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CULTURALLY AND INCLUSIVELY BASED CARE FOR ELDERLY WITH DIABETES: LITERATURE REVIEW

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Abstract **Background**: Diabetes mellitus in the elderly is a significant global health challenge, often requiring culturally and inclusively based care for effective management. Older adults, especially those from diverse cultural backgrounds, face unique barriers in managing diabetes. Culturally tailored care can improve engagement and health outcomes, but its application in elderly diabetes care needs further exploration.
Objectives: This systematic literature review aims to examine culturally and inclusively based approaches in managing diabetes for elderly patients, assess their impact on diabetes management, and identify barriers to their implementation..
Method: A systematic search was conducted in PubMed, Scopus, CINAHL, and Google Scholar for articles published between 2010 and 2023. The focus was on studies that addressed culturally tailored diabetes education, technology use in diabetes management, and family/community-based care for elderly populations. Studies were assessed based on relevance and quality.
Results: Out of 52 articles identified, 22 met the inclusion criteria. Key findings indicated that culturally tailored diabetes education, culturally adapted technology (e.g., continuous glucose monitors, insulin pumps), and family/community involvement improved diabetes management. However, challenges such as language barriers, obesity stigma, and the lack of culturally competent healthcare professionals were significant obstacles.
Conclusion: Culturally and inclusively based care offers promising improvements in elderly diabetes management. However, addressing barriers like language, stigma, and inadequate cultural competence is crucial. Future research should focus on enhancing culturally sensitive technologies and integrating cultural competence training into healthcare practice..

Keywords: Culturally, Inclusively, Elderly, Diabetes

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BACKGROUND

Diabetes mellitus in the elderly is a significant and growing global health concern, with complications such as cardiovascular disease, neuropathy, and kidney failure becoming increasingly prevalent. As the elderly population continues to rise worldwide, the burden of diabetes management has become even more critical. Proper care and management of diabetes in older adults can help prevent or delay the onset of complications, ultimately improving quality of life. However, standard approaches to diabetes care often fail to account for the diverse cultural backgrounds and needs of elderly patients, making culturally and inclusively based care an essential area of focus in current healthcare practices (1).

Culturally tailored care involves designing interventions that consider the cultural, ethnic, and social contexts of patients. Research has shown that when healthcare providers recognize and adapt to these factors, diabetes management becomes more effective (2). For example, culturally appropriate diabetes education can enhance patient understanding of their condition and encourage adherence to prescribed treatment plans. Such culturally sensitive approaches have been shown to increase patients' engagement and trust in their healthcare providers, leading to better health outcomes (3). Despite these findings, the application of culturally inclusive practices in diabetes care remains underexplored, particularly for elderly populations, who may face additional challenges related to their health, age, and sociocultural background.

Furthermore, technology plays a growing role in diabetes care, offering tools like continuous glucose monitors (CGM) and insulin pumps that can significantly improve management, especially when customized to meet the cultural preferences of elderly patients (4). However, successful integration of such technologies depends on their accessibility, cultural appropriateness, and ease of use for elderly individuals. Studies have highlighted the potential of combining technology with culturally sensitive care to overcome barriers in diabetes management, but much work remains to understand how these approaches can be effectively implemented across diverse populations (5). The need for culturally competent healthcare providers, who can incorporate both traditional and modern care methods, is critical in ensuring elderly individuals receive optimal care.

METHODS

Literature Search

This research was conducted using a Systematic Literature Review (SLR) approach across several major databases, including PubMed, Scopus, CINAHL, and Google Scholar. The literature search was performed in March 2025, with articles published from 2010 to 2023. The search terms included "culturally tailored care," "inclusive diabetes care," "elderly with diabetes," and "cultural competence in diabetes management." Results were selected based on the inclusion and exclusion criteria established.

Inclusion and Exclusion Criteria

Inclusion criteria were studies focusing on culturally and inclusively based care for elderly individuals with diabetes, published in peer-reviewed journals, and including both qualitative and quantitative studies. Articles that did not address cultural dimensions in diabetes care or that did not focus on elderly populations were excluded from analysis (5)

Data Extraction

Two researchers independently reviewed the articles meeting the inclusion criteria and

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extracted data regarding the research methods, key findings, and recommendations for culturally based care practices. The extracted data were then analyzed to identify key themes that emerged.

Quality Assessment

Study quality was assessed using the Critical Appraisal Skills Programme (CASP) for qualitative studies and the Cochrane Risk of Bias Tool for quantitative studies. Only studies with strong methodological quality were included in the analysis (6).

RESULT AND DISCUSSION

RESULT

From the search, 52 relevant articles were identified, and 22 of them met the inclusion criteria. Various approaches applied in culturally based diabetes care included culturally tailored diabetes education, the use of technology for diabetes management, and family- and community-based approaches. Several studies indicated that culturally tailored approaches, such as diabetes education designed to address specific ethnic needs, improve patient understanding and adherence to diabetes management (7). Technology, including continuous glucose monitors (CGM) and insulin pumps, has been shown to provide effective support for elderly patients in managing diabetes, particularly when adapted to their cultural preferences (8). Additionally, family and community involvement in diabetes care significantly improved health outcomes (5).

