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Effectiveness of Self-Help Group Support in Enhancing Medication Adherence and Quality of Life (QoL) Among Patients with Tuberculosis (TB): A Systematic Review

Efektivitas Dukungan Swabantu (Self Help Group) Dalam meningkatkan Kepatuhan dan Kualitas Hidup Pasien Tuberkulosis : Tinjauan Sistematik

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ABSTRACT

Tuberculosis (TB) remains a major global health challenge, especially in countries with high disease burdens like Indonesia. Treatment non-adherence and reduced quality of life among TB patients continue to undermine control efforts. This systematic review seeks to explore how self-help group (SHG) interventions contribute to enhancing medication adherence and improving the quality of life (QoL) among individuals living with TB. A systematic review was followed the 2020 PRISMA guidelines. Comprehensive searches were performed across PubMed, Science Direct, ProQuest, Scopus, and Google Scholar using the PICO framework. Studies of various designs (RCTs, cohort, quasi-experimental, and cross-sectional) involving TB patients receiving SHG interventions were included. Eight eligible studies were critically appraised using the JBI checklist. Despite differences in design, participants, and SHG approaches such as patient education, motivation, emotional support, behavioral empowerment, and digital integration the studies consistently showed improvements in medication adherence and quality of life, supported by generally strong methodological quality. The findings highlight the importance of structured SHG models in nursing practice, supporting the development of community-based interventions and protocols that enhance TB treatment outcomes and patient well-being. Future studies should prioritize robust RCTs with diverse populations and long-term follow-up, including hybrid models that integrate digital technologies to ensure sustainable implementation in high-burden settings.

Keywords : *Medication adherence, Quality of life, Self-Help Group (SHGs), TB patient*

ABSTRAK

Tuberkulosis (TB) menjadi tantangan besar dalam kesehatan global, terutama di negara-negara dengan beban penyakit yang tinggi seperti Indonesia. Ketidakpatuhan pengobatan dan penurunan kualitas hidup pada pasien TB menjadi hambatan dalam upaya pengendalian penyakit. Tinjauan sistematis ini bertujuan untuk menelaah bagaimana intervensi kelompok swadaya (self-help group/SHGs) berkontribusi meningkatkan kepatuhan minum obat dan kualitas hidup pasien TB. Tinjauan sistematis ini mengikuti pedoman PRISMA 2020, dengan pencarian komprehensif dilakukan pada 5 database PubMed, Science Direct, ProQuest, Scopus, dan Google Scholar menggunakan kerangka PICO. Desain penelitian termasuk RCT, kohort, kuasi-eksperimental, dan potong lintang melibatkan pasien TB penerima intervensi SHG diikutsertakan. Delapan studi yang memenuhi kriteria diinklusi dan dikaji secara kritis menggunakan form checklist dari JBI. Delapan artikel penelitian yang dianalisis memiliki variasi dalam desain, karakteristik partisipan, serta bentuk intervensi SHG mencakup kegiatan edukasi pasien, memberikan motivasi, dukungan emosional, pemberdayaan perilaku, dan integrasi dengan pendekatan digital. Pendekatan-pendekatan tersebut menghasilkan peningkatan signifikan untuk kepatuhan pengobatan dan kualitas hidup pasien TB, dengan kualitas metodologi dinilai baik berdasarkan standar JBI. Temuan ini menekankan pentingnya model dukungan swabantu (SHG) terstruktur dalam praktik keperawatan, acuan dalam pengembangan intervensi berbasis komunitas dan protokol untuk meningkatkan kepatuhan pengobatan TB serta kualitas hidup pasien TB. Penelitian selanjutnya disarankan untuk berfokus pada uji coba terkontrol secara acak (RCT) dengan populasi yang beragam dan tindak lanjut jangka panjang, termasuk penerapan model hibrid yang melibatkan teknologi digital guna implementasi yang berkelanjutan di wilayah dengan beban TB yang tinggi.

