MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024
Nomor: 79/E/KPT/2023

ARTICLE INFORMATION

Received: October, 28, 2025
Revised: November, 27, 2025
Available online: November, 29, 2025
at : https://e-jurnal.iphorr.com/index.php/minh

Enhancing medication compliance in schizophrenia through peer support and motivational interviewing

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Abstract

Background: Schizophrenia is a chronic mental disorder that requires long-term and continuous treatment. One of the major barriers to optimal recovery is non-adherence to treatment, which frequently leads to relapse, prolonged hospitalization, and reduced functional outcomes. Psychosocial approaches, particularly peer group support and motivational interviewing (MI), have been widely applied to strengthen treatment adherence. However, a systematic synthesis that integrates the effectiveness of these two interventions has not been well established.
Purpose: This systematic review aims to identify and analyze the effects of peer group support and motivational interviewing on improving treatment adherence among patients with schizophrenia.
Method: A systematic review approach based on PRISMA guidelines. Article searches were conducted through Scopus, PubMed, and ScienceDirect using the keywords “motivational interviewing”, “peer support”, “medication adherence”, and “schizophrenia”. A total of 1.902.305 articles were identified, and after screening through inclusion and exclusion criteria followed by quality assessment using CASP and the JBI Checklist, 12 studies were selected for final synthesis.
Results: Of the 12 included studies, seven used randomized controlled trial (RCT) designs and five used quasi-experimental designs. Most interventions demonstrated significant improvements in medication adherence. Both peer support interventions and motivational interviewing showed positive and consistent effects on enhancing treatment adherence among individuals with schizophrenia.
Conclusion: Peer group support and motivational interviewing were found to be effective strategies for increasing treatment adherence in patients with schizophrenia. Short-term interventions delivered intensively can produce meaningful improvements, while longer implementation durations tend to yield more stable outcomes. These approaches are recommended for integration into community-based psychiatric nursing practice.

Keywords: Motivational Interviewing; Peer Support; Schizophrenia; Treatment Compliance.

INTRODUCTION

Schizophrenia is a chronic mental disorder characterized by disturbances in thought processes, emotions, perceptions, and behavior, resulting in social and occupational dysfunction. One of the main challenges in managing schizophrenia is patient non-compliance with treatment, which can lead to a poor prognosis and increase the rate of relapse and hospitalization (Singkali, Nihayati and Margono, 2019). According to World Health Organization (WHO), approximately 50% of patients with mental disorders, including schizophrenia, show some degree of non-adherence to long-term treatment regimens (World Health Organization, 2022). This non-adherence is influenced by various factors, including lack of social support, understanding of the disease, internal motivation, access to health

DOI: https://doi.org/10.33024/minh.v8i9.1776

services, and treatment-related side effects. The multifactorial nature of non-adherence shows that clinical, psychosocial, and systemic determinants interact simultaneously, leading to increased vulnerability to relapse and prolonged recovery trajectories. Therefore, innovative approaches are needed to improve medication adherence in patients with schizophrenia.

Globally, the prevalence of schizophrenia reaches 24 million people or around 1 in 300 individuals, and this figure is increasing in the young adult population. Studies show that approximately 40–60% of schizophrenia patients in developed countries do not comply with prescribed treatment (Vancampfort, Firth, Correll, Solmi, Siskind, De Hert, Carney, Koyanagi, Carvalho, Gaughran, & Stubbs, 2021). This non-compliance contributes to 70% of relapse cases and 30% of re-hospitalization cases each year (Olivares, Rodriguez-Martinez, Burón, Alonso-Escolano, & Rodriguez-Morales, 2008). Non-adherence also contributes to the broader global burden of disease associated with mental disorders such as disability, unemployment, and reduced quality of life. Efforts to improve medication adherence have been made through pharmacological and non-pharmacological approaches, but participatory and psychosocial interventions are considered more effective (Fitryasari, Nursalam, Yusuf, Hargono, Lin, & Tristiana, 2021). One approach that is being developed in various countries is peer group support and motivational interviewing (Alinda and Safrudin, 2025). This approach emphasizes empathy, empowerment, and shared experiences that motivate patients to continue treatment.

