

**ABSTRACT:** African Americans (AA) experience a disparate effect of type II diabetes (T2D). For this nurse-led pilot study, a pre-validated 6-week diabetes self-management education (DSME) program was implemented in a faith community setting and tailored to the participants' faith and culture by using short scriptural lessons, prayers, and individual sharing. Participants demonstrated improvements in fasting blood glucose ( $p = .042$ ), diabetes knowledge ( $p = .002$ ), and psychosocial self-efficacy ( $p = .001$ ). Although generalizability of findings is limited, the structure and methods used in tailoring this DSME program could be transferable to other faith-based settings.

**KEY WORDS:** African Americans; cultural tailoring; diabetes self-management education (DSME); health disparity; faith-based intervention; faith community nursing; social support; type 2 diabetes

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This article is dedicated to Dr. Anne H. Shelly, Christine's first nursing mentor and her two children, Joshua and Anne-Yael, who God used to make this journey possible. Rest in peace Joshua.

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African American adults are twice as likely to die from diabetes as non-Hispanic White adults.

# TAILORING AFRICAN AMERICAN FAITH COMMUNITY-BASED DIABETES SELF-MANAGEMENT EDUCATION



**D**iabetes is a growing national challenge, affecting about 11% of the United States population (Centers for Disease Control and Prevention [CDC], n.d.-a) and ranking eighth among the leading causes of death (National Center for Health Statistics, n.d.). African American adults have a 60% greater chance of a diagnosis of diabetes and are twice as likely to die from the disease as non-Hispanic White adults (Office of Minority Health, n.d.).

Obesity and low levels of physical activity are strong indicators for the development and/or worsening of type

2 diabetes (T2D; CDC, n.d.-b, n.d.-c). African American adults (AAs) with T2D are more likely to be obese (Gower & Fowler, 2020) and less likely to report healthful physical activity than their non-Hispanic White counterparts (Kariuki et al., 2019). The disparate impact of T2D on AA adults and increased lifestyle risks warrant continued evaluation of efforts to improve clinical outcomes.

Jesus's teaching to "love your neighbor as yourself" (Mark 12:31b, NIV) encourages Christian nurses to provide the best care possible to all. As we learn to love one another despite race or other differences, we

can furnish ourselves with the knowledge of cultural differences, which can contextually make us more effective and equip us for the "good works" (Ephesians 2:10, NIV) we can accomplish as nurses. Faith community nurses who work within the context of a faith and surrounding community and focus on intentional care of the spirit, promotion of whole-person health, and prevention/minimization of illness (American Nurses Association [ANA] & Health Ministries Association [HMA], 2017) are in key positions to offer diabetes interventions to targeted groups such as AAs.



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The pilot study reported here was a nurse-led culturally tailored diabetes self-management education (DSME) intervention with social support for AA adults with T2D in a Christian church setting. The aim of the project was to impact self-care behaviors to produce positive changes in clinical outcomes.

## LITERATURE REVIEW

Patient adherence to diabetes treatment plans has been a challenge (Alharbi et al., 2023). However, diabetes self-management interventions in church settings have proven to be effective (Hawkins et al., 2022; Lehrer et al., 2017; Wilmoth et al., 2022). Researchers have demonstrated the effectiveness of faith-based interventions that include DSME among AAs with T2D, especially when culturally tailored in the context of the faith community (Goff et al., 2021; Hawkins et al., 2022; Joo & Liu, 2021). The components of self-care management and cultural sensitivity, including the role of faith in understanding the disease (Majee et al., 2023), are integral to designing programs for the AA community.

## Self-Care Management

Self-care management involves understanding the complex multiple aspects of diabetes care including

medication management, glucose monitoring, the role of nutrition and exercise, and more (Carmienke et al., 2022; Davis et al., 2022). Education and behavioral modification interventions can be effective self-care management strategies in care (Davis et al., 2022), but the effectiveness of educational interventions in ethnic minority populations has been suboptimal (Goff et al., 2021). Group-based DSME, compared to routine treatment for people with T2D, is less costly and has exhibited great worth in improving clinical outcomes (Shiyanbola et al., 2022; Singh et al., 2022).

## Cultural Tailoring

Cultural tailoring constitutes integrating practices and fashioning intervention materials that provide ethnic value, and produce effectiveness, retention, and adherence for targeted populations (Bhuiyan et al., 2022). Adapting DSME methods to the specific cultural characteristics of groups, families and individuals could ultimately lead to self-care behavioral changes and better T2D outcomes (Davis et al., 2022; Sukkarieh-Haraty et al., 2022). Cultural tailoring of interventions for AAs can be accomplished by engaging the social support of others, and by drawing upon traditions of oral storytelling to encourage patients to “testify” about

their challenges and successes in managing diabetes while simultaneously helping to dispel myths or misunderstandings (Shiyanbola et al., 2022).

