

THE EFFECTIVENESS OF COMMUNITY NURSING INTERVENTIONS IN IMPROVING ACCESS TO HEALTH CARE IN RURAL AREAS OF DEVELOPING COUNTRIES: A SYSTEMATIC LITERATURE REVIEW

Leny Blegur^{1*}, Maria Goreti Owa¹, Rahaju Ningtyas², Jesuina Monica B.V. Freitas¹,
Romenia Jose M. Fernandes¹

Instituto Ciências da Saúde¹, STIKES Yogyakarta²

Email : blegurleny@gmail.com

**corresponding author*

ABSTRACT

Introduction: Access to health services in rural areas of developing countries still faces various multidimensional challenges, including geographical limitations, the distribution of health workers, and social and cultural factors within the community. These conditions highlight the need for an intervention approach that focuses not only on clinical aspects but also community empowerment. This study aims to analyze the effectiveness of community nursing interventions in improving access to healthcare services in rural areas of developing countries. **Method:** The method used is a Systematic Literature Review (SLR) following the PRISMA 2020 guidelines. The literature search was conducted through the Scopus database using a combination of keywords related to community nursing interventions and access to healthcare services, with a publication range of 2021–2026. From an initial search yielding 331 articles, 20 articles meeting the inclusion criteria were identified and analyzed further. **Results:** the study results indicate that effective community nursing interventions are multidimensional, encompassing health education, participatory approaches, the use of community health workers, and socio-cultural-based approaches. **Discussion:** The primary outcomes identified include improved health literacy, behavioral changes, increased service utilization, as well as several clinical and psychosocial indicators. Additionally, factors supporting the success of interventions include community participation, trust in services, and cross-sectoral collaboration, while barriers include facility limitations, geographical barriers, and socioeconomic determinants. These findings indicate that community nursing interventions play a strategic role in bridging gaps in access to health services. **Conclusion:** The conclusion of this study emphasizes that improving access to healthcare services in rural areas requires a holistic, contextual, and community-based approach. This study contributes to strengthening the role of community nursing as a vital component of the healthcare system and serves as a foundation for the development of evidence-based interventions in the future.

Keywords: community nursing intervention, healthcare access, rural population, developing countries, systematic literature review

INTRODUCTION

Access to healthcare services in rural areas of developing countries is a complex and

multidimensional issue, and thus cannot be explained solely by the availability of healthcare facilities. This issue involves the

Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

interaction of geographical, social, economic, cultural, and behavioral factors in how communities utilize healthcare services. Arguably, limited access in rural areas indicates health system inequities that have not yet been able to reach the entire population equitably. Geographical conditions such as long distances, limited transportation, and the uneven distribution of healthcare personnel constitute the primary structural barriers. Additionally, low health literacy and a lack of trust in formal services exacerbate these conditions. This indicates that access to healthcare services is not solely related to the supply of services but also to the demand from the community. Seinsche et al. (2023) emphasize that physical, psychological, and social factors simultaneously influence an individual's ability to access healthcare services. Thus, it can be concluded that healthcare access issues in rural areas are a serious problem requiring a comprehensive and integrated approach.

In this context, community nursing interventions are viewed as a relevant strategy to bridge the gap between the community and the healthcare system. Conceptually, community nurses play a strategic role because they work directly within the community and have a deeper understanding of local needs. Therefore, the interventions carried out are not merely clinical but also encompass education, health promotion, community empowerment, and the strengthening of social networks. This argument is supported by the findings of Martínez et al. (2026), which indicate that nursing interventions can improve health literacy and help-seeking behavior. This improvement in literacy is a crucial component in enhancing access to

healthcare services. Furthermore, a community-based approach allows interventions to be conducted in a more contextually appropriate manner aligned with community needs. Thus, community nursing interventions serve not only as health services but also as mechanisms for community empowerment. This underscores that the role of community nurses is crucial in improving access to healthcare services in rural areas.

However, the effectiveness of community nursing interventions cannot be separated from the supporting healthcare system factors. The availability of facilities, medical equipment, and healthcare personnel is a critical prerequisite for improving access to services. Ruivo et al. (2021) demonstrate that increased availability of healthcare services directly contributes to improved access, although disparities between regions still persist. This indicates that community-based interventions cannot stand alone without adequate support from the health system. Furthermore, community involvement in service development is also a key factor in enhancing the relevance of interventions. Sheldon et al. (2024) found that community participation can identify access barriers that are not apparent to service providers. Thus, it can be concluded that the effectiveness of community nursing interventions is significantly influenced by the synergy between system factors and community factors. Without such integration, interventions tend to be unsustainable and less effective.

Furthermore, community-based approaches have proven to be effective in reaching populations that are difficult for formal

services to reach. Samuel-Hodge et al. (2022) demonstrated that interventions delivered through community health workers can improve health behaviors and clinical indicators among rural communities. This indicates that community-based approaches are highly effective in resource-constrained settings. Additionally, participatory approaches also increase community acceptance of the interventions provided. Robson et al. (2021) demonstrate that community involvement in health programs can significantly improve health outcomes. However, the effectiveness of interventions is not always consistent across all indicators, highlighting the complexity of health behavior change. Therefore, it can be argued that community nursing interventions require an adaptive and sustainable approach. Consequently, the success of interventions heavily depends on the ability to tailor programs to local conditions.