Kata Kunci : Kelompok Swabantu, Kepatuhan Pengobatan, Kualitas Hidup, Pasien TB

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BACKGROUND

Tuberculosis (TB) is a communicable disease with an increasing global prevalence. It is caused by the bacterium Mycobacterium tuberculosis, which primarily affects the lungs but can also involve other organs [25]. According to the Global Tuberculosis Report 2024, an estimated 10.8 million people worldwide were affected by TB in 2023, an increase from 10.7 million in 2022 and 10.6 million in 2021. Indonesia is currently the country with the second-highest tuberculosis burden globally, following India, accounting for approximately 10% of the total global TB cases [25]. Control of TB remains a significant challenge in both global and national public health contexts.

Challenges in TB control occur across various forms of disease. More than 88% of global tuberculosis (TB) cases are drug-sensitive TB, which is treatable with standard medication and generally has a good prognosis if treatment is completed. However, the WHO reports a gap of approximately 2.7 million cases between estimated and reported or treated TB cases [25]. In contrast, Drug Resistant Tuberculosis (DR-TB) does not respond to standard treatment and requires longer course of second-line therapy. In Indonesia, the prevalence of DR-TB is estimated at 23,000 cases, representing 2.4% of newly diagnosed TB cases and 13% of those with a history prior treatment [6]. In 2023, the mortality rate due to DR-TB in Indonesia reached 134,000 per year, with a treatment success rate (TSR) of only 56% [11]. The low coverage of early detection, delayed treatment initiation, and poor patient adherence are believed to be the main contributing factors to treatment failure.

Medication adherence is a critical indicator of successful TB treatment outcomes [6, 24]. The National Tuberculosis Control Program has undertaken various efforts to improve the coverage and quality of care, newer treatment options including injection-free regimens and shorter courses such as BPaL and BPaLM, have been introduced. However, treatment success rates still fall short of the target [6, 8, 19]. Non-adherence continues to heighten the risks of relapse, drug resistance, and reduced QoL [2, 6, 8]. Enhancing patients' QoL is essential for supporting successful TB treatment, as it reflects physical health, psychological well-being, independence, social relationships, environmental conditions, and spirituality [25]. Declines in QoL often stem from medication side effects, stigma, anxiety, psychosocial stress, and reduced economic productivity [7, 18, 20]). Thus, strategies that effectively improve the quality of life of TB patients are urgently needed.

Social and emotional support from the surrounding environment can strengthen TB patients' motivation to complete their treatment and help reduce psychological burdens. One effective strategy is the formation of self-help groups, which provide a platform for patients to exchange information and emotional support [4-5]. Evidence from Ethiopia and Nepal shows that participation in such groups improves treatment adherence, enhances QoL, and lowers the risk of treatment interruption [1, 9]. However, findings across studies remain mixed, highlighting the need for a systematic review to assess their effectiveness and identify which SHG components work best [21]. This systematic review aims to evaluate the impact of self-help group support on treatment adherence and QoL among TB patients and to offer scientific insights for future research.

METHODS

A systematic review was carried out in alignment with the reporting standards of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Eligible interventions included self-help group approaches, defined as informal groups of individuals with shared experiences who voluntarily meet to exchange information, offer emotional support, and share life experiences in managing their illness [4–5]. There were no restrictions regarding the duration of the intervention, both brief and regular interventions are considered.

Search Strategy

The search strategy aimed to find both published and unpublished studies. The Population

(patients with tuberculosis), Intervention (self-help group support), Comparison, and Outcome (improvement in medication adherence and quality of life) framework (PICO) was used to guide the formulation of the research question and inclusion criteria. A predetermined search strategy was applied to conduct a comprehensive search across Science Direct, PubMed, Science Direct, ProQuest, Scopus and Google Scholar. This systematic literature review was limited to studies published within the last five years (2020–2025). The search process used in this review is illustrated in the flowchart presented in Figure 1.

Study Selection

Following the execution of the database search strategy, all retrieved citations were collected and imported into the latest version of Mendeley (1.19.8), where duplicate records were systematically removed. The article search was then filtered based on several criteria, with selected articles being full-texted and meeting the author's desired inclusion criteria. The reasons for excluding full-text articles that did not meet the inclusion criteria were documented and reported in the systematic review. The search outcomes and study selection process were detailed in the final review and illustrated in a flow diagram in accordance with the PRISMA 2020 guidelines.

Types of Studies

This review included various experimental study designs, such as meta-analyses, randomized controlled trials, randomized systematic reviews, non-randomized controlled trials, quasi-experimental studies, and observational studies, including cohort studies, case-control studies, and cross-sectional studies.

