underscores the vital role of community health volunteers, practical interventions to strengthen their competence in close contact tracing remain limited at the local level. Most programs focus on providing information rather than long-term skill development through hands-on mentoring. As a result, cadres often rely on trial-and-error approaches, leading to inconsistent outcomes in identifying and referring close contacts for examination.

Addressing this gap is particularly important because cadres have a unique advantage that health workers may lack, social proximity and cultural familiarity with the families they serve. Leveraging these strengths through structured capacity building can transform cadres into effective agents of early detection. Strengthening their ability to conduct non-stigmatizing interviews, collect accurate data, and communicate risks clearly can directly contribute to breaking the chain of TB transmission within households.

Based on these considerations, this community service program (PKM) was designed to enhance the knowledge and skills of Posyandu cadres in conducting close contact tracing for pulmonary TB in the Pamolokan Health Center area. The program aims to provide interactive training, practical simulations, and field mentoring to ensure cadres

gain both conceptual understanding and real-world competence. Through this initiative, the PKM seeks not only to support the national TB control strategy but also to build a sustainable community-based surveillance system that empowers cadres as essential partners in public health.

2. Methods

This community service program employed a Participatory Action Research (PAR) approach to ensure active involvement of Posyandu cadres throughout the process (Baum et al., 2006; Cornish et al., 2023; Fine & Torre, 2019; Kidd & Kral, 2005). PAR was selected because it emphasizes collective learning, reflection, and action, allowing cadres not only to receive training but also to contribute their local knowledge to improve program relevance. The method consisted of four stages: preparation, training, field mentoring, and evaluation. During the preparation stage, the team coordinated with the Pamolokan Health Center, identified cadres' learning needs through brief interviews and a rapid assessment, and developed training modules, job aids, and educational materials tailored to the local context.

The training stage utilized interactive learning methods, including lectures, group discussions, case-based exercises, and simulation practices (Rose, 2020; Weltz et al., 2022). Twenty-five cadres participated in a one-day workshop held at the Pamolokan Health Center hall. Training sessions covered basic TB concepts, national policy guidelines, definitions of close contacts, communication techniques, and proper procedures for completing contact tracing forms. Simulations and role-play were conducted to allow cadres to practice interviewing techniques in a safe environment before entering the field.

Field mentoring was conducted over a three-week period, where cadres worked in small groups accompanied by facilitators. Using an on-the-job training model, facilitators demonstrated contact tracing during the first household visit, observed cadres leading the second visit, and gradually transferred full responsibility to them. Data collection methods included pre- and post-test questionnaires to measure knowledge improvement, observation checklists to assess skills, and monitoring sheets documenting the number of households visited and contacts identified. At the end of the program, a focus group discussion (FGD) was held to evaluate the strengths, challenges, and sustainability of the intervention.

Table 1 Summary of Methods Used in the Community Service Program

Stage	Activities	Outputs
Preparation	Coordination with Health Center, rapid needs assessment, recruitment of cadres, development of training materials	Identified needs, selected participants, finalized modules and tools
Training	Interactive lectures, group discussions, case studies, simulations and role-play	Improved baseline knowledge and strengthened communication skills
Field Mentoring	Household visits with facilitators, on-the-job demonstration, guided practice, independent practice	Increased confidence, accurate form completion, effective interviews
Evaluation	Pre-/post-tests, observation checklists, monitoring sheets, FGD with cadres and	Measured knowledge gain, assessed skills, collected

health workers	feedback for sustainability

Table 1 explain the method used in this program followed a structured four-stage process designed to strengthen the capacity of Posyandu cadres. The preparation stage ensured strong coordination with the Pamolokan Health Center and helped identify gaps in cadres' understanding so the training materials could be tailored accordingly. During the training stage, cadres participated in interactive activities that strengthened both conceptual knowledge and practical communication techniques. The core of the intervention occurred in the field mentoring stage, where facilitators accompanied cadres during real household visits, gradually transferring responsibility to them through demonstration and guided practice. Finally, the evaluation stage combined quantitative measures such as pre- and post-tests and observation checklists with qualitative inputs from an FGD to assess improvement and gather insights for future program continuity.