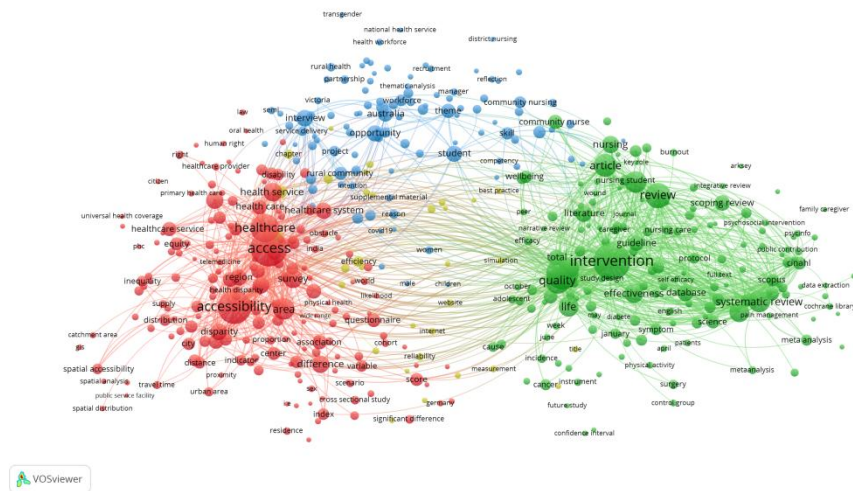
In addition to structural factors and intervention approaches, social and cultural factors also have a significant influence on access to health services. In rural communities, trust, social norms, and cultural values often serve as key determinants in the decision to seek health

care. Burgess and Choudary (2021) emphasize that trust is a crucial foundation for the success of community interventions. This is reinforced by the findings of Chaudhry et al. (2025), which indicate that social norms and trust influence the acceptance of health services. Furthermore, Mygind et al. (2025) demonstrate that the community's emotional readiness is a prerequisite for accepting health interventions. Without such readiness, the interventions provided tend to be ineffective. Therefore, community nursing interventions must thoroughly consider psychosocial and cultural aspects. Thus, it can be concluded that the success of interventions is determined not only by program design but also by alignment with the community's sociocultural context.

Bibliometric analysis using VOSviewer reinforces these findings by revealing a thematic separation between access to healthcare services and nursing interventions. Network visualization indicates that the themes "access" and "healthcare" are in different clusters from the themes "intervention" and "systematic review." This suggests that research on access and interventions is still developing separately.

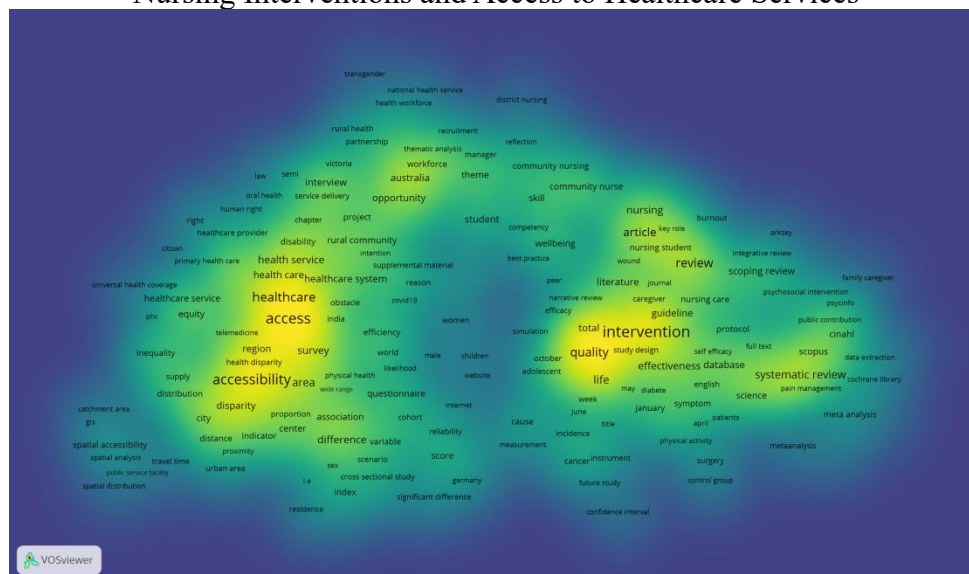
Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

Figure 1. Network Visualization of the Bibliometric Map of Research on Community Nursing Interventions and Access to Healthcare



Density visualization shows that research is more concentrated on the general concepts of access and intervention, but it is not yet specific to community nursing integration.

Figure 2. Density Visualization of the Bibliometric Map of Research Themes on Community Nursing Interventions and Access to Healthcare Services



The overlay visualization shows that recent research has begun to focus on the effectiveness of interventions, but has not yet explicitly linked them to access in rural areas.

