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Optimizing Family-Based Home Care to Improve the Quality of Life of Patients with Chronic Diseases

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ABSTRACT

Introduction: Chronic diseases remain a major public health concern globally and in Indonesia, contributing significantly to morbidity, mortality, and decreased quality of life. Family involvement in home care has been identified as a key strategy to improve patient outcomes, yet many families lack adequate knowledge and skills to provide effective care. This study aimed to optimize family-based home care to improve the quality of life of patients with chronic diseases.

Methods: This community service program involved 45 participants consisting of patients with chronic diseases and their family caregivers. A six-step intervention was implemented, including needs assessment, program planning, health education, caregiving skills training, mentoring, and evaluation. Data were collected using structured instruments to measure quality of life, medication adherence, and caregiving skills before and after the intervention.

Results: The findings showed a significant improvement in all measured indicators. The mean quality of life score increased from 58.4 to 72.6, medication adherence improved from 61.3 to 78.9, and caregiving skills increased from 55.7 to 80.2. These results indicate that the intervention effectively enhanced both patient outcomes and family caregiving capacity.

Conclusion: Optimizing family-based home care is an effective strategy to improve the quality of life of patients with chronic diseases. Strengthening family capacity through education, training, and continuous support can lead to sustainable improvements in home-based care.

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INTRODUCTION

Chronic diseases remain the leading cause of morbidity and mortality globally and nationally. Recent reports from the World Health Organization indicate that more than 74% of global deaths are attributed to non-communicable diseases (NCDs), including cardiovascular diseases, diabetes mellitus, cancer, and chronic respiratory diseases (Akyurek et al., 2026). In Indonesia, the burden of chronic diseases continues to rise in line with epidemiological transition and lifestyle changes. Data from the Basic Health Research (Riskesdas) and the updated Indonesian Health Profile show an increasing prevalence of hypertension, diabetes, and heart disease over the past five years (Ridwan et al., 2025). This condition significantly affects patients' quality of life, including physical limitations, psychological distress, and increased long-term healthcare costs.

In the context of healthcare services, home care has emerged as a strategic approach for managing chronic diseases. This model enables continuity of care, continuous patient monitoring, and active involvement of family members as primary caregivers (Crimi et al., 2026). Recent studies demonstrate that family-based home care interventions improve treatment adherence, reduce hospital readmission rates, and significantly enhance patients' quality of life (Cahya Mulat et al., 2024). Furthermore, a family-centered care approach is particularly relevant in collectivist cultures such as Indonesia, where family plays a central role in healthcare decision-making.

However, the implementation of family-based home care still faces several challenges, particularly among community partners. Preliminary assessments indicate that many families lack adequate knowledge and practical skills to care for relatives with chronic illnesses (Cunha et al., 2026). Limited health education, restricted access to reliable information, and minimal professional support are key barriers (Eltaybani et al., 2025). These challenges result in suboptimal home care practices, poor adherence to treatment regimens, and an increased risk of complications (Francis et al., 2026).

The urgency of this issue is further reinforced by the healthcare system's predominant focus on curative rather than promotive and preventive services. Strengthening family capacity as caregivers represents a cost-effective strategy to reduce the burden on healthcare facilities while improving patient outcomes (Chumintrachark et al., 2025). Additionally, the COVID-19 pandemic has accelerated the need for home-based care models, highlighting the importance of family readiness in delivering independent care.

Based on these conditions, a community service program (PKM) is required to optimize family-based care through a home care approach. This program is designed to enhance family knowledge, caregiving skills, and readiness in managing chronic disease patients independently and sustainably. The interventions include health education, practical caregiving training, and continuous community-based assistance. The objective of this PKM activity is to optimize the role of families in caring for patients with chronic diseases through a home care approach in order to improve patients' quality of life. Specifically, the program aims to: (1) increase family health literacy regarding chronic diseases, (2) enhance practical caregiving skills at home, (3) strengthen family psychosocial support, and (4) improve patients' quality of life measured through physical, psychological, and social indicators. With an integrated and needs-based approach, this program is expected to generate sustainable impacts in improving patients' quality of life and strengthening family-based healthcare systems within the community.