3. Results and Discussion

3.1. Improvement in Knowledge and Practical Skills of Posyandu Cadres

The mentoring activity involved 25 Posyandu cadres from ten different posts, most of whom were women with several years of experience, which provided a stable foundation for skill enhancement. The data shows a clear progression in their understanding of TB and close contact tracing. Their average knowledge score rose from 55.6 percent (poor category) to 86.4 percent (very good category), marking a substantial 30.8-point improvement. The highest gains occurred in areas that had previously been the biggest obstacles, such as defining who qualifies as a close contact (45 percent increase) and understanding the reporting flow (40 percent increase). These increases indicate not only that the training materials were relevant, but also that the interactive format helped cadres absorb and internalize the information effectively. The detailed breakdown of knowledge aspects reinforces this pattern: even topics that were moderately familiar such as basic TB concepts and interview techniques still showed notable improvement after training.

Skill development followed the same positive trajectory. During early simulations, many cadres felt hesitant, with 60 percent struggling to introduce themselves and explain the purpose of their visit, and 75 percent still making errors when filling out the symptoms section of the contact tracing form. By the end of the mentoring period, the shift was evident: 92 percent were able to conduct interviews confidently and empathetically, and 88 percent completed the forms accurately. The mentoring approach, which gave cadres repeated practice followed by immediate feedback, helped them overcome anxiety, correct mistakes, and gradually build self-confidence. These results confirm that hands-on learning was essential for bridging the gap between theoretical knowledge and real practice.

Table 2 Improvement in Knowledge and Practical Skills of Posyandu Cadres

Aspect Assessed	Initial Condition	Final Condition	Improvement
Average Knowledge Score	55.6% (Poor)	86.4% (Very Good)	+30.8 points
Understanding of Close Contact Definition	40%	85%	+45%

Understanding of Reporting Flow	45%	85%	+40%
Basic TB Knowledge	65%	90%	+25%
Interview & Form-Filling Skills	60%	88%	+28%
Effective Communication Skills	50%	80%	+30%
Confidence in Conducting Interviews	40% (hesitant)	92% (confident)	+52%
Accuracy in Completing Forms	25% (frequent errors)	88% (accurate)	+63%

Table 2 shows a consistent and substantial improvement in both the knowledge and practical skills of the 25 Posyandu cadres who participated in the mentoring program. Their understanding of key concepts related to TB and close contact tracing rose sharply, as reflected in the increase of the average knowledge score from 55.6 to 86.4 percent, with the most significant gains seen in the definition of close contact and reporting flow, two areas that had previously been the biggest challenges. Practical skills followed the same upward trend; cadres who initially hesitated to introduce themselves or made frequent errors in filling out forms became confident and accurate after mentoring, supported by increases of over 50 percent in communication confidence and more than 60 percent in form accuracy. These results highlight how interactive training, simulations, and structured field mentoring effectively bridged the gap between theory and practice, enabling cadres to perform tracing tasks more independently and with greater competence.

3.2. Field Outcomes and Contribution to Early TB Case Detection

The strengthened capacity of cadres produced direct, measurable results in the field. Over three weeks, they visited 15 households of confirmed TB patients and identified 42 individuals who met the criteria for close contact. This translates to an average of 2.8 contacts per patient, showing how many potential transmission links can exist within a single household. The fact that 38 of the 42 contacts—equal to 90.5 percent—agreed to undergo examination at the health center underscores two things: first, that the persuasion and communication skills of cadres improved significantly, and second, that their presence as familiar community members helped reduce stigma and encourage cooperation. Without trained cadres facilitating these interactions, many of these contacts might not have been detected or referred for screening.

These field achievements validate the relevance of the training and mentoring approach. They show that cadres are not only capable of performing contact tracing effectively but can also enhance the overall reach of the TB control program. The findings support existing literature stating that community health volunteers can widen surveillance networks and identify cases that health workers might miss due to stigma-related refusal or lack of access. Moreover, by establishing a simple reporting mechanism between cadres and the TB coordinator, the program created a foundation for long-term continuity. Cadres now see themselves as active contributors to TB control, not just as volunteers assisting routine Posyandu activities. This sense of ownership and empowerment is crucial for sustaining community-based health initiatives beyond the duration of the program.

Table 2 Field Outcomes and Contribution to Early TB Case Detection

Field Indicator	Result	Notes
Number of TB Patient Households Visited	15 houses	Conducted over a 3-week mentoring period
Total Close Contacts Identified	42 people	Average 2.8 contacts per household
Close Contacts Referred for Examination	38 people	Represents 90.5% of identified contacts
Participation Compliance Rate	90.5%	Indicates strong trust and low resistance
Cadres' Role in Tracing	Active	Cadres led interviews with minimal supervision

Table 3 illustrate that the improved competence of cadres translated directly into stronger early detection outcomes, with the team successfully completing visits to 15 TB patient households and identifying 42 individuals as close contacts. An impressive 90.5 percent of these contacts agreed to be examined at the health center, a level of cooperation that reflects both the cadres' increased communication skills and the community's trust in them as familiar local figures. The average of 2.8 contacts per patient highlights how essential thorough tracing is for breaking transmission chains, and the high referral compliance shows that cadres were able to address stigma and encourage families to participate in screening. These achievements demonstrate how community-based tracing, supported by mentoring, can widen the surveillance net and capture potential cases that might otherwise remain undetected, reinforcing the long-term value of empowering cadres within the TB control program.