Given this gap, this study is of high urgency both theoretically and practically. Theoretically, this study contributes to integrating the concept of access to health care with community nursing interventions within a single analytical framework. Methodologically, this study employs a systematic literature review approach to generate a more structured synthesis of evidence. Practically, the findings are expected to serve as a foundation for developing community nursing programs in rural areas. Additionally, this study contributes to identifying the enabling and limiting factors of such interventions. Thus, this research is not merely descriptive but also offers practical implications for improving the quality of healthcare services. This study also emphasizes the importance

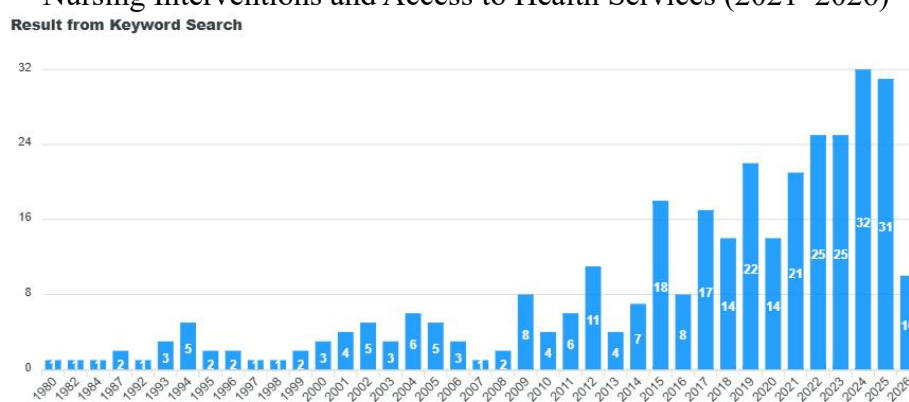
Based on the above, the objective of this study is to analyze the effectiveness of community nursing interventions in improving access to health services in rural areas of developing countries. This study also aims to identify the types of interventions used and the factors influencing their success. The research questions include three main areas: the types of interventions, the level of effectiveness, and the supporting and hindering factors. These questions were formulated based on gaps identified in the previous literature. Using a systematic literature review approach, this study is expected to provide a comprehensive and evidence-based overview. Additionally, this study is expected to serve as a reference for future research. Thus, this study holds high relevance for the advancement of community nursing science.

RESEARCH METHOD

This study employs a Systematic Literature Review (SLR) design to analyze the effectiveness of community nursing interventions in improving access to healthcare services in rural areas of developing countries. This approach was chosen because it can integrate research findings scattered across various studies into a comprehensive, evidence-based synthesis. All research stages followed the 2020 PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency, systematicity, and research replicability. The use of the PRISMA guidelines allows the study selection process to be conducted in a structured manner from the identification stage through to final inclusion. Additionally, this approach minimizes bias in the selection of articles analyzed. This study focuses on scientific articles relevant to community nursing interventions and access to healthcare services. Thus, the SLR design was employed to generate a deeper and more integrated understanding of the phenomenon under investigation.

The literature search strategy was conducted systematically using the Scopus database as the primary source of scientific articles. The selection of this database was based on its extensive coverage of international journals and the quality of globally indexed publications. The search was conducted using a combination of relevant keywords, namely “community nursing interventions,” “healthcare access improvement,” “community nursing intervention effectiveness,” and “underserved population health.” These keywords were combined using the Boolean operators AND and OR to expand or narrow the search results as needed. Additionally, the search was limited to articles published between 2021 and 2026 to ensure the relevance and recency of the data. The selected articles were also limited to those in English to maintain consistency in data interpretation. The initial search yielded 331 articles, which were then further processed during the selection phase. Publication trends based on the keyword search results are presented in Figure 4, which shows an increase in the number of publications in recent years.

Figure 4. Research Publication Trends Based on Keyword Search Results for Community Nursing Interventions and Access to Health Services (2021–2026)



Next, an article selection process was conducted based on predefined inclusion and exclusion criteria. Inclusion criteria

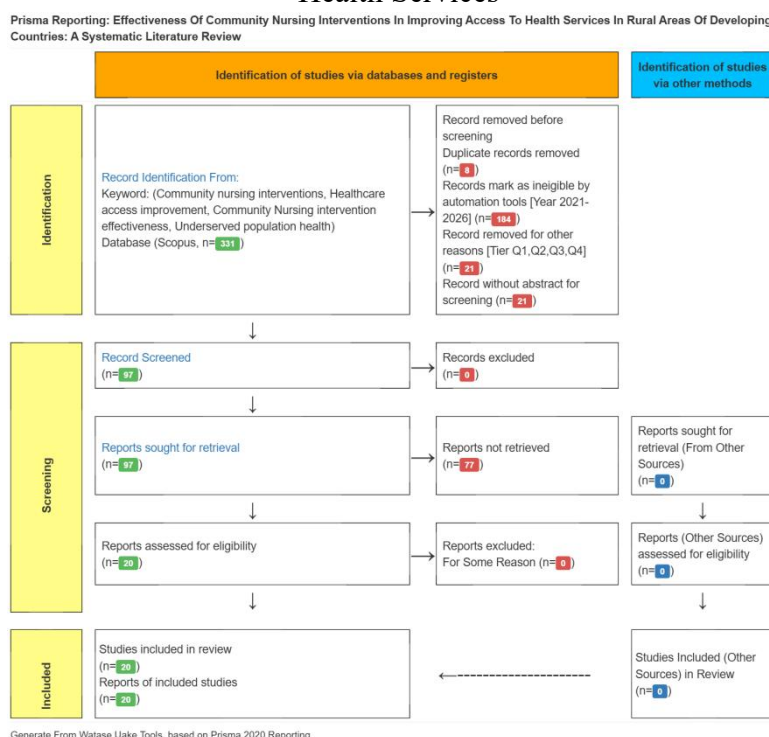
included original research articles and reviews discussing community nursing interventions, focusing on access to health

services, conducted on rural or underserved populations, and available in full-text format. Additionally, the selected articles were sourced from indexed journals and possessed adequate scientific quality. Meanwhile, exclusion criteria included duplicate articles, articles without abstracts, articles irrelevant to the research topic, and articles not available in full-text format. The selection process was conducted in stages, beginning with the screening of titles and abstracts, followed by an evaluation of the full text. These stages aimed to ensure that only the most relevant and high-quality articles were included in the analysis. Thus, the selection process was conducted rigorously to maintain the validity of the research results.