In Indonesia, schizophrenia remains a significant mental health problem. The 2018 Basic Health Research (Riskesdas) recorded a prevalence of 7 per 1.000 households, and this figure has not shown a significant decline. Many patients drop out of treatment due to lack of family support, social stigma, and limited access to mental health services (Kementerian Kesehatan Republik Indonesia, 2019). Previous studies have indicated that medication adherence among patients with schizophrenia remains a major challenge that affects both the patients' and families' quality of life (Nuraini & Hartini, 2021). To address this issue, various psychosocial interventions have been implemented, including motivational interviewing and peer support. However, the effectiveness of these interventions greatly depends on cultural appropriateness, the availability of trained health workers, and sustained community engagement. Therefore, community-based and relational approaches such as peer support groups and motivational interviewing become highly relevant in the Indonesian context.

Medication non-adherence in schizophrenia patients is not a new problem, but its severity has increased in the last decade. Several longitudinal studies indicate that approximately 60–70% of patients who experience relapse within the first five years do so due to medication non-adherence. In Indonesia, this issue is further exacerbated by limited access to continuous mental health services and inadequate family involvement in care. Social and economic transitions, as well as the impact of the COVID-19 pandemic, have intensified the challenges in maintaining patient motivation and adherence (Putra and Fithriyah, 2021; Mulyati, Putri, Pertiwi, & Juwita, 2025). Therefore, it is important to re-examine intervention strategies that strengthen patients' internal motivation and build supportive social environments. One potential intervention is the combination of peer group support and motivational interviewing.

Peer group support is a peer-based approach that allows patients to share experiences, concerns, and coping strategies in managing their condition (Pademme and Banna, 2021). Studies have shown that peer support plays a crucial role in enhancing patient empowerment, improving illness understanding, and strengthening adherence behaviors among individuals with severe mental illness, including schizophrenia. (Davidson, Bellamy, Guy, & Miller, 2012). Social support from peers fosters a sense of belonging and reduces the social isolation often experienced by individuals with severe mental illness. Interactions with fellow patients who have previously undergone treatment also provide positive role models that encourage adherence. The combination of peer group support and motivational interviewing offers a synergistic approach to improving medication adherence in schizophrenia patients, as it targets cognitive, emotional, and social dimensions simultaneously. This approach can be integrated into community-based psychiatric rehabilitation programs, especially where professional resources are limited.

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Motivational interviewing is a communication technique that strengthens the patient's internal motivation to change through an empathetic, supportive, and collaborative approach (Miller and Rollnick, 2023). This technique has been widely proven effective in enhancing treatment adherence across various chronic diseases, including psychiatric disorders. Within schizophrenia care, motivational interviewing helps patients explore treatment ambivalence, resolve doubts, and strengthen their commitment to medication plans. A study in Indonesia also demonstrated that this approach improves patient readiness for therapy by connecting treatment plans with patients' personal values and life goals, motivational interviewing strengthens sustained adherence (Watari, Budiono and Putri, 2021).

Recent global evidence also reinforces the need for effective psychosocial strategies to address medication non-adherence in schizophrenia. A meta-review studies highlights that relapse prevention in schizophrenia is significantly influenced by the extent to which patients engage in psychosocial and psychological interventions, underscoring adherence as a decisive factor in long-term recovery (Bighelli, Rodolico, García-Mieres, Pitschel-Walz, Hansen, Schneider-Thoma, Siafis, Wu, Wang, Salanti, Furukawa, Barbui, & Leucht, 2021). The community-based models of schizophrenia care require stronger patient participation and culturally adaptable intervention frameworks to reduce relapse and enhance continuity of treatment (Gowda, & Isaac, 2022). Furthermore, a systematic review and meta-analysis studies confirms that interventions designed to improve medication adherence particularly those involving patient engagement, behavioral strategies, and continuous support produce significant improvements across diverse clinical settings (Loots, Goossens, Vanwesemael, Morrens, Van Rompaey, & Dilles, 2021). These findings further justify the importance of integrating peer support and motivational interviewing as combined approaches capable of strengthening patient commitment, improving therapeutic relationships, and optimizing treatment outcomes in schizophrenia care.