Culturally tailored interventions in faith-based settings have been helpful for behavioral change in disadvantaged populations (Bhuiyan et al., 2022). For AAs, the church has historically been a central institution and played a significant role in influencing individual beliefs, behaviors, daily activities, and relation building (Majee et al., 2023).

## PROJECT INTERVENTION

A 6-week culturally tailored, faith-based DSME program was carried out in a North Carolina Christian church. The church had congregants from different races; however, only AAs were recruited into the program. The goal was to increase diabetes knowledge and self-efficacy toward improving self-care behaviors that would affect clinical outcomes. The Institutional Review Board at the University of North Carolina at Chapel Hill approved this study. Before initiation of the educational sessions, participants signed an informed consent disclosing the project procedures, potential risks, discomforts, and inconveniences.

The project nurse leader developed

For African Americans, the church has played a significant role in influencing individual beliefs and behaviors.



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a partnership through building trusting relationships with the local faith community and engaging church leadership in understanding the importance of diabetes education for congregants. The nurse leader and the church congregation had discussions and shared meals for months. Recruitment was done primarily through church announcements directed by one of the church's spiritual "gatekeepers," whose commitment showed leadership endorsement. Various church faith leaders provided motivational verbal persuasion through brief Scripture lessons and prayer before each week's meeting.

## Methods

The evidence-based intervention was culturally tailored for AAs from a DSME curriculum developed by the Community Health Center (Middletown, Connecticut) as part of the Robert Wood Johnson Foundation's Diabetes Initiative (Advancing Diabetes Self-Management Program, n.d.). Topics covered in each session are noted in Table 1 as supplemental digital content (SDC) at <http://links.lww.com/NCF-JCN/A111>

At the first meeting, participants were asked to complete a Diabetes Concerns Assessment Form (Anderson & Funnell, 2005). The intent was to elicit what participants hoped to learn from the program and their primary concerns, as well as identify areas in which they could be motivated to change. The assessment was also used to help participants begin to explore the intensity of their emotions concerning diabetes, consider goal setting for change, and help demonstrate the nurse instructor had empathy for the participants. Participants were provided with a tool for weekly goal setting and encouraged to select accountability partners from the group. Self-management goals and progress were discussed weekly.

To tailor the curriculum culturally to AAs in the context of this church setting, brief scriptural lessons and prayers were included at the beginning and end of each session. One of the

themes noted by Whitney et al. (2017) in their qualitative work with AAs is that faith serves to motivate self-management behavioral change in the context of diabetes. As one church leader in this intervention inspired participants to "offer your bodies as a living sacrifice, holy and pleasing to God" (Romans 12:1, NIV), participants were encouraged to incorporate regular exercise into their lives.

Storytelling and testifying are AA ethnic traditions. As such, participants were encouraged to share about their challenges and successes. During one session, a female excitedly shared her story regarding how motivated she was to increase her walking which previously had been quite difficult. She described how encouraged she was by an increase in days and time walked and how it made her feel physically and emotionally.

Sessions were scheduled immediately following the Sunday church service and included a free lunch. Adapting self-care behaviors to food choices through cultural and lifestyle influences was demonstrated and achieved in discussions during the lunches. For example, the group talked about food preferences, and meals were prepared in line with those preferences. During meal serving and sharing, the group discussed ingredients that made meals lower in calories but healthy and palatable. Food ingredients by category (e.g., carbohydrates), amounts, and serving sizes were discussed. In addition, the group had an in-class planning exercise to look at fast food menus and contents of pre-prepared foods that are common at AA family gatherings and neighborhood stores. In doing so, they learned to make a healthier plan in terms of content and calories [for days when they would attend family gatherings and have] fast food or other pre-prepared foods.

## Measurements

Diabetes knowledge, psychosocial self-efficacy, weight, fasting blood glucose (FBG), and physical activity were evaluated at the beginning and end of the intervention. Diabetes

knowledge and psychosocial self-efficacy were measured by surveys adapted from the Michigan Diabetes Research Center (MDRC) and used by permission (see Web Resources). The MDRC development of these surveys was supported by Grant Number P30DK020572 from the National Institute of Diabetes and Digestive and Kidney Diseases.