Quality Assessment

Eligible studies were carefully assessed by an independent reviewer (IP) using the standardized JBI critical appraisal tools to evaluate methodological quality [3]. Any discrepancies that arose were resolved through discussion or by consulting three supervisors (HP, AYN, and WD).

Data Extraction

The extracted data covered key information on the study populations, methodologies, self-help group (SHG) interventions, and outcomes relevant to the review objectives. Any disagreements between reviewers were resolved through discussion or consultation with a supervisor. From each study, the following details were collected: study title, authors, country, language, year of publication, study design, number of participants, gender distribution (number and percentage), age, the measurement tools used to assess medication adherence and QoL among TB patients, pre- and post-intervention results, and the specific SHG program implemented.

Types of Participants

Inclusion and Exclusion Criteria

This review included studies involving individuals diagnosed with tuberculosis (TB) as the target population, regardless of gender, aged 18 years and older; studies investigating the use of self-help groups (SHGs) as the primary intervention to improve medication adherence among TB patients, and studies that employed validated instruments to assess medication adherence as the primary outcome and QoL among TB patients as the secondary outcome. The exclusion criteria were studies with interventions aimed at non-TB conditions (e.g., asthma, COPD, pneumonia, HIV), as well as studies that did not provide full-text access. All terms related to TB patients, medication adherence, and quality of life among TB patients globally were included. To ensure broad coverage across studies and settings, various terms related to medication adherence and QoL were included in the search.

Types of Interventions

This review examined studies assessing how self-help group (SHG) interventions support improvements in medication adherence and QoL among TB patients. SHGs are peer-support groups in which individuals with similar health experiences such as those living with tuberculosis meet to share their stories, provide emotional

support, and exchange practical information. These groups help reduce the social isolation often experienced by TB patients, especially in settings where stigma remains high, offering a sense of belonging and encouragement to continue treatment [12]. By fostering accountability among members, SHGs can further promote better adherence to medication regimens [23].

In addition to improving adherence, SHGs also enhance QoL by addressing both the physical and emotional challenges of TB. Members can share coping strategies for managing side effects, discomfort, and the psychological strain of the disease. The social support within these groups helps alleviate stress, anxiety, and depression, strengthening emotional resilience and overall well-being [12]. Evidence shows that participation in SHGs can significantly improve adherence and mental health outcomes. For instance, a study found that TB patients involved in SHGs reported higher adherence and better mental health than those not participating. By offering a supportive environment, SHGs play an essential role in reinforcing treatment behaviors and improving the overall QoL for TB patients [12].

Comparator

As most primary studies did not compare interventions within the target population, studies that focused solely on the implementation of SHGs were also included. While there are several studies that compare interventions with SHG practices, there is no equivalent range of interventions within the specific population under consideration.

Types of outcomes

The main outcome assessed in this review was TB patients' adherence to medication, measured through reliable and validated tools. The secondary outcome focused on their quality of life (QoL), evaluated using standardized and validated assessment instruments. These outcomes were specifically evaluated in relation to the consistent use of self-help groups (SHGs).