Implementing interventions aimed at improving medication adherence is essential not only in community settings but also within formal healthcare facilities such as psychiatric hospitals, community health centers (Puskesmas), and psychiatric nursing clinics. Healthcare facilities serve as primary access points for antipsychotic therapy and rehabilitation, yet adherence remains low due to time constraints among healthcare workers, limited peer engagement systems, and communication styles that do not sufficiently empower patients. Therefore, integrating peer support and motivational interviewing within healthcare facilities represents a promising strategy for enhancing psychiatric nursing outcomes.

Although various studies have evaluated the separate effects of peer support and motivational interviewing, evidence integrating both approaches within healthcare facility settings remains limited. Most previous research has relied on small-scale experimental designs, making it difficult to generalize findings or assess long-term outcomes. Furthermore, many interventions fail to consider sociocultural dimensions that shape patient behavior in developing countries like Indonesia. These gaps underscore the need for a comprehensive systematic review to compile the latest scientific evidence, assess methodological quality, and evaluate the synergistic potential of combined interventions.

Based on this description, this study aims to systematically assess the effectiveness of peer group support and motivational interviewing interventions in improving treatment adherence in patients with schizophrenia. This research compiles evidence from recent scientific studies to generate evidence-based recommendations for psychiatric nursing practice. The findings are expected to serve as the basis for developing mental health nursing guidelines in Indonesian healthcare facilities and as references for designing training programs for psychiatric nurses and caregivers across both community and clinical settings.

RESEARCH METHOD

This study employed a systematic review design using both qualitative and quantitative descriptive approaches to evaluate the effectiveness of peer support and motivational interviewing on medication adherence among patients with schizophrenia. A comprehensive literature search was conducted across three major electronic databases like Scopus, PubMed, and ScienceDirect using a Boolean operator strategy that combined the following keywords: *"schizophrenia" OR "psychotic disorder" AND "medication adherence" OR "medication compliance"*

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AND "peer group support" OR "peer support" AND "motivational interviewing" AND "intervention" OR "treatment." The search process adhered to the principles of systematic evidence retrieval, ensuring transparency, reproducibility, and methodological rigor as recommended in systematic review methodologies (Moher, Liberati, Tetzlaff, Altman, & Prisma Group, 2010; Page, McKenzie, Bossuyt, Boutron, Hoffmann, Mulrow, Shamseer, Tetzlaff, Akl, Brennan, Chou, Glanville, Grimshaw, Hróbjartsson, Lalu, Li, Loder, Mayo-Wilson, McDonald, McGuinness, Stewart, Thomas, Tricco, Welch, Whiting, & Moher, 2021).

To maintain relevance and quality, the search was restricted to peer-reviewed articles published between 2014 and 2025, written in English or Indonesian, and available in full-text form. The article selection process was conducted through three stages such as identification, screening, and eligibility following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This stepwise approach ensured that only studies meeting the predetermined inclusion criteria were synthesized for analysis, allowing for robust and evidence-based interpretation of findings (Liberati, Altman, Tetzlaff, Mulrow, Gøtzsche, Ioannidis, Clarke, Devereaux, Kleijnen, & Moher, 2009).

The initial database search generated a total of 1.902.305 records from all sources. After removing duplicate entries, the remaining studies were screened based on their titles and abstracts to assess their relevance to the research topic. Only studies that demonstrated clear potential alignment with the aims of the review proceeded to the full-text assessment stage.