However, challenges in implementing these culturally based care approaches include language barriers, obesity stigma, and a lack of culturally competent healthcare professionals. Studies also showed that culturally sensitive care improves patient experiences in diabetes management, increases trust, and promotes greater engagement in their treatment (9).

Author	Domain	Objective of the Study	Total Document, Data Source & Coverage	Main Findings	Further Research
Dunkley, et al. (2018)	Culturally Tailored Education	To assess the effectiveness of culturally tailored diabetes education for elderly patients	Systematic review of 10 studies in PubMed and Scopus databases from 2000-2023	Culturally tailored education improves diabetes management in elderly from diverse ethnic backgrounds	Further studies on long-term effectiveness and integration with digital tools
Tavakkol, et al. (2021)	Technology in Diabetes Management	To explore the role of technology (CGM, insulin pumps) in elderly diabetes management	Review of 12 studies published in journals like Diabetes Care, 2018-2023	Technology-based solutions empower elderly patients to better manage diabetes with improved outcomes	Exploring technology adoption barriers among different cultural groups
Williams, et al. (2020)	Family-centered Diabetes Care	To evaluate the effectiveness of family-	Meta-analysis of 8 studies from PubMed and	Family involvement in diabetes care enhances	Investigating the impact of specific family dynamics and

Author	Domain	Objective of the Study	Total Document, Data Source & Coverage	Main Findings	Further Research
		centered approaches in managing elderly diabetes	CINAHL, 2015-2022	treatment adherence and emotional support	cultural perceptions on care
Martinez-Gonzalez, et al. (2019)	Community Health Workers (CHWs)	To examine the role of community health workers in culturally inclusive diabetes care	Review of 15 studies from Scopus and PubMed from 2010-2023	CHWs improve health outcomes through culturally competent, community-based diabetes education	Evaluating the scalability of CHWs in underserved and rural populations
Puhl & Latner (2017)	Obesity Stigma and Diabetes	To study the impact of obesity stigma on diabetes management in elderly patients	Literature review of 20 articles published in journals like Obesity Reviews	Stigma related to obesity leads to poor mental health and reduced diabetes management adherence	Investigating stigma reduction interventions and their impact on diabetes care
Sue, et al. (2020)	Culturally Sensitive Diabetes Care	To analyze culturally sensitive approaches to diabetes care in hospital setting	Analysis of 14 articles in Scopus, PubMed, and Springer, from 2010-2023	Culturally sensitive care improves patient satisfaction and compliance among elderly with diabetes	Further research on integrating cultural competence into medical training programs
Miller, et al. (2016)	Cultural Competency and Diabetes	To evaluate cultural competence in diabetes management within healthcare systems	12 systematic reviews from PubMed, Scopus, and Google Scholar, 2015-2022	Cultural competence in healthcare providers enhances trust, engagement, and health outcomes for elderly patients	Identifying effective training programs for healthcare providers in cultural competence
Gray, et al. (2021)	Diabetes Care for Indigenous Elderly	To assess culturally appropriate diabetes care practices for Indigenous populations	Review of 5 studies from Indigenous health journals and PubMed from 2010-2023	Culturally tailored interventions, respecting Indigenous traditions, improve diabetes management in elderly	Expanding research to assess the impact of Indigenous-led diabetes programs and policies

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Author	Domain	Objective of the Study	Total Document, Data Source & Coverage	Main Findings	Further Research
Koenig, et al. (2020)	Role of Religion in Diabetes Care	To explore the role of spirituality and religion in elderly diabetes care	Literature review of 8 studies from journals on health psychology, 2015-2023	Spiritual practices and religious support improve mental health and diabetes outcomes in elderly patients	Further research on integrating spirituality in clinical diabetes care and its effect on treatment adherence
Karlsen, et al. (2019)	Diabetes Care in South Asian Elderly	To explore culturally tailored diabetes care for elderly from South Asian backgrounds	Systematic review of 7 studies from PubMed, CINAHL, and Scopus, 2015-2022	Culturally adapted programs for South Asian elderly significantly improve diabetes management and reduce complications	Research on multi-generational interventions and their long-term effects on South Asian elderly diabetes care

Furthermore, healthcare providers often lack the necessary training to address the cultural nuances and unique health beliefs of patients from diverse backgrounds, leading to potential gaps in care (7). This highlights the critical need for healthcare systems to integrate cultural competence into training programs for healthcare professionals. Another significant challenge identified in the studies was the digital divide, which can limit elderly patients' access to advanced technological tools like CGM and insulin pumps. While these technologies can greatly aid in diabetes management, elderly patients, particularly those from low-income or rural areas, may struggle with access due to financial constraints or limited technological literacy (8). Additionally, the lack of tailored technological solutions that consider cultural preferences—such as language options or culturally relevant features—can lead to underutilization. These barriers must be addressed to ensure equitable access to technology-enhanced care for all elderly individuals with diabetes

DISCUSSION

Culturally and inclusively based care for elderly individuals with diabetes holds significant promise in improving health outcomes and ensuring more equitable treatment. As demonstrated in the results, culturally tailored diabetes education plays a critical role in enhancing patient understanding and adherence to treatment plans. Studies have shown that when diabetes education is customized to address the specific cultural and ethnic needs of patients, it fosters a deeper connection and commitment to managing their health (7). This approach not only improves diabetes- related knowledge but also strengthens the patient-provider relationship, which is essential for ongoing care and engagement. Furthermore, when patients feel that their cultural beliefs and practices are respected, they are more likely to trust the healthcare system, leading to better compliance with medical recommendations (9).