RESULTS

Database Search

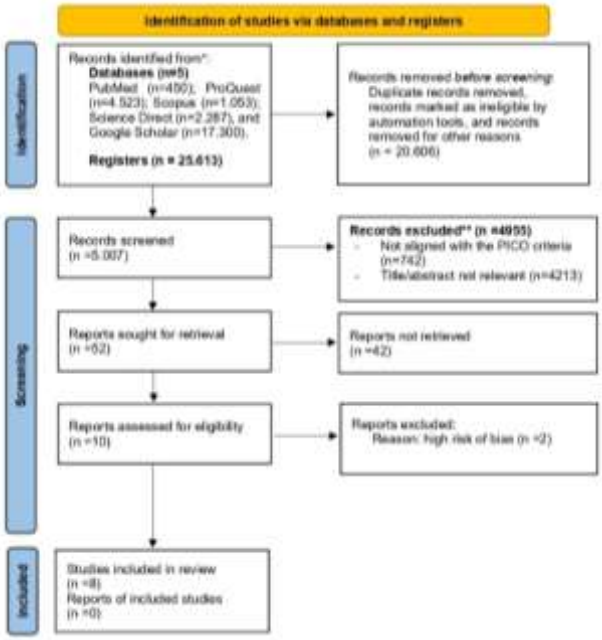
The database search was carried out in February 2025, yielding 25,613 records. Articles were retrieved from five databases: PubMed, Science Direct, Scopus, ProQuest, and Google Scholar. All search strategies were tailored to the specific platform. A total of 450 records were identified through the PubMed database, Science Direct yielded 2,287 studies, while ProQuest resulted in 4,523 articles. Scopus provided 1,053 results, and Google Scholar retrieved 17,300 studies. The initial selection was made based on title, publication year, article type, and language (only English and Indonesian articles were considered), resulting in 5,007 articles. After a detailed evaluation and a second round of selection, only studies aligned with the PICO criteria and title or abstracts relevant were reviewed. Of the 52 studies screened, 42 could not be accessed in full despite attempts to contact the authors and retrieve them through university resources. An additional two studies were excluded following critical appraisal, resulting in eight studies being included in the final systematic review (Figure 1).

Characteristics of The Included Studies

Among the eight studies included in this systematic review, the research was conducted across various regions, reflecting a global approach to understanding tuberculosis (TB) treatment adherence and interventions. One study in Morocco [16], one in Turkey [15], one in Nepal [26], two in China [22], and one in India [17]. Two of the included studies were conducted in Indonesia [21, 14]. Geographical diversity highlights the global nature of TB treatment adherence challenges, with studies spanning across Asia, Africa, and Europe, providing insights into how different cultural, healthcare, and socio-economic contexts impact TB management. All studies were published in English, allowing broader academic accessibility and supporting international dissemination of the findings across diverse healthcare settings.

The studies varied in design, three used a randomized controlled trial (RCT) approach [14,

21, 22], two employed cohort designs [15, 17], one was cross-sectional [26], and two used



experimental designs [16, 21], enabling the evaluation of interventions such as integrated patient management and health coaching. All studies were published recently, between 2021 and 2024 (Table 1).

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Flowchart for The Study Selection Process

Characteristics of The Participants

The studies included in this review showed considerable variation in participant characteristics, though all focused specifically on TB patients (Table 1). Across the eight studies, a total of 30,706 participants were involved, with sample sizes ranging from small groups of around 30 individuals to a large cohort study in India with over 30,000 participants. Most respondents were between 35 and 45 years old, and in studies reporting gender distribution, men accounted for roughly 55–60% of the sample.

The Intervention Characteristics and Outcomes

The reviewed studies primarily examined Self-Help Group (SHG) interventions for TB patients, combining peer support with structured education, coaching, and in some cases, digital tools. These SHGs were designed to improve medication adherence, strengthen treatment outcomes, and build supportive communities. Several studies incorporated technologies such as electronic medication monitors and mobile applications to expand the reach and impact of SHGs, leading to notable gains in adherence such as a 94% adherence rate compared with 73% in control groups [22].

Control groups generally received standard care or no extra support, underscoring the added value of SHGs. For example, the study reported major improvements in the intervention group, with adherence increasing from 21.1% to 100% and quality of life rising from 0% to 89.5% [13]. SHG participants consistently showed higher treatment success and lower loss to follow-up than controls. Overall, these findings indicate that SHG interventions especially when paired with educational and technological components, substantially enhance treatment adherence, patient retention, and overall well-being among TB patients.

Quality Assessment

The methodological rigor of the studies included in this review was evaluated using the JBI Critical Review Checklist. This checklist was applied to evaluate the 10 relevant articles, each of which was thoroughly reviewed by three independent reviewers to ensure comprehensive assessment. The critical appraisal followed the specific JBI guidelines for each study design. The quality score was graded as high if >80% (low risk of bias), moderate between 60–80% (moderate risk of bias), and low <60% (high risk of bias).

Different JBI tools were used according to the study type. Two were assessed with the RCT checklist [13, 22], three with the quasi-experimental checklist [14, 16, 21], and one with the analytical cross-sectional checklist [26]. Additionally, two studies were assessed using the cohort study tools, including [15,17] (Table 1). The evaluation covered various criteria, such as participant selection, data collection methods, and

outcome measures, to ensure consistency and rigor in the analysis.