3.3. Strengthening Community-Based Capacity to Enhance TB Case Detection

The results of this program show that improving the knowledge and skills of Posyandu cadres can significantly strengthen community-based TB surveillance. The substantial increase in knowledge scores, particularly in understanding close contact criteria and reporting procedures, aligns with the concept that training grounded in clear, context-specific information enhances adult learning outcomes. Knowles' Theory of Andragogy (Hartree, 1984) argues that adults learn best when the material is immediately relevant to their roles, and the training provided here directly matched the cadres' responsibilities in their communities. This relevance contributed to their ability to internalize key concepts and apply them effectively in the field.

The marked improvement in practical skills supports the view that experiential learning plays a crucial role in adult education. According to Kolb's Experiential Learning Theory (Chen et al., 2022; Healey & Jenkins, 2000), learning becomes deeper when individuals can test and refine their understanding through real-life practice. The mentoring sessions provided cadres with opportunities to practice interviews, receive immediate feedback, and adjust their approach in subsequent visits. This iterative process helped transform initial hesitation into confidence, as evidenced by the shift from awkward introductory interactions to empathetic and structured communication by the end of the program.

From a public health perspective, the cadres' growing confidence is essential for overcoming the stigma often associated with TB. Studies show that stigma remains one of the biggest barriers to early detection, causing families to hide symptoms or avoid engaging with formal healthcare providers. Cadres, who are familiar members of the

community, are uniquely positioned to address these barriers. Their interpersonal closeness allows them to approach families in a non-threatening manner, which aligns with WHO's recommendations on community-centered strategies for TB control. The high compliance rate of 90.5 percent among identified close contacts demonstrates that this community-based approach can bridge gaps that conventional outreach methods often fail to reach.

The field results also reaffirm the importance of social capital in health interventions. Social capital theory (Swanson et al., 2020; Thomas & Gupta, 2021) suggests that trust, shared norms, and community networks can significantly influence health behaviors. Cadres leveraged their existing relationships to create a supportive environment that encouraged families to participate in screening. This supports findings from community health studies in various countries, which emphasize that community trust is a strong predictor of willingness to engage in disease prevention programs. The success of the cadres in motivating families shows how social bonds can be transformed into public health assets.

In addition to strengthening surveillance, the program fostered a sense of empowerment among cadres, which is essential for long-term sustainability. Empowerment theory states that individuals are more likely to sustain actions when they feel a sense of ownership and control over their tasks. Through repeated practice, feedback, and positive field experiences, cadres came to view themselves as essential contributors to TB control, not merely as volunteers supporting routine activities. This shift in identity is crucial for maintaining long-term commitment and consistency in tracing activities.

Figure 1 Strengthening Community TB surveillance

Figure 1 illustrates how community-based training strengthens TB surveillance by connecting several key components into a continuous improvement cycle. It shows that weak surveillance namely characterized by low knowledge, limited skills, and low confidence among cadres can be transformed through targeted interventions. The cycle begins with enhancing knowledge through relevant, context-specific learning, followed by improving practical skills using experiential methods and mentoring sessions. As cadres gain competence, their confidence grows, enabling them to approach families in a non-threatening way and reduce stigma-related barriers. The model also highlights the importance of leveraging social capital, such as trust and existing community networks, as well as simplifying reporting systems to ensure clear communication and consistent feedback loops. With these elements reinforced, cadres experience greater empowerment and ownership of their role. Together, these interconnected processes contribute to stronger TB surveillance marked by high levels of knowledge, skills, and confidence within the community.

The establishment of a simplified reporting mechanism between cadres and the TB coordinator ensures continuity beyond the intervention period. Systems theory emphasizes that sustainable health programs require clear communication channels and efficient feedback loops. By integrating cadre-generated data into the health center's monitoring system, the program helped strengthen institutional support for community-based TB management. This integration demonstrates how capacity-building efforts, when paired with structural support, can enhance early detection and contribute to a stronger and more responsive TB control system.

