The Research Reservoir

THE RESEARCH RESERVOIR of Paramedical Sciences

International Peer- Reviewed, Referred, Indexed Journal January - June 2026 Volume: 12 Issue: 1

DIABETES SELF-MANAGEMENT AMONG OLDER ADULTS: STRATEGIES FOR HEALTHY AGING AND IMPROVED QUALITY OF LIFE

Dr. A. Chellamani*

**Nursing Tutor, Coimbatore School of Nursing, Coimbatore, Tamil Nadu, India.*

https://doi.org/10.47211/trr.2026.v12i01.009

ABSTRACT

Diabetes mellitus is a metabolic disorder that causes a significant health challenge in the older adults due to age-related physiological changes, multiple comorbidities, functional limitations, and an increased risk of complications. Effective self-management is very important for maintaining optimal glycaemic control, preventing disease progression, and enhancing quality of life. This study is an overview of evidence-based strategies for diabetes self-management among older adults, including glycaemic monitoring, medication adherence, diabetes self-management education, psychosocial support, and individualized goal setting. The importance of regular assessment of medical, psychological, functional, and social factors is highlighted to facilitate person-cantered care. The review also emphasizes the role of healthcare professionals, caregivers, and multidisciplinary teams in supporting self-management through education, behavioural interventions, and appropriate use of technology. A comprehensive and individualized approach to diabetes self-management can improve treatment adherence, reduce complications, promote healthy aging, and enhance the overall well-being of older adults living with diabetes.

Keywords: *Diabetes Mellitus, Older Adults, Diabetes Self-Management, Glycaemic Control, Self-Care, Diabetes Education, Healthy Aging, Quality of Life.*

ABOUT THE AUTHOR

Dr. A. Chellamani is a Nursing Tutor at Coimbatore School of Nursing, Coimbatore, Tamil Nadu, India. Dr. Chellamani has extensive academic and professional experience in Community Health Nursing, Nursing Education, Public Health Research, Health Promotion, and Preventive Healthcare. She is committed to advancing nursing education, involved in evidence-based practice, and promoting community health through teaching, research, and scholarly contributions.

The Research Reservoir
THE RESEARCH RESERVOIR of Paramedical Sciences
International Peer- Reviewed, Referred, Indexed Journal January - June 2026 Volume: 12 Issue: 1

INTRODUCTION

Diabetes mellitus (DM) is a chronic metabolic disorder that requires continuous management to prevent complications and improve the quality of life for affected individuals. The prevalence of DM is increasing globally, with developing nations witnessing a significant rise due to lifestyle changes, urbanization and sedentary behaviour. Studies have shown that structured home care interventions can enhance diabetes self-management, leading to better glycaemic control and reduced risk of complications [Asmi A.S, et al. 2024].

Home-based diabetes care programs, such as structured education and self-monitoring techniques, have been found to significantly improve regulation in type 2 diabetes patients. Research highlights that self-monitoring blood glucose (SMBG) as part of home care interventions can enhance patient adherence to dietary modifications, medication use and lifestyle changes, ultimately improving diabetes outcomes [Khodaveisi M, et al.2018]

National Institute for Health and Clinical Excellence recommends that all patients with diabetes in the UK should be offered an SSME program at the time of diagnosis. There are currently three specific formal and national types of SSME programs for patients with diabetes, including Diabetes Education and Self-Management for Ongoing and Newly Diagnosed (DESMOND) and Expert Patient Education versus Routine Treatment (X-PERT) program for people with type 2 diabetes and Dose Adjustment For Normal Eating (DAFNE) for people with type 1 diabetes.[DAFNE Study Group.2002]

Self-management of diabetes among the elderly requires individualized, practical strategies that account for age-related challenges such as cognitive impairment, multiple comorbidities, higher hypoglycaemia risk, and limited self-care capacity. The Guidelines for the Management of Diabetes Mellitus in the Elderly in China (2024 Edition) advocate a stratified approach emphasizing technology and education to overcome these barriers.