Among the ten studies initially assessed, two were excluded due to high risk of bias (<60%), primarily related to inadequate methodological reporting and insufficient control of confounding factors. The remaining eight studies met the inclusion threshold and were retained for synthesis (Table 1). Of these eight included studies, six demonstrated high methodological quality (>80%) [13, 14, 15, 17, 22, 26], while two showed moderate quality (76.9%) [21; 16]. Overall, the included studies generally presented clear sampling procedures, appropriate measurement of outcomes, and sufficient methodological transparency, providing an acceptable level of rigor to support the review findings. As summarized in Table 1, these eight studies formed the basis of the analysis.

Table 1. Characteristic of Included Studies

Author (years)	Country	N (sample)	Age (mean)	Gender (Men/Women)	Desain Study	Quality Assesment
Mantouw & Widyowati (2024)	Indonesia	38 TB patients	Intervention: Mean 40 years Control: mean 40 years	Intervention: 12 men / 7 Women Control: 11 Men / 8 Women	RCT (Pretest-post-test control group)	84.6% (low risk of bias)
Potty, et.al., (2023)	India	30,706 TB patients	Not specifically, age varies, including age ≥60.	Not specific, gender varies	Retrospective Cohort	100% (low risk of bias)
Park et al. (2021)	Morocco	3,605 TB Patients	The average age was not specified for each group.	Not specific, gender varies	Experimental Study – Quasi Experiment	76.9% (moderate risk of bias)
Yadav et, al. (2021)	Nepal	180 TB patients.	35-45 years	60% men and 40% women.	Cross-sectional Study	100% (low risk of bias)
Ozaltun & Akin (2024)	Turkey	84 TB Patients	40 years	55% were men, and 45% were women	Retrospective Cohort	90.9% (low risk of bias)
Wahyudi et., al., (2021)	Indonesia	40 TB patients	35-45 years	Intervention: 11 men and 9 women Control: 12 men, and 8 women	Quasi Experimental	76.9% (moderate risk of bias)
Nursasi et, al. (2022)	Indonesia	70 TB patients	38 years	Not specific, gender varies	Quasi Experimental	92.3% (low risk of bias)
Wei et al. (2024)	China	278 TB patients	40.4 years	Intervention: 85 men and 58 women Control: 78 men and 57 women	RCT - multicenter	84.6% (low risk of bias)

Table 2. Main Finding

Author (years)	Intervention	Comparator	Outcome	
			Adherence	Quality of Life
Mantouw & Widyowati (2024)	Structured SHG-based health education on TB prevention delivered through peer group support.	Control group receiving standard care only.	Adherence increased significantly (100% vs 21.1%).	QoL improved markedly (89.5% vs 63%).
Potty, et.al., (2023)	Participation in TB patient support groups (SHGs) providing peer support and follow-up encouragement.	No SHG participation (routine program care).	Higher treatment success among SHG participants (94.1% vs 88.2%).	Not assessed/reported.
Park et al. (2021)	Integrated community-based patient management system (involving TB cadres, TB survivors, education, and mobile-health group support).	Conventional care approach.	Improved treatment success (92.2% vs 88%); reduced loss to follow-up (4.1% vs 7.9%).	Not assessed/reported.
Yadav et, al. (2021)	Healthcare worker support and participation in TB patient social support groups (SHGs).	No comparison group; cross-sectional assessment.	Patients with better adherence reported better health status (association only).	Significantly better QoL among patients with higher adherence.
Ozaltun & Akin (2024)	Social support and education, including interactions with fellow TB survivors (SHG-type support).	No intervention (routine follow-up).	Adherence decreased during continuation phase, but social support helped improve adherence patterns.	Not assessed.
Wahyudi et., al., (2021)	Health coaching delivered within a self-help group model.	Control group receiving no intervention.	Significant increase in medication adherence in the intervention group.	QoL indirectly improved through better self-efficacy and adherence (significant effects reported).
Nursasi et, al. (2022)	CERMAT program: education dan peer support delivered through SHG-style community sessions.	No formal control group.	Significant improvement in supportive attitudes and medication adherence.	Not reported.
Wei et al. (2024)	Comprehensive package combining SHG support, electronic medication monitoring, and smartphone application.	Standard care.	Adherence improved significantly (94% vs 73%); reduced missed doses and loss-to-follow-up.	Not reported.