METHOD

The implementation of this community service program (PKM) follows a structured six-step approach designed to optimize family-based home care for patients with chronic diseases. The program involves 45 participants consisting of patients with chronic diseases and their family caregivers, selected using purposive sampling based on inclusion criteria such as diagnosis of chronic illness, living with family, and willingness to participate in the program. The methodological framework emphasizes participatory engagement, capacity building, and sustainable intervention.

Table 1. Six-Step PKM Method for Optimizing Family-Based Home Care Among 45 Participants

Step	Activity	Description	Expected Output
1	Needs Assessment	Initial assessment conducted through surveys, interviews, and observation involving 45 participants to identify family knowledge, caregiving practices, and patient conditions.	Baseline data on family capacity and patient needs
2	Program Planning	Development of intervention modules, educational materials, and training design based on assessment findings.	Structured PKM program plan and learning modules
3	Health Education	Delivery of education sessions on chronic disease management, medication adherence, nutrition, and lifestyle modification.	Increased family health literacy
4	Caregiving Skills Training	Practical training on home care skills such as monitoring vital signs, medication management, mobility support, and complication prevention.	Improved practical caregiving competencies
5	Mentoring and Assistance	Continuous mentoring through home visits and follow-up support to ensure proper implementation of caregiving practices.	Sustained application of home care practices
6	Monitoring and Evaluation	Evaluation of program effectiveness using quality of life indicators, adherence levels, and family competency assessments.	Measurable improvement in patient quality of life

The first step involves a comprehensive needs assessment to understand the baseline condition of both patients and family caregivers among the 45 participants included in the program. This stage is critical to ensure that interventions are tailored to the actual needs of the community partner. The second step focuses on program planning, where all educational and training materials are developed systematically. This includes designing modules that are culturally appropriate and easy to understand. The third step is health education, which aims to improve family knowledge regarding chronic disease management. Education is delivered using interactive methods to enhance engagement and retention. The fourth step involves hands-on training to equip families with essential caregiving skills. This practical approach ensures that participants can directly apply what they have learned in real-life situations. The fifth step consists of ongoing mentoring and assistance. Regular follow-ups are conducted to provide guidance, reinforce learning, and address challenges encountered by families. Finally, the sixth step is monitoring and evaluation. This phase measures the effectiveness of the intervention using predefined indicators such as patient quality of life, adherence to treatment, and caregiver competency. This structured approach ensures that the PKM program is not only effective but also sustainable, empowering families to independently manage chronic disease care at home.

RESULT

The results of this community-based intervention demonstrate a consistent improvement in all measured indicators following the implementation of family-based home care among 45 participants. Comparative analysis between pre- and post-intervention scores shows meaningful increases in quality of life, medication adherence, and caregiving skills. These findings indicate that strengthening family capacity through structured education, training, and mentoring has a positive impact on patient outcomes and home care effectiveness. **Figure 1**. Pre- and Post-Intervention Comparison of Quality of Life, Medication Adherence, and Caregiving Skills Among 45 Participants