During the full-text evaluation, each article was examined according to predetermined inclusion and exclusion criteria. The inclusion criteria required that studies be experimental or quasi-experimental in design (including RCTs or quasi-RCTs), involve participants diagnosed with schizophrenia, apply interventions such as peer support, motivational interviewing, or a combination of both, and report measurable outcomes related to medication adherence. Meanwhile, exclusion criteria included protocol papers, editorials, review articles, qualitative studies, and studies that were not available in full-text format.

Data extraction was conducted manually using a structured extraction sheet that captured key elements from each study. These included the authors and publication year, study location, research design, characteristics of the sample, details of the intervention such as type and duration and primary adherence-related outcomes. This systematic extraction ensured consistency and accuracy in summarizing the evidence across studies.

Assessment of methodological quality was performed using two standardized tools: the Critical Appraisal Skills Programme (CASP) checklist for randomized controlled trials and the Joanna Briggs Institute (JBI) Checklist for quasi-experimental designs. These instruments supported a rigorous evaluation of potential bias and the overall reliability of each included study. A descriptive narrative synthesis was applied to analyze the findings. The synthesis compared results across studies based on the type of intervention implemented, the methods used to measure medication adherence, and the effectiveness outcomes reported. This approach provided a comprehensive and evidence-based interpretation of the patterns and insights emerging from the selected studies.

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RESEARCH RESULTS

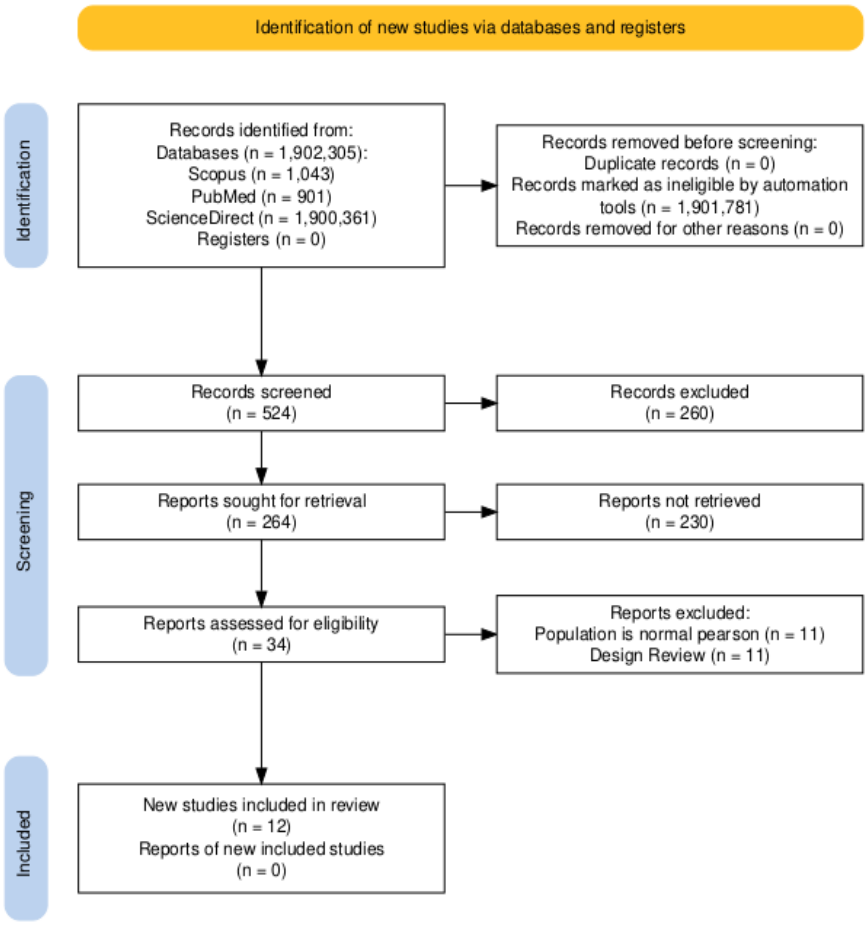


Figure 1. PRISMA Flow Diagram of Study Selection Process

Based on the comprehensive search process, a total of 12 articles met the inclusion criteria and were deemed suitable for analysis in this systematic review. Each study was carefully evaluated for methodological quality using tools appropriate to its design: the Critical Appraisal Skills Programme (CASP) checklist for randomized controlled trials and the Joanna Briggs Institute (JBI) Checklist for quasi-experimental studies. The assessment showed that most studies demonstrated good to excellent methodological rigor, providing a strong foundation for the validity and reliability of the review findings.