DISCUSSION

Summary of the Main Results

This review demonstrates that self-help group (SHG) interventions provide meaningful benefits for tuberculosis (TB) patients across diverse settings. While all included studies reported positive outcomes, the magnitude and mechanisms of improvement varied based on the SHG model, study design, and contextual factors [7, 10]. Rather than simply increasing adherence or quality of life (QoL), SHGs function as multi-layered platforms that combine peer support, structured education, and behavioral empowerment, creating a supportive environment that strengthens patient engagement throughout the treatment continuum.

The Effect of SHG Approach on TB Treatment Adherence

Across the reviewed studies, SHGs contributed to adherence through mechanisms beyond simple knowledge transfer. Interventions

enhanced self-efficacy, internal motivation, and perceived accountability—factors consistently associated with higher completion rates in chronic disease management. Studies incorporating structured peer-education or health coaching demonstrated substantial effects, such as adherence improvements from 21.1% to 100% in Indonesian RCTs [13, 17, 21]. Larger cohort studies, including India's 30,706-patient sample, highlight scalability, showing a 2.44-fold higher likelihood of treatment success among SHG participants [17].

Notably, technology-integrated interventions yielded additional gains. Combining SHGs with electronic medication monitoring and mobile apps supported real-time feedback loops, reduced missed doses, and lowered loss-to-follow-up rates [16]. These findings imply that SHGs are not merely supportive add-ons but can strengthen patient navigation in complex treatment pathways, especially where human supervision is limited. Critically, these results must be interpreted against Indonesia's low national Treatment Success Rate (TSR), which remains only 56% in 2023 [11]. The robust improvements seen in SHG-supported studies suggest that integrating systematic peer-support structures into national TB programs could directly target the adherence gap that contributes to poor TSR performance.

The Effect of SHG Approaches on Quality of Life of TB Patients

Self-help group (SHG) interventions consistently improved the quality of life (QoL) of TB patients through mechanisms that extend beyond clinical care [13; 26; 31]. Across reviewed studies, SHGs created a safe social environment where patients could share experiences, receive encouragement, and reduce feelings of isolation key factors that directly influence psychological and social QoL domains [13]. Participation in peer groups also reduced TB-related stigma, strengthened emotional coping, and enhanced patients' confidence in managing treatment challenges [14; 22]. These psychosocial benefits are important because TB patients commonly face anxiety, uncertainty, and social withdrawal, all of which negatively impact QoL even when clinical treatment is progressing well.

In addition to emotional support, structured SHG activities such as peer-led education, skill-building, and survivor mentoring helped patients develop better treatment literacy and self-efficacy [13], which indirectly improved their physical QoL by stabilizing health behaviors and symptom management. Studies incorporating digital tools alongside SHGs further amplified these benefits by maintaining continuous engagement and reducing treatment fatigue [13; 26; 31]. Overall, SHGs provide a holistic framework that strengthens both the psychosocial and functional aspects of QoL, making them a valuable complement to biomedical TB care. Importantly, improvements in QoL were mediated by both direct (psychosocial support) and indirect (enhanced adherence leading to better health status) pathways [26]. This dual mechanism suggests that SHGs operate as holistic care models, filling the psychosocial gaps that clinical services often fail to address. In high-burden countries where stigma, isolation, and emotional distress remain major barriers, this function is particularly crucial [14].

Similarity and Differences Studies

The reviewed studies consistently show positive effects of self-help group approaches on TB treatment adherence and quality of life, they differ in study design, geographical setting, and intervention strategies. A common strength across all included studies is the use of quantitative research designs, which supports the validity and consistency of the findings. Some studies [13, 22] emphasized structured group-based education and technology integration, while others [21, 14] focused on health coaching and peer support in more localized contexts (Table 1). The integration of mobile health technologies, as seen in study [16], further distinguishes certain interventions by offering a more modern approach to treatment support.