Diabetes management in older adults requires regular assessment of medical, psychological, functional, and social domains. When assessing older adults with diabetes, it is important to accurately categorize the type of diabetes, diabetes duration, the presence of complications and comorbidities, the individual's capacity for self-management and availability of support systems, treatment burden, and treatment-related concerns, such as fear of hypoglycaemia, polypharmacy, and financial barriers. Screening for diabetes complications in older adults should be individualized and periodically revisited, as this may affect treatment goals and therapeutic approaches (Institute of Medicine of the National Academies . Cognitive aging: progress in understanding and opportunities for action. Accessed 28 August 2025.).

Older adults with diabetes have higher rates of functional disability, accelerated muscle loss, mobility impairment, frailty, and coexisting illnesses, such as hypertension, chronic kidney disease, coronary heart disease, stroke, and premature death than those without diabetes (Pilla SJ, Rooney MR, McCoy RG. 2023). They also have higher rates of common geriatric syndromes such as cognitive impairment, depression, urinary incontinence, falls, persistent pain, frailty, and polypharmacy.

Key components of effective self-management include:

1. **Glycaemic monitoring and medication management:** Glycaemic monitoring and medication management are central to effective diabetes self-management because they provide the data and therapeutic actions needed to maintain glycaemic control and prevent complications. Self-monitoring of blood glucose (SMBG) enables patients to track glucose levels and make informed decisions about diet, physical activity, and medication adjustments, and a systematic review of 22 studies found SMBG significantly reduced HbA1c compared with no SMBG (mean difference = –0.32%), with structured SMBG protocols yielding greater reductions than unstructured monitoring. Integration of continuous glucose monitoring (CGM) into treatment soon after diagnosis improves glycaemic outcomes, decreases hypoglycaemic events, and enhances quality of life, and is now considered standard of care for most people with type 1 diabetes; for adults with type 2 diabetes on basal insulin, real-time CGM improved glycaemic control versus SMBG during both self-management and clinician-supported management. Medication management involves adhering to

The Research Reservoir
THE RESEARCH RESERVOIR of Paramedical Sciences
International Peer- Reviewed, Referred, Indexed Journal January - June 2026 Volume: 12 Issue: 1

prescribed regimens, understanding dose titration, and recognizing hyperglycaemia and hypoglycaemia symptoms. The American Diabetes Association's 2026 Standards of Care emphasize that when A1C is ≥1.5% above goal, dual-combination therapy or more potent agents, including GLP-1 receptor agonists or insulin, should be initiated, with insulin considered when glucose is ≥300 mg/dL or A1C >10%. Both SMBG use and medication adherence are associated with similar degrees of A1C reduction, suggesting each is important for attaining control. Optimal outcomes occur when monitoring data guide clinical management: treatment intensification, monitoring of adverse effects, and management of comorbidities, combined with diabetes education, lifestyle improvement, and adherence support. Yet barriers such as low health literacy, cost, and operational complexity in elderly patients persist, underscoring the need for individualized plans and caregiver support. Together, structured glycaemic monitoring and systematic medication management form the foundation of diabetes self-care, linking patient behaviour to measurable glycaemic targets and reduced risk of complications. (American Diabetes Association. (2026)