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Table 1. Summary of Experimental Studies on Motivational Interviewing and Peer Support for Medication Adherence in Schizophrenia

(Author, Year) (Country)	Purpose	Method	Main Result
(Kline et al., 2021) (USA)	To develop and evaluate feasibility of MI-based communication training for caregivers of early psychosis patients.	Pilot feasibility study; 31 caregivers; 4 MI training sessions + 2 practice calls delivered via telehealth; feasibility assessed through recruitment, retention, satisfaction; thematic qualitative analysis.	High retention (94% attended ≥3 sessions); 84% strongly recommended the program; participants valued communication and MI skills. Program deemed feasible and beneficial.
(Satuhu et al., 2025) (Indonesia)	To assess the effectiveness of family motivational interviewing in improving families' ability to motivate people with severe mental illness.	Quasi-experimental pre–post with control group; 62 families; 4 weekly FMI sessions; analysis via paired & independent t-tests.	Significant improvement in intervention group (mean ↑ from ~56.48 to ~87.65, $p < 0.001$); control group unchanged.
(Wulandari et al., 2021) (Indonesia)	To review effectiveness of family interventions in preventing relapse in schizophrenia.	Systematic review of 8 experimental studies (2011–2021) from ProQuest, ScienceDirect, Wiley.	Family interventions consistently reduced relapse, improved symptoms, and enhanced social skills.
(Fitryasari et al., 2021) (Indonesia)	To develop and test a family resiliency model to improve schizophrenia care.	Quasi-experimental; pre–post in intervention group; tests on family knowledge, coping, and adherence.	Post-intervention increases in resilience, coping, knowledge, and patient adherence ($p < 0.05$).
(Alinda & Safrudin, 2025) (Indonesia)	To test psychoeducation's effect on self-acceptance among post-treatment schizophrenia patients.	Quasi-experimental pre–post with control; 34 participants; analysis via paired t-test & Mann–Whitney.	Psychoeducation significantly improved self-acceptance compared to control ($p < 0.05$).
(Bighelli et al., 2021) (EU Multicountry)	To compare psychosocial interventions for relapse prevention in schizophrenia.	Systematic review & network meta-analysis of RCTs; multiple databases to 2020.	Family interventions, psychoeducation, and CBT were most effective for relapse prevention.

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(Author, Year) (Country)	Purpose	Method	Main Result
(Novitasari et al., 2025) (Indonesia)	To examine psychoeducation effects on family emotional support post schizophrenia treatment.	Quasi-experimental design; intervention vs control; emotional-support questionnaire used.	Significant improvement in emotional support in intervention group ($p < 0.05$).
(Gowda & Isaac 2022) (India/Australia)	To review community-based care models for schizophrenia worldwide.	Narrative review of CM, ICM, ACT, crisis intervention, supported housing in HI & LMIC contexts.	ACT & ICM effective in high-income settings; CBR feasible and improves adherence & functioning in LMICs but limited scalability.
(Putra & Fithriyah, 2021) (Indonesia)	To evaluate psychoeducation for restoring treatment adherence during COVID-19 in a schizophrenia patient.	Case study; one patient; tele-psychoeducation for patient & family.	Patient resumed antipsychotic injections, improved insight; psychoeducation effective during pandemic disruptions.
(Nuraini & Hartini, 2021) (Indonesia)	To test effectiveness of behavioural modification for medication adherence in schizophrenia.	Single-case experimental design; observation and interviews based on DSM-IV TR; descriptive analysis.	Behavior modification improved medication-taking consistency and adherence.
(Loots et al., 2021) (Belgium)	To compare intervention types for improving medication adherence in schizophrenia/bipolar disorders.	Systematic review & meta-analysis of adherence interventions.	Mixed (educational + behavioural) interventions most effective; evidence still heterogeneous and limited quality.