Diabetes knowledge was assessed using an abbreviated form (14-item general test) of the 23-item revised Diabetes Knowledge Test 2 (DKT-2; Fitzgerald et al., 2016, 1998). Diabetes psychosocial self-efficacy was measured using the Diabetes Empowerment Scale-Short Form (DES-SF; Anderson et al., 2003). The DES-SF evaluates eight domains of assessing the need for change, developing a plan, overcoming barriers, supporting oneself, coping with stress, asking for support, motivating oneself, and making appropriate diabetes care choices.

Weight and FBG were continuous outcome measures evaluated by participants' self-reporting. Participants were instructed to measure their weight at the same time and day each week, using the same measurement scale on the same surface, and record their weight and FBG on the day they weighed. The physical activity variable was measured categorically in four domains of activity type, duration, intensity, and number of times per week during the preceding week. Participants' satisfaction with the program was assessed at program completion.

## RESULTS

Twelve people agreed to participate in the project. However, four withdrew from participation prior to commencing the DSME program. Eight participants completed the 6-week program, but one did not complete postintervention surveys. The seven remaining participants had statistically significant increases pre- to post-intervention in their DKT-2 diabetes knowledge scores ( $p = .002$ ) and Diabetes Empowerment Scale-Short Form (DES-SF) scores ( $p = .001$ ;

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see Table 2 as SDC at <http://links.lww.com/NCF-JCN/A111>). Fasting blood glucose decreased significantly from an average 196.86 pre- to 148.71 post-intervention ( $p = .042$ ; see Table 3 as SDC at <http://links.lww.com/NCF-JCN/A111>). Composite weight measures remained stable from pre- (253.31 lb) to post-intervention (255.00 lb; see Table 3). All seven participants reported an increase in purposeful activity (walking time, intensity, and days per week) as reported in Table 4 at <http://links.lww.com/NCF-JCN/A111>. Five of the participants who completed the post-intervention surveys *strongly agreed* that they would recommend the classes to friends or family and that they learned a lot about diabetes self-management.

## DISCUSSION

Due to the small sample size, this discussion is centered around the practical and clinical significance of the findings and what the findings represent for participants (Carpenter et al., 2021). The average post-intervention FBG of 148.71 was higher than a clinically desirable maximum of 126 mg/dL for persons on oral diabetes medications but demonstrates a positive change over the 6-week intervention. A program of longer duration may have shown decreases in weight for participants. The lack of short-term improvement in overall weight was homogeneous with the findings in the Duru et al. (2010) study.

The participants reported having a regular primary care provider (PCP) at the beginning of the program yet expressed frustration concerning their diabetes self-care. Conversations during the intervention revealed frustrations were due to knowledge deficit, especially with participants' changing needs and coping with those needs. The fact that participants reported having a PCP and regular medical care but perceived they had no one to help them with their disease process is paradoxical. By the end of the intervention, however, participants reported

increased diabetes knowledge and psychosocial self-efficacy, and identified physicians and nurses as those who help them with T2D.

Overall, the participants reported being very satisfied with the program. One participant who was diagnosed over 10 years earlier felt the program was very helpful in teaching her things she neither knew nor understood, and therefore previously had not appreciated the need for ongoing educational assistance of this kind.

## Lessons Learned

Given the time constraints in primary care, caring for T2D only in the primary care [setting may lead to patients not being able] to better care for themselves. In this study, even though participants had increased diabetes knowledge and self-efficacy scores, one wanted to have ongoing classes beyond 6 weeks. The need for follow-up during the week was very apparent, as some participants reported forgetting the assignment of the week.

Despite encouragement by the project leader to partner with other participants during the program, all participants agreeing partnership accountability would be helpful, and some expressing accountability partnership was one of the biggest assets to

them, not all participants sought out or used the support of partners. Nonetheless, when one participant described how being in the program had motivated her to awaken earlier each day to walk, two other women set times with her to motivate each other to walk consistently. Those participants who kept in contact with accountability partners did not report forgetting weekly assignments and reported feeling accomplished or challenged to persevere in their goals. This suggests the need for personal or individual social support for people with T2D.

The findings of this study support the usefulness of DSME as well as the need to adapt programs to the needs of specific groups being served. For example, 6 weeks has been studied and shown to be an appropriate time in which to execute DSME groups (van Wageningen, 2022). However, participants had a hard time committing to 6 weeks. This may denote the need to provide DSME to certain groups in smaller segments of time.