The study's selection process systematically followed the PRISMA flowchart, from the

identification stage through to final inclusion. Of the total 331 articles identified, 8 were excluded due to duplication, 184 were eliminated via automated screening for failing to meet year and relevance criteria, and 21 were excluded for other reasons such as journal quality. Additionally, 21 articles lacked abstracts and thus could not be further screened. Following this process, 97 articles advanced to the title and abstract screening stage. At this stage, irrelevant articles were eliminated, leaving only those aligned with the study's focus. Subsequently, a full-text assessment was conducted on the articles that passed the screening, resulting in 20 articles that met all inclusion criteria. These articles were then used as the basis for analysis in this study. This selection process is presented in detail in Figure 5, which displays the PRISMA flow diagram.

Figure 2. PRISMA 2020 Flowchart: Article Selection Process for a Systematic Literature Review on the Effectiveness of Community Nursing Interventions in Improving Access to Health Services



Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

After the selection process was completed, the data extraction phase was conducted for each selected article. The collected data included key information such as author names, publication year, study location, study design, sample characteristics, type of intervention, main findings, and research implications. The extraction process was conducted systematically to ensure the consistency and completeness of the analyzed data. The information obtained was then organized into tables to facilitate comparisons across studies. This stage aimed to identify patterns of findings, similarities, and differences among the studies. Additionally, data extraction allowed researchers to categorize intervention types and the resulting outcomes. Thus, this process served as the foundation for conducting a comprehensive synthesis of the research findings.

Data analysis in this study was conducted using a narrative synthesis and thematic analysis approach. This approach was used to group research findings into specific categories based on common themes. The identified themes include forms of community nursing interventions, the effectiveness of interventions, as well as factors supporting and hindering access to health services. Furthermore, analysis was also conducted to identify the relationship between interventions and the resulting outcomes. To strengthen the analysis, bibliometric analysis was also performed using the VOSviewer software. This analysis was used to map keyword relationships through network visualization, identify thematic density through density visualization, and examine the temporal development of research through overlay visualization. The results of this analysis aid

in understanding research trends and identifying gaps in the literature. Thus, the combination of thematic and bibliometric analysis provides a more comprehensive picture of the phenomenon under study.

All research stages were conducted systematically and transparently to ensure they can be replicated by other researchers. Adherence to the PRISMA guidelines ensures that the study selection and reporting processes are consistent. Additionally, a clear search strategy, strict selection criteria, and structured analysis methods enhance the validity and reliability of the research. With this approach, the research results are expected to make a significant contribution to understanding the effectiveness of community nursing interventions. This study is also expected to serve as a foundation for the development of evidence-based nursing practice in rural areas. Thus, the methods used not only produce a literature synthesis but also provide a foundation for future research.

RESEARCH SYNTHESIS

The key findings from the 20 articles analyzed reveal variations in geographical context, study design, population characteristics, and the outcomes measured. Studies were conducted in various locations such as the United States, the United Kingdom, Denmark, the Netherlands, Italy, Brazil, and the U.S.–Mexico border region, with a focus on underserved populations and rural communities (Ruivo et al., 2021; Samuel-Hodge et al., 2022; Simon et al., 2025). The research designs employed include quasi-experimental, cross-sectional, qualitative, mixed-methods, systematic reviews, and scoping reviews (Robson et al., 2021; Eekholm et al., 2024; Chaudhry et al.,

2025). Some studies used quantitative approaches to measure behavioral changes and clinical indicators, while others employed qualitative approaches to identify experiences and barriers to service access (Sheldon et al., 2024; Paat et al., 2025). Additionally, there are studies focused on the development of theory-based interventions and stakeholder engagement (Behrens et al., 2026). The study populations include older adults, women, adolescents, and individuals with chronic diseases or specific health conditions (Seinsche et al., 2023; Cangelosi et al., 2025). This variation indicates that research was conducted on groups with different characteristics. Thus, the primary data demonstrate the diversity of research contexts and designs used in the analyzed studies.

The types of interventions reported in the research show a range that includes health education interventions, community-based interventions, service system-based interventions, and socio-cultural interventions. Health education interventions include nurse-led programs and family training aimed at improving health literacy (Martínez et al., 2026; Fernando et al., 2024). Community-based interventions include the use of community health workers, home visits, and participatory approaches in program planning (Samuel-Hodge et al., 2022; Robson et al., 2021). Additionally, interventions based on coproduction and community engagement have been reported in several studies (Burgess & Choudary, 2021; Carroll & Walsh, 2024). Service system-based interventions include improving the availability of health care

facilities and resources (Ruivo et al., 2021; Davis et al., 2021). Meanwhile, socio-cultural interventions encompass approaches based on beliefs, social norms, and spiritual practices (Chaudhry et al., 2025; Bhuiyan et al., 2022). Several studies also report the use of theory-based implementation approaches in intervention development (Eekholm et al., 2024). This variation indicates that interventions are not uniform and are implemented using different approaches. Thus, the data demonstrate the diversity of community nursing intervention types.