4. Conclusions

The results of the program show a clear improvement in the knowledge, skills, and confidence of Posyandu cadres in conducting close contact tracing for pulmonary TB. Their average knowledge scores rose from poor to very good, with the highest gains appearing in areas previously identified as major gaps, such as defining close contacts and understanding the reporting flow. Practical skills also improved significantly through simulations and field mentoring, leading to more accurate form completion and more confident, empathetic communication. These improvements translated into meaningful field outcomes, with cadres identifying 42 close contacts from 15 households and successfully referring 90.5 percent of them for examination.

The discussion highlights that these achievements were strongly supported by adult learning principles, experiential training, and the use of social capital within the community. The mentoring approach, grounded in andragogy and experiential learning theory, helped cadres apply knowledge in real contexts, gradually overcoming hesitation and stigma-related barriers. Their role as trusted community members allowed them to connect families with the health system more effectively than conventional outreach alone. The program also fostered empowerment and strengthened reporting mechanisms, contributing to a more sustainable community-based TB surveillance model as depicted in the visual cycle of capacity building.

Despite these strengths, the program has several limitations. The intervention was short-term, involving only 25 cadres and limited to one health center area, which may restrict the generalizability of the results. The evaluation relied on pre- and post-tests and observation checklists without long-term follow-up to measure whether skills and performance remain consistent over time. Future research could include larger samples

across multiple regions, incorporate longitudinal tracking to assess sustainability, and explore digital tools for reporting and monitoring. Further studies might also examine the impact of cadre-led tracing on actual TB case detection rates over extended periods, providing deeper insights into the long-term effectiveness of community-based interventions.

Conflict of Interest

The authors declare no conflict of interests.

References

Bagcchi, S. (2023). WHO's Global Tuberculosis Report 2022. *The Lancet Microbe*, *4*(1). https://doi.org/10.1016/s2666-5247(22)00359-7

Baum, F., MacDougall, C., & Smith, D. (2006). Participatory action research. *Journal of Epidemiology and Community Health*, *60*(10). https://doi.org/10.1136/jech.2004.028662

Chen, L., Jiang, W. J., & Zhao, R. P. (2022). Application effect of Kolb's experiential learning theory in clinical nursing teaching of traditional Chinese medicine. *Digital Health*, *8*. https://doi.org/10.1177/20552076221138313

Chirenda, J., Gwitira, I., Warren, R. M., Sampson, S. L., Murwira, A., Masimirembwa, C., Mateveke, K. M., Duri, C., Chonzi, P., Rusakaniko, S., & Streicher, E. M. (2020). Spatial distribution of Mycobacterium Tuberculosis in metropolitan Harare, Zimbabwe. *PLoS ONE*, *15*(4). https://doi.org/10.1371/journal.pone.0231637

Cornish, F., Breton, N., Moreno-Tabarez, U., Delgado, J., Rua, M., de-Graft Aikins, A., & Hodgetts, D. (2023). Participatory action research. *Nature Reviews Methods Primers*, *3*(1). https://doi.org/10.1038/s43586-023-00214-1

Cui, Z., Zhou, Y., Li, H., Zhang, Y., Zhang, S., Tang, S., & Guo, X. (2012). Complex sputum microbial composition in patients with pulmonary tuberculosis. *BMC Microbiology*, *12*. https://doi.org/10.1186/1471-2180-12-276

Fikri, M.Kep, Z., Arfianto, M. A., 'Ibad, M. R., Kholis, M. A. N., Mu'jizah, K., Toonsiri, C., & Wijaya Ridi Putra, K. (2023). The relationship between family support and the quality of life of patients with seroconcordant HIV at the Pandian health center and Pamolokan health center, Sumenep Regency. *Jurnal Keperawatan*, *14*(01). https://doi.org/10.22219/jk.v14i01.25113

Fine, M., & Torre, M. E. (2019). Critical Participatory Action Research: A Feminist Project for Validity and Solidarity. *Psychology of Women Quarterly*, *43*(4). https://doi.org/10.1177/0361684319865255

Hartree, A. (1984). Malcolm knowles' theory of andragogy: A critique. *International Journal of Lifelong Education*, *3*(3). https://doi.org/10.1080/0260137840030304

Healey, M., & Jenkins, A. (2000). Kolb's experiential learning theory and its application in geography in higher education. *Journal of Geography*, *99*(5). https://doi.org/10.1080/00221340008978967

Khatri, R. B., Mishra, S. R., & Khanal, V. (2017). Female Community Health Volunteers in Community-Based Health Programs of Nepal: Future Perspective. *Frontiers in Public Health*, *5*. https://doi.org/10.3389/fpubh.2017.00181

