Supplementary Table S5
Detailed 8-Session Diabetes Self-Management Education (DSME) Control Protocol
Format: 8 weekly group sessions; 90 minutes per session

session	Title	Educational objectives	Core content	Educational activities / materials	homework
1	Understanding Type 2 Diabetes and Its Management	To provide basic knowledge about T2DM and its medical management.	Definition and pathophysiology of T2DM; hyperglycemia; HbA1c and its role in monitoring; general treatment options; role of nutrition, physical activity, medication, and glucose monitoring in diabetes management.	Structured education; review of educational material; questions related to diabetes management; handout.	Review the session material and record the usual times of meals and routine glucose monitoring, where applicable.
2	Healthy Eating and Meal Planning	To improve practical knowledge regarding dietary management of T2DM.	Principles of healthy eating; food groups; portion sizes; meal planning; food selection; beverages; carbohydrate-containing foods and their role in diabetes management.	Examples of appropriate food choices; review of sample meals; educational handout.	Record one representative day of meals and identify food choices relevant to diabetes management.
3	Physical Activity and Daily Lifestyle	To increase knowledge about physical activity as part of diabetes management.	Role of physical activity in diabetes management; aerobic activity; muscle-strengthening activity; reducing prolonged sedentary time; general safety considerations; incorporating activity into daily routines.	Structured education; examples of feasible daily activities; handout.	Record daily physical activity during the following week.
4	Medication and Insulin Management	To increase knowledge regarding safe and appropriate medication use.	Common diabetes medication categories; importance of taking medications as prescribed; timing of medication; principles of insulin use; insulin storage; avoiding self-directed changes in prescribed treatment.	Medication-focused education; review of prescribed medication routines; handout.	Review the prescribed medication schedule and record medication-taking according to the existing prescription.
5	Blood Glucose Monitoring	To improve knowledge and practical skills related to glucose monitoring.	Purpose of self-monitoring of blood glucose; appropriate monitoring according to individual treatment plans; basic use of a glucose meter; recording measurements; general interpretation of recorded results; recognition of hypo- and hyperglycemia.	Demonstration of glucose monitoring procedures; review of recording methods; handout.	Record glucose measurements according to the participant's usual monitoring plan and bring the record to the next session.
6	Reduction of Diabetes-Related Health Risks	To increase knowledge regarding prevention and early recognition of diabetes complications.	Hypoglycemia and hyperglycemia; warning signs and appropriate initial actions; prevention of chronic complications; foot care; importance of routine medical follow-up and recommended screening.	Structured education; foot-care demonstration; educational handout.	Complete a diabetes preventive-care checklist and review routine follow-up needs.

7	Diabetes Self-Management in Everyday Life	To apply diabetes-management knowledge to common daily situations.	Coordinating meals, medication, activity, and glucose monitoring; diabetes management during travel; changes in daily schedules; management of diabetes-related care during acute illness; practical organization of self-management activities.	Case-based diabetes-management examples; practical planning; handout.	Prepare a one-week diabetes self-management schedule covering meals, medication, activity, and monitoring according to the participant's usual treatment plan.
8	Consolidation and Continuation of Diabetes Self-Management	To consolidate diabetes-management knowledge and support continuation of self-management practices.	Review of diabetes knowledge, nutrition, physical activity, medication, monitoring, complication prevention, and practical self-management activities; review of individual self-management plans; identification of areas requiring continued medical follow-up.	Educational review; completion/review of a self-management plan; final educational handout.	Continue the established diabetes self-management practices and follow the participant's routine medical care plan.