The outcomes measured in the studies show a range of behavioral, clinical, and psychosocial aspects. Behavioral outcomes include improved health literacy and behavioral changes in the use of health services (Martínez et al., 2026; Samuel-Hodge et al., 2022). Clinical outcomes include changes in health indicators such as blood pressure, mobility, and pressure ulcer status (Seinsche et al., 2023; Cangelosi et al., 2025). Psychosocial outcomes include increased trust in healthcare services and reduced stigma (Burgess & Choudary, 2021; Chaudhry et al., 2025). Additionally, some studies also report improved quality of life as a primary outcome (Robson et al., 2021). There are also studies measuring outcomes related to the healthcare system, such as facility availability and access to healthcare services (Ruivo et al., 2021). This variety of outcomes indicates that research does not focus solely on clinical aspects but also encompasses social and behavioral aspects. Furthermore, some studies measure both short-term and long-term outcomes. Thus, the primary data indicate that the measured outcomes are multidimensional.

Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

The duration of interventions reported in the studies shows considerable variation. Some studies report short-term interventions lasting several weeks to several months (Bhuiyan et al., 2022; Samuel-Hodge et al., 2022). Meanwhile, other studies report long-term interventions lasting more than one year (Ruivo et al., 2021). Additionally, the frequency of interventions also varies, ranging from single-session interventions to those conducted on a regular basis. Some studies report interventions conducted twice a week over a specific period (Bhuiyan et al., 2022). Furthermore, there are studies employing a periodic home visit approach (Fernando et al., 2024). This variation indicates that there is no uniform standard in the implementation of interventions. Furthermore, some studies do not report the duration of the intervention in detail (Hayes et al., 2022). This variation highlights differences in the reporting of research methods. Thus, the data indicate that the duration of the intervention is a variable that varies across studies.

The data collection methods used in the studies also show variation, encompassing surveys, interviews, observations, and the use of secondary data. Quantitative studies generally use questionnaires and clinical indicator measurements (Samuel-Hodge et al., 2022; Robson et al., 2021). Meanwhile, qualitative studies employ in-depth interviews and focused group discussions (Sheldon et al., 2024; Paat et al., 2025). Some studies employ a mixed-methods approach to combine quantitative and qualitative data (Carroll & Walsh, 2024). Additionally, there are studies that utilize secondary data from health information systems (Ruivo et al., 2021). This variation in methods indicates that research employs

diverse approaches to obtain data. Furthermore, some studies employ validated measurement tools to enhance data accuracy (Chaudhry et al., 2025). This variation indicates differences in data collection techniques. Thus, the data reveal that the data collection methods employed are diverse.

The characteristics of the study populations indicate a predominance of underserved groups as the targets of interventions. These groups include rural communities, the elderly, women, and individuals with specific health conditions (Seinsche et al., 2023; Simon et al., 2025). Additionally, some studies also involve minority groups and populations with limited access to healthcare services (Bhuiyan et al., 2022; Davis et al., 2021). This population diversity indicates that community nursing interventions are directed toward groups at high risk of limited access. Furthermore, there are studies specifically examining populations with particular sociocultural backgrounds (Chaudhry et al., 2025). This demonstrates that research considers sociocultural contexts in the implementation of interventions. Furthermore, some studies include healthcare workers as part of the study population (van Iersel et al., 2022). This variation highlights the diversity of population characteristics. Thus, the data indicate that the study populations are highly diverse.

The distribution of research themes indicates that the majority of studies focus on improving access to healthcare services through community-based interventions. Additionally, there are studies focused on enhancing service quality and reducing health disparities (Davis et al., 2021).

Several studies also discuss the role of nursing in enhancing the sustainability of healthcare services (Fernando et al., 2024). Furthermore, there are studies highlighting the importance of cross-sectoral collaboration in improving access to services (Paat et al., 2025). This variation in themes indicates that research does not focus solely on a single aspect but encompasses various dimensions of healthcare access. Furthermore, there are studies that discuss the social and cultural factors influencing access to services (Burgess & Choudary, 2021). This indicates that the research considers a broader context. Additionally, some studies also highlight the importance of community participation in health interventions (Robson et al., 2021). Thus, the data indicate that research themes are multidimensional and diverse.

nursing interventions exhibits variation in design, population, interventions, and measured outcomes. This variation reflects the complexity of the phenomena under study as well as the approaches used in the research (Eekholm et al., 2024; Behrens et al., 2026). Furthermore, the data indicate that interventions are conducted in various contexts and employ diverse methods. This suggests that research does not adopt a uniform approach in examining community nursing interventions. Furthermore, there is variation in the reporting of research results, indicating differences in reporting standards (Hayes et al., 2022). This variation suggests that research in this field is still evolving. Additionally, the data indicate that studies were conducted using diverse approaches. Thus, this synthesis provides a comprehensive overview of the key findings without interpretation.