One potential avenue to improve DSME for African Americans is for providers, especially FCNs, and community leaders to seek out opportunities to establish sustained partnerships to provide DSME classes. The classes demonstrated the



possibility of providing education, reinforcement, and social support. Family members can be encouraged to attend DSME classes, especially when those with T2D want them to attend. Attending DSME classes permits family members to learn about the disease process, provide social support, and proactively learn ways to minimize diabetes and its effects in their lives.

### Study Limitations

This program was conducted in a church of mixed races which differs from prior studies that executed T2D programs in AA-only churches. Data were self-reported and therefore left up to the discretion and perception of the participant. A challenge with self-reporting is reporters may want to please the project leader; therefore,

Caring for T2D only in the primary care setting may not lead to patients being able to better care for themselves.

reporting may be skewed. The DSME intervention occurred during warmer weather which may have influenced participants' increase in walking. Furthermore, a hurricane that occurred in the local area during the program caused one class to be postponed to a later date. The confounding effects of this delay were neither explored nor measured but could have contributed to why one participant did not complete postintervention surveys.

Although the small size of the sample population was an asset to teaching this group, the generalizability of the findings is limited. [Albeit], the lessons learned and information gleaned from the work with this population cannot be generalized to others, there are transferable elements

that can be applied when working with similar populations in similar settings. Such elements include the fact that spiritual leaders are well respected in AA communities and can consequently be a strong force in promoting DSME programs. Spiritual leaders should be sought out as program champions. Completing group education in small groups, adapting tools to the specific needs of the group being trained, and providing incentives for participation are also transferable to other settings.

### Implications for Future Research and Clinical Practice

Further research is needed to report the clinical impact of attempts to engage AAs with T2D in self-management. Identifying impediments to implementation and strategies that work best for the AA adult T2D population is important to minimize the disparate impact of T2D on AAs. This program is an example of modifying and using DSME national standards in a culturally tailored way to address the need for knowledge and psychosocial self-efficacy among AAs with T2D. Keeping all other factors constant, the participants' behavioral changes imply their empowerment of self-care needs was not being met within the primary care system. Involvement by community partners of influence, such as the church, is needed to disseminate DSME to AAs in a socially supportive way; future research should invest in sustainable solutions to encourage this type of partnership.

Faith community nurses seeking to offer DSME are advised to study and assess the characteristics of groups they seek to impact and adapt intervention materials to the group's characteristics while targeting values that are culturally specific to the group. In addition, intentional relationship building over time should occur with key partners in the faith community.

### CONCLUSION

The structure and methods used in tailoring this DSME program could be

## Web Resources

- **Diabetes Initiative Archive—Diabetes Self-Management in Real World Settings**  
<http://diabetesnpo.im.wustl.edu/index.html>
- **Michigan Diabetes Research Center—Survey Instruments**  
<https://diabetes.med.umich.edu/about/resources-health-professionals/survey-instruments>
- **The Faith & Diabetes Initiative**  
<https://www.faihanddiabetes.org/>

transferable to other faith-based settings, such as motivational verbal persuasion, brief Scripture lessons, and prayer prior to DSME in a socially supportive small group. There is [a] need to establish sustainable ongoing community partnerships where DSME can be provided to improve outcomes for AAs with T2D. The core function of nurses' roles of teacher/educator, collaborator, communicator, and counselor places nurses in a pivotal place to provide diabetes self-management education and carry out interventions in faith communities. As nurses collaborate with those with diabetes, they can teach and inspire them to take control of the ravaging effects of diabetes on their bodies through knowledge and faith. 🙏

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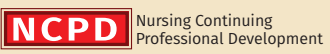
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- You'll need to create an account (it's free!) and log in to access My Planner before taking online tests. Your planner will keep track of all your Lippincott Professional Development online NCPD activities for you.
- There's only one correct answer for each question. A passing score for this test is 8 correct answers. If you pass, you can print your certificate of earned contact hours and access the answer key. If you fail, you have the option of taking the test again at no additional cost.
- For questions, contact Lippincott Professional Development: 1-800-787-8985.
- Registration deadline is June 5, 2026.

**PROVIDER ACCREDITATION**

Lippincott Professional Development will award 2.0 contact hours for this nursing continuing professional development activity.

Lippincott Professional Development is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 2.0 contact hours. Lippincott Professional Development is also an approved provider of continuing nursing education by the District of Columbia, Georgia, West Virginia, New Mexico, South Carolina, and Florida, CE Broker #50-1223. Your certificate is valid in all states.

**Payment:** The registration fee for this test is \$21.95 for nonmembers, \$15.95 for NCF members.