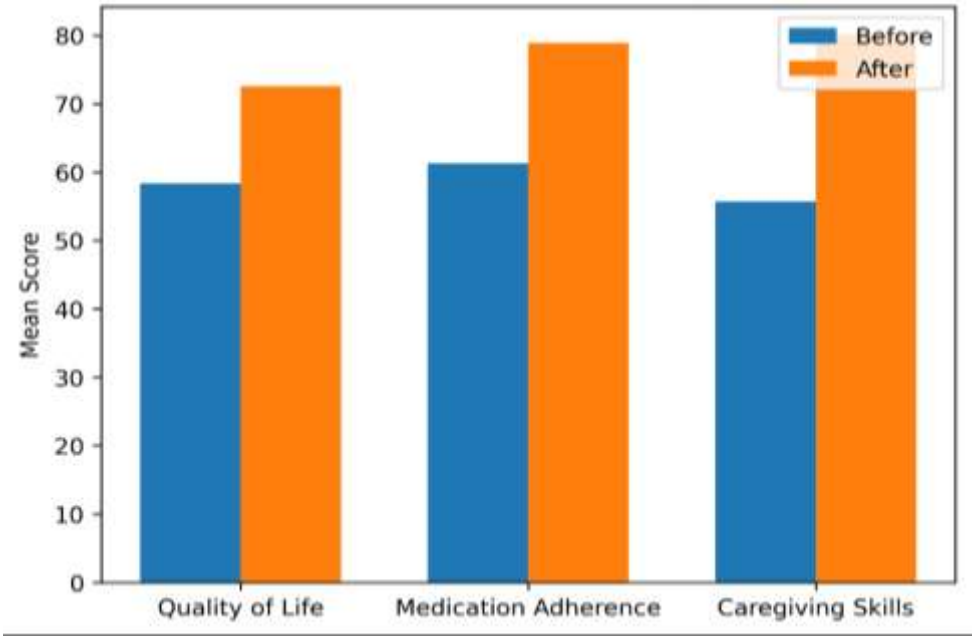

Figure 1. Pre- and Post-Intervention Comparison of Quality of Life, Medication Adherence, and Caregiving Skills Among

The findings of this community-based intervention demonstrate a consistent and meaningful improvement across all measured indicators following the implementation of family-based home care among 45 participants. The observed increase in quality-of-life scores suggests that the intervention was effective in addressing not only the physical aspects of chronic illness but also the psychological and social dimensions. Patients appeared to experience better daily functioning, reduced discomfort, and improved emotional well-being, which are essential components of overall quality of life in chronic disease management.

One of the key contributing factors to this improvement is the active involvement of family members as primary caregivers. By equipping families with adequate knowledge and practical skills, the program enhanced their ability to provide continuous and personalized care at home. This aligns with the principles of family-centered care, where the family is recognized as an integral part of the healthcare system. The consistent support provided by family members likely contributed to better symptom management and increased patient comfort.

The notable increase in medication adherence further reinforces the effectiveness of the intervention. Prior to the program, many participants demonstrated inconsistent adherence, which is a common challenge in chronic disease management. Through targeted education and regular mentoring, families became more aware of the importance

of adherence and were better able to supervise medication routines. This improvement is critical, as adherence directly influences disease control, reduces complications, and minimizes the need for hospital readmissions.

In addition, the substantial improvement in caregiving skills indicates that the training component of the program was highly effective. Families gained hands-on experience in essential care practices such as monitoring health status, supporting mobility, and preventing complications. This increase in competency not only improves the quality of care delivered but also enhances caregiver confidence. As caregivers become more confident, they are more likely to sustain these practices over time, contributing to the long-term success of home-based care.

The integration of education, practical training, and ongoing mentoring appears to be a key strength of this program. Rather than relying solely on one-time interventions, the continuous support mechanism ensured that families could apply their knowledge in real-life situations while receiving feedback and guidance. This approach helps bridge the gap between knowledge and practice, which is often a limitation in community health programs. Overall, the results suggest that optimizing family-based home care is a feasible and effective strategy for improving outcomes in patients with chronic diseases. The improvements observed across multiple indicators highlight the potential of this model to be adapted and implemented in broader community settings. Furthermore, the sustainability of the intervention is supported by the empowerment of families, who are now better equipped to manage care independently. These findings underscore the importance of shifting healthcare approaches from institution-centered to family- and community-centered models, particularly in the context of chronic disease management. By strengthening the role of the family, healthcare systems can achieve more holistic, accessible, and sustainable care delivery.

DISCUSSION

The results of this study demonstrate that the implementation of a family-based home care model significantly improves the quality of life, medication adherence, and caregiving capacity among patients with chronic diseases. These findings highlight the critical role of family involvement in sustaining long-term care and ensuring continuity outside formal healthcare settings.