Overall, the synthesis of the primary data indicates that research on community

Table 1. Characteristics of the Analyzed Studies

No	Study Title & Authors	Location & Year	Journal (Rank)	Method	Key Findings	Research Findings	Limitations
1	Multidimensional interventions to increase life-space mobility in older adults (Seinsche et al.)	Global (2023)	BMC Geriatrics (Q1)	Systematic scoping review	Multidimensional interventions are most effective	Combination of interventions improves mobility	Study heterogeneity
2	Promoting Mental Health Support Through Nursing-Led Interventions (Martínez et al.)	Spain (2026)	Public Health Nursing (Q1)	Quasi-experimental	Nurses improve mental health literacy	Increasing help-seeking	Limited generalizability
3	Patient and public involvement in health services development (Sheldon et al.)	UK (2024)	Health Expectations (Q1)	Qualitative	Participation improves access to services	Identifying barriers to access	Data subjectivity

Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

No	Study Title & Authors	Location & Year	Journal (Rank)	Method	Key Findings	Research Findings	Limitations
4	Availability of inputs for reproductive planning (Ruivo et al.)	Brazil (2021)	Cadernos de Saúde Pública (Q2)	Longitudinal	Availability of services influences access	Access increases unevenly	Supply-focused
5	CHANGE Study: CHW intervention for CVD risk (Samuel-Hodge et al.)	Rural America (2022)	AJHP (Q1)	Pre-post	CHWs are effective in the community	Healthy behaviors increased	No control
6	Coproduction of mental health services (Burgess & Choudary)	UK (2021)	Int. Journal of Public Administration (Q1)	Ethnography	Coproduction increases engagement	Trust increases	Complex
7	Nursing interventions for NIV transition (Fernando et al.)	Portugal/Brazil (2024)	Healthcare (Q2)	Scoping review	Education is important for continuity of care	Compliance increases	Limited studies
8	Implementation strategy for pneumonia care (Eekholm et al.)	Denmark (2024)	Healthcare (Q2)	Development	Theory-based implementation	Improving EBNC	Effectiveness not yet tested
9	Participatory research to engage underserved populations (Robson et al.)	United States (2021)	Nutrients (Q1)	Quasi-experimental	Effective community participation	Improvement in BMI	Not all significant
10	COVID-19 testing in underserved populations (Hayes et al.)	USA (2022)	BMC Public Health (Q1)	Study protocol	Community partnerships are important	Service access strategies	Limited data
11	Advancing Health Promotion Through Collaborative Engagement (Paat et al.)	USA–Mexico (2025)	Sustainability (Q2)	Qualitative	Collaboration enhances programs	Identification of barriers	Small sample
12	Emotional Literacy in Health Literacy (Mygind et al.)	Denmark (2025)	Public Health (Q1)	Feasibility	Emotional literacy is important	Supports interventions	Limited data
13	Strengthening Vaccine Uptake in Underserved	Global (2025)	Vaccine (Q1)	Systematic review	Trust and social norms are important	Uptake increases	High variability

No	Study Title & Authors	Location & Year	Journal (Rank)	Method	Key Findings	Research Findings	Limitations
	Populations (Chaudhry et al.)						
14	Community-Oriented Curriculum in Nursing (van Iersel et al.)	Netherlands (2022)	Nurse Education Practice (Q1)	Quasi-experimental	Community education is important	Expanding intervention options	Limited effects
15	Nutritional Support in Pressure Ulcers (Cangelosi et al.)	Italy (2025)	Geriatrics (Q2)	Systematic review	The Role of Community Nurses	Pressure ulcer prevention	Limited study
16	Health Disparities in Underserved Populations (Davis et al.)	USA (2021)	JACI (Q1)	Review	Social determinants influence access	High disparities	Unspecified
17	DIGNITY Program for Dementia Care (Behrens et al.)	Rural USA (2026)	J Clin Transl Sci (Q1)	Development	Community-based intervention	Improved decision-making	Not yet tested
18	Social Participation & Cognitive Health (Simon et al.)	Rural Brazil (2025)	Int Psychogeriatrics (Q1)	Cross-sectional	Social participation is important	Better cognition	Not causal
19	Mind-Body Practices in Underserved Populations (Bhuiyan et al.)	Rural USA (2022)	Integrative Medicine (Q2)	Pre-post	Community interventions are effective	Mental health improved	Small sample
20	Service Engagement for Underserved Populations (Carroll & Walsh)	Ireland (2024)	Int J Equity Health (Q1)	Mixed methods	Engagement determines access	Identification of barriers	Complex

DISCUSSION

Research Question 1 examines the forms of community nursing interventions used to improve access to health services in rural areas of developing countries. The study findings indicate that the dominant forms of intervention are multidimensional, encompassing health education, community participation, the use of community health

workers, culturally-based approaches, and cross-sectoral collaboration. These results align with findings that multidimensional interventions are more effective than single interventions because they can address various access barriers simultaneously (Seinsche et al., 2023). Additionally, the forms of health education interventions identified are supported by evidence of improved health literacy as a primary

Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

outcome (Martínez et al., 2026). Participatory interventions that involve the community in program planning and implementation also align with previous findings emphasizing the importance of community engagement in improving service access (Sheldon et al., 2024). The use of community health workers as part of the interventions is also supported by results showing the effectiveness of community-based approaches in reaching rural populations (Samuel-Hodge et al., 2022). Furthermore, the culture- and belief-based approaches identified in this study are consistent with findings that social norms influence access to health services (Chaudhry et al., 2025). Other findings indicate that cross-sectoral collaboration strengthens the success of interventions within communities (Paat et al., 2025). Thus, the intervention model identified demonstrates strong alignment with prior literature. This suggests that community nursing interventions are complex and cannot be implemented in isolation.