Geographically, studies conducted in countries such as Indonesia [13], India [17], and

Morocco [17] demonstrate the adaptability of SHG interventions across diverse healthcare systems. Although studies with larger sample sizes [17, 22] provide stronger generalizability, smaller community-based studies still contribute valuable insights into individual and local impacts. Overall, while the core benefits of SHGs in improving adherence and quality of life remain consistent, differences in implementation methods and intervention scale highlight the flexibility and broad potential of self-help groups in TB management (Table 1).

Implications for Community Health

The findings of this systematic review highlight the essential role of community health providers in facilitating self-help group (SHG) interventions to improve treatment adherence and quality of life among individuals with tuberculosis (TB). As frontline actors in community-based health systems, they are well positioned to initiate, coordinate, and sustain peer-support programs across diverse community and clinical settings. Integrating SHG models into routine TB care enables community health practitioners to build supportive environments that encourage mutual support, patient empowerment, and positive behavioral change, ultimately strengthening treatment outcomes. Their contribution should extend beyond providing health education to guiding group processes, offering psychosocial support, and maintaining ongoing community engagement throughout the treatment journey.

In practice, community health providers can utilize SHGs to address complex challenges faced by TB patients, including stigma, emotional distress, and low self-efficacy. Structured protocols such as regular peer meetings, goal setting, and personalized motivational strategies can enhance community health practices, particularly when combined with community-based coaching and monitoring systems in resource-limited settings. The use of digital tools, such as medication monitoring devices and mobile applications can further expand the reach and effectiveness of SHG-based interventions, enabling real-time adherence tracking and timely follow-up. Successful integration of SHGs into community health practice requires capacity-building efforts, including training community health workers in group facilitation and behavior change communication. Institutional and policy-level support is also essential to ensure adequate resources and strengthen cross-sector collaboration. Incorporating SHGs into national TB control programs can serve as a sustainable, community-centered strategy that aligns with public health priorities and promotes holistic care. Thus, empowering community health systems to adopt and scale SHG initiatives is vital in enhancing population-level health outcomes and ensuring equitable TB care at the community level.

Limitation

This review has several limitations that warrant consideration. First, the studies included showed considerable variability in research designs, intervention components, duration, frequency, outcome measures, and implementation approaches. The diversity in methodological quality, ranging from randomized controlled trials to observational and quasi-experimental designs may have influenced the consistency and strength of the conclusions drawn. Second, the search strategy was limited to articles published between 2020 and 2025. Although this timeframe allowed the review to capture recent and relevant studies, it may have introduced publication bias by excluding high-quality articles published before 2020 or after the review period. Limiting the search to studies in English and Indonesian may also have led to the omission of important literature in other languages, potentially reducing the generalizability of the findings especially from non-English-speaking regions with a high TB burden. In addition, many studies relied on self-reported measures of medication adherence and quality of life, which are vulnerable to recall and social desirability biases, and the lack of objective tools such as electronic monitoring or physiological indicators decreases the reliability of some outcomes. Many studies also

did not include long-term follow-up, which limits the ability to evaluate the lasting impact of the interventions. Future research should broaden language inclusion, extend publication ranges, incorporate objective outcome measures, and adopt standardized protocols to strengthen the quality, reproducibility, and global relevance of the evidence.

CONCLUSION

This systematic review concludes that self-help group (SHG) interventions are an effective approach to enhancing medication adherence and QoL among TB patients. Across the included studies, SHGs consistently offered vital social and emotional support, strengthened peer accountability, and provided structured education that contributed to better treatment outcomes. Integrating SHGs with technological tools such as electronic medication monitors and mobile applications further enhanced adherence monitoring and patient engagement. Nonetheless, the review notes several limitations, including varied study designs and intervention protocols, predominantly short-term follow-up, and limited representation of certain patient groups, which may restrict generalizability.

Future research should address these gaps through well-designed randomized controlled trials with larger, more diverse samples, particularly in underrepresented settings, and incorporate long-term follow-up with both subjective and objective adherence measures. Moreover, exploring hybrid models that combine SHG support with digital health technologies could offer scalable and adaptable intervention strategies. Policymakers and healthcare providers, particularly in high TB burden settings like Indonesia, are encouraged to formally integrate SHGs into national TB programs, supported by training for facilitators and sustainable resource allocation to maximize community-based TB care effectiveness.

CONFLICTS OF INTEREST

The authors report no conflict of interest.

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