2. **Self-care behaviours and education: Self**-care behaviours and structured education are foundational to effective diabetes self-management because they equip individuals with the knowledge, skills, and confidence to control blood glucose and prevent complications. Diabetes self-management education and support (DSMES) provides personalized services that teach seven key self-care behaviours: healthy eating, being active, taking medicine as prescribed, monitoring blood sugar/activity/eating, reducing risks, healthy coping, and problem-solving. People who participate in DSMES are more likely to achieve better blood sugar control, lower weight, blood pressure, and cholesterol, and avoid emergency care and costly complications. The American Diabetes Association's 2026 Standards of Care recommend that all people with diabetes participate in developmentally and culturally appropriate DSMES at diagnosis, annually, when treatment goals are not met, or during life transitions, using behavioural strategies like motivational interviewing and goal setting. Recent evidence underscores the impact of education on outcomes: a 2025 observational study using the AADE7 framework found that participants with limited prior education improved their understanding of glucose monitoring, medication, diet, and exercise, while misconceptions about insulin and hypoglycaemia were corrected, demonstrating that education enhances glycaemic management. Similarly, a 2025 randomized controlled trial showed structured distance education significantly improved metabolic control, self-care activities, and health literacy in newly diagnosed type 2 diabetes patients compared with routine care. Effective self-care behaviours—dietary adherence, physical activity, medication compliance, and glucose monitoring—are directly influenced by self-efficacy and health literacy; higher self-efficacy correlates with better application of self-care behaviours, improved glycaemic control, and fewer complications. However, barriers persist: only 16% of patients in one study adhered to at least four self-care behaviours, with 88% unaware of diabetes complications, highlighting the need for accessible, ongoing education delivered by trained health workers and via telehealth to reduce access barriers. Thus, integrating self-care education that builds self-efficacy and health literacy is critical for sustained diabetes control. (Silva, T. P., & Rodrigues, R. C. M. (2025).
3. **Psychosocial factors:** Psychosocial factors are essential to effective diabetes self-management because they directly shape motivation, adherence, and clinical outcomes beyond glycaemic targets alone. The biopsychosocial model recognizes that diabetes-related distress, mental health conditions, personality traits, self-efficacy, social support, and perceived control significantly influence self-management behaviours, glycaemic control, and quality of life. In a 2023 multicentre cross-sectional study of 2,005 adults with type 2 diabetes, patient empowerment significantly mediated the relationships between psychosocial factors and both self-management behaviours and HbA1c: Type D personality and diabetes distress were independent risk factors for low empowerment, while positive attitudes, subjective norms, perceived behavioural control, and behavioural intention improved self-management through empowerment. Diabetes distress—defined as the emotional burden of managing diabetes—is associated with suboptimal

The Research Reservoir
THE RESEARCH RESERVOIR of Paramedical Sciences
International Peer- Reviewed, Referred, Indexed Journal January - June 2026 Volume: 12 Issue: 1

glycaemic control and inadequate self-management, and interventions that alleviate distress enhance empowerment and adherence. Self-efficacy also emerges as a critical mediator: a 2024 scoping review found that self-efficacy mediates the link between depression and self-management behaviours, and that social support is a protective factor that can reduce depression's adverse effects on glycaemic control. Conversely, unaddressed psychosocial challenges—depression, anxiety, cognitive impairment, and unmet social needs—impair patients' ability to take responsibility for self-care and are linked to poorer adherence to diet, exercise, and medication. Consequently, clinical guidelines now recommend routine psychosocial screening and stepped-care interventions, including evidence-based communication, digital health tools, and structured support, to address these determinants. Integrating psychosocial care shifts management from a purely biomedical focus to person-cantered care, improving treatment adherence, reducing complications, and enhancing well-being. (Hao, Y., Ma, X., Kang, L., Wang, Y., & Shi, H. (2025).

4. **Individualized goals:** Individualized goals are central to effective diabetes self-management because they align clinical targets with each person's preferences, health status, and life circumstances, making self-care achievable and sustainable. Diabetes self-management (DSM) is defined as the knowledge, attitudes, and behaviours people use to maintain health and prevent complications, and it specifically "targets the maintenance of individualized goals for glycaemic control through comprehensive lifestyle behaviours including dietary management, physical activity, and weight management, optimizing medication taking behaviours, and self-monitoring of glucose". Guidelines recommend that HbA1c and blood pressure targets be determined per patient based on age, comorbidities, disease duration, risk of hypoglycaemia, and patient preferences, rather than applying a one-size-fits-all cutoff. Setting S.M.A.R.T. goals—Specific, Measurable, Achievable, Realistic, Timely—helps operationalize this individualization across self-management areas: nutrition, physical activity, medication adherence, hypoglycaemia prevention, self-monitoring, foot care, and mental health. Individualized counselling that addresses medication, lifestyle guidance, barrier identification, and problem-solving significantly improved diabetes knowledge, self-care abilities, systolic blood pressure, and HbA1c compared with usual care, with greater knowledge gain strongly correlated with HbA1c reduction. For older adults, glycaemic goals are stratified by cognitive function and activities of daily living using tools like the Dementia Assessment Sheet, ensuring treatment avoids hypoglycaemia while addressing frailty, social participation, and support needs. Patient-cantered goal setting enhances self-efficacy and empowerment, which mediate the relationship between psychosocial factors and self-management behaviours. Yet suboptimal DSM skills remain common, partly due to difficulties coping and lifestyle challenges, underscoring why individualized, realistic goals developed through shared decision-making are essential for translating education into daily action and improved outcomes. (Nguyen, V. B., Thi, K. H. P., Nguyen, T. X., Pham, N. T. L., Nguyen, V. V. H., & Van Le, C. (2023).