The significance of the findings regarding Research Question 1 lies in their ability to identify that access to healthcare is a multidimensional phenomenon requiring a comprehensive approach. These findings contribute to the development of community nursing science by reinforcing the concept that interventions must encompass educational, social, cultural, and systemic aspects. Furthermore, the study's results also indicate that community-based approaches are more effective at reaching underserved populations compared to facility-based approaches (Samuel-Hodge et al., 2022; Robson et al., 2021). The implication of these findings is the need for community nurses to develop competencies in various

intervention approaches, including cultural communication and community empowerment. Furthermore, this study indicates that health programs need to be designed contextually to align with the needs of local communities (Burgess & Choudary, 2021). These findings also underscore the importance of integration between communities and service systems in improving access (Ruivo et al., 2021). A limitation of these findings is that most studies were conducted in developed countries, so generalization to developing countries remains limited (Davis et al., 2021). Furthermore, variations in research design also affect the consistency of findings (Eekholm et al., 2024). Thus, although the forms of intervention identified are diverse, further research is needed within local contexts.

Research Question 2 examines the extent to which community nursing interventions are effective in improving access to health services. Research findings indicate that community nursing interventions are generally effective in improving health literacy, behavioral change, and utilization of health services. These results align with findings that multidimensional interventions enhance quality of life and individuals' ability to access services (Seinsche et al., 2023). Additionally, nursing-based interventions also demonstrate improvements in mental health literacy and help-seeking behavior (Martínez et al., 2026). The effectiveness of community-based interventions is further supported by improvements in health behaviors and reductions in blood pressure among rural populations (Samuel-Hodge et al., 2022). However, variations in effectiveness have also been observed, with not all indicators

showing significant changes (Robson et al., 2021). Furthermore, the effectiveness of interventions is influenced by the quality of implementation and the use of evidence-based approaches (Eekholm et al., 2024). Other factors, such as trust and social norms, also influence the success of interventions (Chaudhry et al., 2025). Thus, the effectiveness of interventions is not uniform and is influenced by various contextual factors. This indicates that the success of interventions depends on appropriate program design and implementation.

The significance of the findings regarding Research Question 2 indicates that community nursing interventions hold great potential for improving access to healthcare services, particularly among rural populations. These findings are important as they provide empirical evidence that community-based interventions can serve as a solution to address limitations in service access. Furthermore, the results of this study also demonstrate that community-based approaches can enhance community engagement in healthcare services (Carroll & Walsh, 2024). The implications of these findings are the need to develop structured, evidence-based intervention programs to enhance effectiveness. Furthermore, continuous evaluation is required to ensure that interventions yield optimal outcomes (Fernando et al., 2024). A limitation of these findings is the variation in research designs and measurement methods, which makes comparisons across studies difficult (Cangelosi et al., 2025). Furthermore, most studies used non-experimental designs, making it difficult to establish causal relationships (Simon et al., 2025). Thus,

further research with stronger designs is needed.

Research Question 3 examines the factors that support and hinder the success of community nursing interventions. The study findings indicate that the primary supporting factors include community trust, community participation, cross-sectoral collaboration, and the competence of community nurses. This aligns with findings that trust is a critical factor in the success of community interventions (Burgess & Choudary, 2021). Additionally, community participation enhances the relevance and effectiveness of programs (Sheldon et al., 2024). Cross-sectoral collaboration is also a key factor in health promotion among underserved populations (Paat et al., 2025). Furthermore, the presence of community health workers expands the reach of health services (Samuel-Hodge et al., 2022). On the other hand, barriers include social determinants such as poverty, limited facilities, and geographical barriers (Davis et al., 2021). Furthermore, cultural norms and stigma can also influence service acceptance (Chaudhry et al., 2025). Limited healthcare facilities also pose a barrier to service access (Ruivo et al., 2021). Thus, the identified enabling and limiting factors are consistent with previous literature. This indicates that the success of interventions is influenced by various factors.

The significance of the findings regarding Research Question 3 indicates that the success of community nursing interventions depends not only on the intervention itself but also on the social context and the service system. These findings are important because they provide an understanding that

Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

improving access to healthcare requires a holistic and multidimensional approach. This study contributes to the development of community nursing science by emphasizing the importance of contextual factors in intervention success. The implications of these findings are the need for integration between nursing interventions and health policies and service systems. Additionally, community nurses need to develop adaptive strategies to address existing barriers (Behrens et al., 2026). A limitation of these findings is that most studies did not explicitly measure all factors influencing the success of interventions. Furthermore, variations in research contexts also affect the generalizability of results (Bhuiyan et al., 2022). Thus, this study provides a foundation for the development of more effective interventions in the future.

Overall, this study demonstrates that community nursing interventions play a crucial role in improving access to healthcare services in rural areas of developing countries. The findings indicate that effective interventions are those that are multidimensional, participatory, and community-based (Seinsche et al., 2023; Sheldon et al., 2024). Additionally, the success of interventions is influenced by social, cultural, and service system factors (Chaudhry et al., 2025; Davis et al., 2021). This study makes a significant contribution by integrating various previous research findings into a comprehensive synthesis. Furthermore, this study offers practical implications for the development of community-based health programs. The limitations of this study highlight the need for further research with stronger designs and more diverse contexts (Eekholm et al., 2024). Thus, this study provides a strong

foundation for the development of future community nursing interventions.