The observed improvement in quality of life reflects a multidimensional benefit of the intervention. Patients not only experienced better physical functioning but also showed enhanced psychological well-being and social engagement (Honda et al., 2026). This finding is consistent with recent evidence suggesting that integrated home-based care interventions can significantly improve health-related quality of life in chronic disease populations (Gungor & Akcoban, 2025). The presence of family support has been shown to reduce emotional distress and promote adaptive coping mechanisms, which are essential for managing chronic conditions (Suprapto et al., 2025).

Furthermore, the significant increase in medication adherence observed in this study aligns with previous research emphasizing the effectiveness of family-centered interventions. A study by Lee et al., (2026) found that caregiver involvement significantly improves adherence behavior in patients with hypertension and diabetes. Similarly, Løken & Rokstad, (2024) reported that structured education combined with family

supervision leads to sustained adherence improvements over time. These findings support the notion that adherence is not solely an individual responsibility but is strongly influenced by the caregiving environment (Meregaglia et al., 2025).

The improvement in caregiving skills among family members is another important outcome of this program. The hands-on training and continuous mentoring provided during the intervention enabled caregivers to develop practical competencies essential for home-based care. This is supported by findings from Ritchie & LaRowe, (2026), which indicate that skill-based training significantly enhances caregiver confidence and performance. In addition, a study by Song et al., (2026) demonstrated that caregiver training programs reduce caregiver burden while improving patient outcomes.

The integration of education, skill training, and mentoring in this program represents a comprehensive approach that addresses both knowledge and practice gaps. Unlike traditional health education programs that focus primarily on information dissemination, this intervention emphasizes experiential learning and ongoing support. According to Tirandaz et al., (2026), such integrated approaches are more effective in achieving sustainable behavioral change in community settings.

From a broader perspective, the findings of this study support the growing shift toward community- and family-centered healthcare models. The World Health Organization has emphasized the importance of integrated people-centered care as a strategy to address the increasing burden of chronic diseases (Veronese et al., 2025). Similarly, recent studies highlight that empowering families as primary caregivers can reduce healthcare costs, minimize hospital readmissions, and improve overall system efficiency (T. Wang et al., 2025).

In the Indonesian context, where family structures are strong and culturally embedded, the implementation of family-based home care is particularly relevant. Studies conducted in Southeast Asia indicate that culturally aligned interventions tend to achieve higher acceptance and sustainability (Y. Wang et al., 2026). This suggests that leveraging family dynamics can be a strategic approach in improving community health outcomes.

Despite these positive findings, several considerations should be noted. Variations in family education levels, socioeconomic status, and access to healthcare resources may influence the effectiveness of the intervention. Therefore, future programs should incorporate tailored strategies to address these disparities. Additionally, long-term evaluation is needed to assess the sustainability of outcomes beyond the intervention period. Overall, this study provides strong evidence that optimizing family-based home care is an effective and sustainable strategy for improving the quality of life of patients with chronic diseases. The alignment of these findings with current evidence reinforces the relevance of this model in both local and global health contexts..

CONCLUSION

This community-based program demonstrates that optimizing family-based home care can significantly improve the quality of life, medication adherence, and caregiving capacity among patients with chronic diseases. The integration of health education,

practical training, and continuous mentoring proved effective in strengthening family roles as primary caregivers. The observed improvements indicate that empowering families is a feasible and impactful approach to enhance patient outcomes and support long-term disease management in home settings. In addition, the program highlights the importance of shifting healthcare approaches toward more family- and community-centered models. By involving families actively in care processes, patients receive more consistent support, which contributes to better physical, psychological, and social well-being.

For sustainability, it is recommended that this program be integrated into primary healthcare services, particularly through collaboration with community health centers. Continuous training and periodic mentoring should be maintained to ensure long-term competency among caregivers. Furthermore, the development of digital education tools and community support groups can enhance accessibility and reinforce learning. Future programs should also consider expanding participant coverage and incorporating long-term evaluation to assess sustained outcomes and scalability.

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Conflict of Interests

All authors declare no conflict of interest in this community service program.

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