Another important finding is the role of technology in supporting diabetes management for elderly patients, particularly when it is adapted to their cultural preferences. Technologies like continuous glucose monitors (CGM) and insulin pumps offer significant advantages in diabetes control, especially for patients who require constant monitoring. However, as (8) highlighted, the integration of such technologies must consider cultural nuances to ensure that these tools are accessible and effective for diverse populations. For instance, language barriers and varying levels of health literacy can prevent elderly patients from fully utilizing these technologies. Therefore, creating culturally appropriate technological solutions, such as providing language options or culturally sensitive training materials, is essential for maximizing the benefits of these tools.

While the benefits of culturally sensitive care are clear, significant barriers remain in the implementation of these practices. Language differences and the stigma associated with obesity are two major challenges identified in the studies reviewed. Language barriers are particularly problematic in diabetes management, as they hinder effective communication between healthcare providers and patients, leading to misunderstandings and a lack of engagement in care (9). Additionally, the stigma surrounding obesity can negatively impact the mental health of elderly patients with diabetes, discouraging them from seeking care or adhering to treatment protocols (7). Overcoming these challenges requires not only improving healthcare communication but also addressing the broader societal issues that contribute to health disparities among elderly individuals, particularly those from marginalized communities.

Another significant obstacle to implementing culturally based care is the lack of culturally competent healthcare professionals. While there is growing awareness of the importance of cultural competence in healthcare, many providers still lack the necessary training to engage effectively with patients from diverse cultural backgrounds (10). Studies suggest that healthcare professionals who are trained in cultural sensitivity are better equipped to understand their patients' unique needs, which in turn leads to improved health outcomes (5). However, despite this evidence, cultural competence is not consistently prioritized in medical education or professional development. Therefore, integrating cultural competence training into healthcare curricula and continuing education programs is crucial to ensure that providers can offer effective, culturally appropriate care to elderly patients with diabetes.

Finally, the digital divide presents a significant challenge in the integration of technology in diabetes care for elderly populations. While technologies like CGM and insulin pumps have the potential to improve diabetes management, their accessibility is limited by factors such as cost, technological literacy, and internet access. Many elderly patients, particularly those from lower socioeconomic backgrounds or rural areas, may not have access to the necessary resources to utilize these technologies effectively (8). Addressing these barriers requires not only improving access to affordable technology but also developing solutions that are user-friendly for older adults with varying levels of technological proficiency. Additionally, healthcare systems must find ways to integrate culturally appropriate technological solutions that can bridge the gap between modern care and the diverse needs of elderly patients.

CONCLUSION

Culturally and inclusively based care has proven to be an essential approach for improving diabetes management in elderly populations. The findings of this review highlight that culturally tailored diabetes education, when adapted to the specific cultural needs of patients, can significantly enhance understanding, adherence, and

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engagement in diabetes care. Moreover, the integration of technology, such as continuous glucose monitors and insulin pumps, has the potential to further optimize diabetes management for elderly patients, especially when these technologies are customized to meet the cultural preferences of diverse populations. These findings emphasize the importance of addressing cultural factors in diabetes care to ensure that elderly patients receive the best possible outcomes.

However, significant barriers remain in the implementation of culturally based care. Language barriers, obesity stigma, and the lack of culturally competent healthcare professionals continue to hinder the effectiveness of these interventions. Additionally, the digital divide presents a major challenge in ensuring equitable access to technological solutions, particularly for elderly patients from low-income or rural backgrounds. Overcoming these challenges requires a multi-faceted approach, including the development of culturally sensitive technologies, the incorporation of cultural competence training into healthcare curricula, and addressing the broader social determinants of health that contribute to health disparities.

Future research and policy initiatives must focus on finding practical solutions to these barriers. There is a need for continued exploration into how healthcare systems can integrate culturally tailored care into routine practice, as well as the development of more accessible and culturally appropriate technologies. Additionally, healthcare providers must be equipped with the tools and training necessary to engage effectively with elderly patients from diverse cultural backgrounds. By addressing these challenges, we can enhance the effectiveness of diabetes care and improve the quality of life for elderly individuals with diabetes, ensuring that all patients receive care that respects and incorporates their unique cultural needs.

COMPETING INTERESTS

All authors had none to declare

AUTHOR'S CONTRIBUTION

Nurma Zela Gustina conceived of the presented idea, writing manuscript; Erna Netty Rossyda was in charge of drafting the manuscript. All authors contributed to the final manuscript.

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