CONCLUSION

Diabetes self-management is an effective diabetes care among older adults and plays a very important role in maintaining glycaemic control, preventing complications, and preserving functional independence. Successful self-management requires a person-cantered approach that integrates regular blood glucose monitoring, medication adherence, healthy dietary practices, physical activity, psychosocial support, and individualized goal setting. Considering the diverse health needs of older adults, diabetes care should also address cognitive function, comorbidities, frailty, polypharmacy, and social support systems. Continuous diabetes education, caregiver involvement, and multidisciplinary healthcare services are essential for empowering older adults to actively participate in their care.

The Research Reservoir
THE RESEARCH RESERVOIR of Paramedical Sciences
International Peer- Reviewed, Referred, Indexed Journal January - June 2026 Volume: 12 Issue: 1

REFERENCES

1. American Diabetes Association. (2026). 9. Pharmacologic approaches to glycemic treatment: Standards of care in diabetes—2026. Diabetes Care, 49(Suppl. 1), S181–S206. https://doi.org/10.2337/dc26-S009
2. Asmi A.S, et al. Journal Edukasi Ilmiah Kesehatan.2024;2:45. doi: 10.61099/junedik.v2i2.45.
3. DAFNE Study Group. Training in flexible, intensive insulin management to enable dietary freedom in people with type 1 diabetes: Dose adjustment for normal eating (DAFNE) randomised controlled trial. BMJ. 2002;325:746. doi: 10.1136/bmj.325.7367.746
4. Hao, Y., Ma, X., Kang, L., Wang, Y., & Shi, H. (2025). Beyond glycemic control: A holistic perspective on psychosocial support in outpatient diabetes management. Frontiers in Endocrinology, 16, Article 1708620. https://doi.org/10.3389/fendo.2025.1708620
5. Institute of Medicine of the National Academies . Cognitive aging: progress in understanding and opportunities for action. Accessed 28 August 2025. Available from https://nationalacademies.org/hmd/Reports/2015/Cognitive-Aging.aspx
6. Khodaveisi M, et al. Nursing and Midwifery Studies. . 2018;7:1. doi: 10.4103/nms.nms_61_17.
7. Nguyen, V. B., Thi, K. H. P., Nguyen, T. X., Pham, N. T. L., Nguyen, V. V. H., & Van Le, C. (2023). Diabetes self-management and its associated factors among patients with diabetes in central Vietnam: A cross-sectional study. PLoS ONE, 18(7), e0280299. https://doi.org/10.1371/journal.pone.0280299
8. Pilla SJ, Rooney MR, McCoy RG. Disability and diabetes in adults. In *Diabetes in America.* Lawrence JM, Casagrande SS, Herman WH, Wexler DJ, Cefalu WT, Eds. National Institute of Diabetes and Digestive and Kidney Diseases, 2023
9. Silva, T. P., & Rodrigues, R. C. M. (2025). Enhancing diabetes self-management through the AADE7 self-care behaviours framework: An observational study. Diabetes & Metabolic Syndrome: Clinical Research & Reviews, 19(2), 102–109. https://doi.org/10.1016/j.dsx.2025.01.007