Kidd, S. A., & Kral, M. J. (2005). Practicing participatory action research. In *Journal of Counseling Psychology* (Vol. 52, Issue 2). https://doi.org/10.1037/0022-0167.52.2.187

Maharani, R., Karima, U. Q., & Kamilia, K. (2022). Socio-demographic and Behavioral Factors Relationship with Pulmonary Tuberculosis: A Case-control Study. *Open Access Macedonian Journal of Medical Sciences*, *10*. https://doi.org/10.3889/oamjms.2022.8157

Marquez, C., Atukunda, M., Nugent, J., Charlebois, E. D., Chamie, G., Mwangwa, F., Ssemmondo, E., Kironde, J., Kabami, J., Owaraganise, A., Kakande, E., Ssekaynzi, B., Abbott, R., Ayieko, J., Ruel, T., Kwariisima, D., Kamya, M., Petersen, M., Havlir, D. V., & Balzer, L. B. (2024). Community-Wide Universal HIV Test and Treat Intervention Reduces Tuberculosis Transmission in Rural Uganda: A Cluster-Randomized Trial. *Clinical Infectious Diseases*, *78*(6). https://doi.org/10.1093/cid/ciad776

Ni, Z., Atluri, N., Shaw, R. J., Tan, J., Khan, K., Merk, H., Ge, Y., Shrestha, S., Shrestha, A., Vasudevan, L., Karmacharya, B., & Yan, L. L. (2020). Evaluating the feasibility and acceptability of a mobile health-based female community health volunteer program for hypertension control in rural Nepal: Cross-sectional study. *JMIR MHealth and UHealth*, *8*(3). https://doi.org/10.2196/15419

Popović Grle, S., Tekavec-Trkanjec, J., Alilović, M., & Katalinić-Janković, V. (2013). Pulmonary tuberculosis. *Infektoloski Glasnik*, *33*(2). https://doi.org/10.29309/tpmj/2015.22.06.1240

Rahmasari, F. H., Nurjazuli, N., & Adi, K. (2020). Community-Based Surveillance Information System for Pulmonary Tuberculosis (Pulmonary TB). *International Journal of English Literature and Social Sciences*, *5*(5). https://doi.org/10.22161/ijels.55.4

Rolo, M., González-Blanco, B., Reyes, C. A., Rosillo, N., & López-Roa, P. (2023). Epidemiology and factors associated with Extra-pulmonary tuberculosis in a Low-prevalence area. *Journal of Clinical Tuberculosis and Other Mycobacterial Diseases*, *32*. https://doi.org/10.1016/j.jctube.2023.100377

Rose, S. (2020). Intersections of machine learning and epidemiological methods for health services research. In *International Journal of Epidemiology* (Vol. 49, Issue 6). https://doi.org/10.1093/ije/dyaa035

Safary, E., Mwandeti, M., Matanje, B., Beiersmann, C., Mtaita, C., Shiroya, V., Winkler, V., Deckert, A., Kumar, P., Phiri, S., & Neuhann, F. (2021). Role of community health volunteers in identifying people with elevated blood pressure for diagnosis and monitoring of hypertension in Malawi: a qualitative study. *BMC Cardiovascular Disorders*, *21*(1). https://doi.org/10.1186/s12872-021-02171-7

Swanson, E., Kim, S., Lee, S. M., Yang, J. J., & Lee, Y. K. (2020). The effect of leader competencies on knowledge sharing and job performance: Social capital theory. *Journal of Hospitality and Tourism Management*, *42*. https://doi.org/10.1016/j.jhtm.2019.11.004

Tadolini, M., & Migliori, G. B. (2012). The WHO strategy for TB control and elimination. *European Respiratory Monograph*, *58*. https://doi.org/10.1183/1025448x.10024111

Thomas, A., & Gupta, V. (2021). Social Capital Theory, Social Exchange Theory, Social Cognitive Theory, Financial Literacy, and the Role of Knowledge Sharing as a Moderator in Enhancing Financial Well-Being: From Bibliometric Analysis to a Conceptual Framework Model. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.664638

Weltz, J., Volfovsky, A., & Laber, E. B. (2022). Reinforcement Learning Methods in Public Health. In *Clinical Therapeutics* (Vol. 44, Issue 1).

https://doi.org/10.1016/j.clinthera.2021.11.002
Zulu, D. W., Silumbwe, A., Maritim, P., & Zulu, J. M. (2022). Integration of systematic screening for tuberculosis in outpatient departments of urban primary healthcare facilities in Zambia: a case study of Kitwe district. *BMC Health Services Research*, *22*(1). https://doi.org/10.1186/s12913-022-08043-w