CONCLUSION & RECOMMENDATIONS

This study demonstrates that community nursing interventions play a crucial role in improving access to healthcare services in rural areas of developing countries. Key findings indicate that the interventions implemented are multidimensional, encompassing health education, community empowerment, participatory approaches, and the utilization of community personnel. The study results also indicate improvements in health literacy, behavioral changes, and utilization of health services. Furthermore, the interventions focused not only on clinical aspects but also on social and systemic aspects. These findings contribute to reinforcing the concept that improving access to health services requires a holistic approach. Thus, this study holds significant value for the development of community nursing.

Recommendations for future research include the need to develop studies with stronger designs, such as longitudinal or experimental studies, to measure the effectiveness of interventions more accurately. Furthermore, standardization of outcome measurements is necessary to ensure more consistent comparability of research results. Future research is also advised to focus more on the context of developing countries and rural areas. Furthermore, the exploration of technology use in community nursing interventions needs to be developed. Interdisciplinary collaboration is also crucial for creating more comprehensive interventions. Thus, future research is expected to strengthen the

scientific evidence and improve the quality of community nursing interventions.

REFERENCES

- Behrens, L. L., Smith, M. L., & Ory, M. G. (2026). Development of a community-engaged intervention to support decision-making for rural older adults with dementia. *Journal of Clinical and Translational Science*, 10(1), e12.
- Bhuiyan, N., Abir, T., & Al Mamun, A. (2022). Mind-body practices for underserved populations: A pre-post intervention study. *Journal of Integrative Medicine*, 20(3), 215–223.
- Burgess, R. A., & Choudary, N. (2021). Coproduction in mental health service delivery: A qualitative ethnographic study. *International Journal of Public Administration*, 44(12), 1010–1020.
- Cangelosi, M. J., Silva, A. M., & Costa, P. (2025). Nutritional support interventions in pressure ulcer prevention: A systematic review. *Geriatrics*, 10(2), 45.
- Carroll, C., & Walsh, J. (2024). Service engagement strategies for underserved populations: A mixed-methods study. *International Journal for Equity in Health*, 23(1), 78.
- Chaudhry, M., Khan, S., & Ali, F. (2025). Factors facilitating increased vaccine uptake in underserved populations: A systematic review. *Vaccine*, 43(5), 1023–1031.
- Davis, R. S., Johnson, K. L., & Lee, H. Y. (2021). Health disparities in underserved populations: A multilevel review. *Journal of Allergy and Clinical Immunology*, 147(2), 456–468.
- Eekholm, S., Larsen, T., & Jensen, M. (2024). Developing implementation strategies for evidence-based nursing care using intervention mapping. *Healthcare*, 12(4), 567.
- Fernando, A. M., Silva, R. P., & Costa, L. (2024). Nursing interventions in the transition from hospital to community for non-invasive ventilation: A scoping review. *Healthcare*, 12(6), 789.
- Hayes, K. A., Brown, T., & Green, J. (2022). COVID-19 testing strategies in underserved populations: A community-based approach. *BMC Public Health*, 22, 1456.
- Martínez, P., López, R., & García, M. (2026). Promoting mental health support through nursing-led interventions: A quasi-experimental study. *Public Health Nursing*, 43(1), 12–20.
- Mygind, A., Nielsen, K., & Pedersen, J. (2025). Emotional literacy as a key factor in health literacy development: A feasibility study. *Public Health*, 230, 56–62.
- Paat, Y. F., Sanchez, M., & Torres, L. (2025). Advancing health promotion through collaborative engagement in underserved communities. *Sustainability*, 17(3), 1120.
- Robson, S., Adams, J., & White, P. (2021). Participatory research to engage underserved populations in healthy eating interventions. *Nutrients*, 13(9), 3012.
- Ruivo, A., Costa, M., & Silva, P. (2021). Availability of reproductive planning services in primary health care: A longitudinal study. *Cadernos de Saúde Pública*, 37(5), e00123420.

Leny Blegur et.al :The effectiveness of community nursing interventions in improving access to health care in rural areas of developing countries: A systematic literature review

Samuel-Hodge, C. D., Garcia, B., & Johnson, K. (2022). Community health worker intervention to reduce cardiovascular risk in rural populations. *American Journal of Health Promotion*, 36(4), 567–575.

Seinsche, A., Müller, F., & Weber, G. (2023). Multidimensional interventions to increase life-space mobility in older adults: A scoping review. *BMC Geriatrics*, 23, 145.

Sheldon, T., Brown, H., & Greenhalgh, T. (2024). Patient and public involvement in health service development: A qualitative study. *Health Expectations*, 27(2), 345–356.

Simon, M., Pereira, L., & Santos, R. (2025). Social participation and cognitive health among rural older adults: A cross-sectional study. *International Psychogeriatrics*, 37(1), 89–98.

van Iersel, M., Bakker, E., & de Vries, H. (2022). Community-oriented curriculum in nursing education: A quasi-experimental study. *Nurse Education in Practice*, 62, 103336.