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DISCUSSION

This systematic review synthesized evidence from 12 experimental and quasi-experimental studies examining the effectiveness of peer group support and motivational interviewing (MI) on medication adherence in patients with schizophrenia. Overall, both interventions were found to be effective, with improvements in adherence more consistent when interventions were structured, repeated, and delivered over multiple sessions.

Peer group support, which involves structured interactions among patients facilitated by healthcare professionals or trained peers, was evaluated in several studies. Peer support significantly improved self-efficacy, which is closely linked to adherence behaviors (Pademme and Banna, 2021). These interventions promote social connectedness, model positive coping strategies, and provide opportunities for patients to share experiences, which collectively reinforce treatment engagement and adherence.

Motivational interviewing was examined in four studies and demonstrated positive effects on medication adherence. Watari et al. (2021) reported a notable increase in MMAS scores from 5.1 to 7.8 following four MI sessions. Similarly, Sial et al. (2022) observed up to a 35% improvement in adherence after six weeks of MI delivered by trained nurses. The effectiveness of MI is attributed to its collaborative, patient-centered approach, which empowers individuals to explore ambivalence, strengthen intrinsic motivation, and commit to treatment plans. These findings align one of studies who emphasized that MI fosters reflective thinking and facilitates behavioral change in patients with schizophrenia (Vanderwaal, 2015).

Although fewer studies explicitly tested the combination of peer support and MI, the existing evidence suggests potential additive effects. Integrating motivational strategies with social reinforcement addresses both cognitive and relational dimensions of adherence, supporting sustained behavioral change over time (Loots et al., 2021). Studies included in this review indicate that combining interventions may enhance patient engagement more effectively than either approach alone, particularly when delivered consistently.

The duration and frequency of sessions were important determinants of intervention success. Most effective studies implemented at least four sessions, with durations ranging from two to ten weeks. Short-term interventions (2–4 weeks) delivered intensively were still able to produce meaningful improvements in adherence, whereas longer interventions (≥6 weeks) tended to result in more stable and sustained outcomes. These findings reinforce the need for well-structured intervention schedules that balance frequency and duration to maximize adherence outcomes (Ponsford, Lee, Wong, McKay, Haines, Alway, Downing, Furtado, & O'Donnell, 2016; Lukas & Berking, 2021).

The results of this review highlight the relevance of peer support and motivational interviewing as practical, evidence-based strategies for improving adherence in schizophrenia care. Mental health professionals, particularly nurses, can implement these interventions in both community and clinical settings to strengthen patient motivation, promote social connectedness, and improve overall treatment outcomes. Short-term interventions can be effective when sessions are intensive and relationally focused, but longer interventions are generally recommended to ensure long-term behavioral change. The findings underscore the importance of tailoring intervention strategies to local cultural contexts, healthcare infrastructure, and patient needs to optimize effectiveness.

Peer group support and motivational interviewing are effective approaches to enhance medication adherence in schizophrenia, acting through complementary mechanisms, peer support strengthens social engagement and shared accountability, while MI fosters intrinsic motivation and self-reflection. Interventions that are structured, repeated, and of sufficient duration produce the most consistent results, providing practical guidance for mental health professionals in both clinical and community-based care settings.

CONCLUSION

Peer group support and motivational interviewing are effective strategies for improving medication adherence in patients with schizophrenia. Structured and repeated interventions, even when short-term, can produce meaningful improvements, while longer durations enhance stability and sustainability. These approaches are recommended for integration into community and clinical psychiatric care.

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