

# Diabetes Education: Integrating Theory, Cultural Considerations, and Individually Tailored Content

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Physicians often refer patients with diabetes for diabetes self-management education (DSME) to help them gain the knowledge and skills to change their behaviors and successfully manage their disease. Although DSME was introduced in the 1940s,<sup>1</sup> its positive impact on diabetes outcomes was not quantified until the 1990s.<sup>2</sup> Since then, clinical research has advanced scientific understanding of the benefits of DSME and the efficacy of different approaches; reviews of DSME programs have found that some approaches are more effective than others. DSME is often associated with improved knowledge and, to a variable degree, reduced weight and blood glucose levels. The most successful programs are those that demonstrate behavior change rather than merely increased knowledge.<sup>3,4</sup>

DSME is, in part, effective to the extent that patients change unhealthy behaviors and, in turn, reduce the negative impact of their disease. Diabetes educators and other health care providers realize the difficulties of getting patients to change. Most would agree that health information in and of itself is not enough. Social science evidence consistently demonstrates the complexity of behavior change and the challenges associated with achieving and sustaining this outcome.

Health psychologists in particular have identified factors to explain and predict behavior. With this knowledge, they have developed health

behavior change theories and models to suggest more effective methods for accomplishing patient compliance with behavior change recommendations.<sup>5-7</sup> Although some theories and models have been available since the 1950s, their application to health promotion gained ground in the 1980s. The major uptake has occurred and continues to occur at academic medical settings and other institutions that have a research infrastructure. Widespread adoption and application of these theories and models in mainstream clinical and community settings remains limited.

## Theoretical Frameworks and Conceptual Models

Leaders in diabetes education emphasize the importance of using health behavior change theories and models to drive DSME efforts.<sup>8-10</sup> The first and most important reason is that programs grounded in these empirically derived theories and

models are more likely to effectively change behavior and maintain behavior change.<sup>11,12</sup> Second, by grounding DSME programs in theoretical principles regarding the processes that regulate behavior, the critical assumptions of a program's protocol can be specified and tested to detect exactly why it worked, failed, or worked under certain conditions or with certain populations.<sup>12</sup> Both benefits are essential to developing more efficacious DSME programs that will successfully reduce the personal, social, and economic burden of diabetes.

## Delivering Theory-Based DSME

Within the context of DSME programs, there are generally two ways DSME can be delivered. One could be termed "one size fits all," in which programs are designed for a large group of individuals and are not modified for individuals in the group who differ from the prototypical individual. The second involves "tailored" programs, which are modified for the needs of each individual. Although individually tailored programs are highly effective at changing behavior,<sup>13</sup> it may not be cost-effective to personalize a program if the increased cost of tailoring and providing different variations of the program offset any improvements in outcomes.<sup>14</sup>

Many DSME programs use a "one size fits all," group-based approach originally designed for white patients. As diabetes prevalence continues to increase among

### IN BRIEF

Efforts are needed to improve the efficacy and accessibility of diabetes education programs for ethnic minority groups. This article focuses on the importance of integrating health behavior change theory and culturally tailored content in the design and content of such programs, as well as improving their availability in clinical and community-based settings.

ethnic minority communities, programs will need to go beyond this traditional approach. Programs will need to address the variations in cultural values underlying motivations, preferences, and behaviors of individuals from different ethnic groups by using approaches that are adapted both to the targeted group and to the individuals within it. Such approaches have shown promise in increasing physical activity and improving eating habits among ethnic minority and other targeted groups<sup>15-17</sup> and may translate into similar advantages for DSME programs.<sup>18,19</sup>

### DSME for Ethnic Minorities

Disproportionately high rates of diabetes in ethnic minority communities have drawn attention to the need for developing efficacious DSME programs to reduce the negative impact of diabetes in these populations. Scientific understanding about DSME has been largely based on patients who are widely accessible in academic medical settings. The extent to which these programs are effective (or ineffective) among specific ethnic minority groups outside these settings has received far less attention,<sup>20</sup> making it particularly difficult to address population-specific barriers to behavior change. Researchers are beginning to fill in these gaps in the literature, which is essential for designing more effective DSME programs that address population-specific determinants of behavior change.

### Tailored Content

In recent years, DSME programs have been developed in a way that may be more understandable and meaningful to different cultures. These programs have been more “targeted” than “tailored,”<sup>20</sup> and a distinction should be made between these two approaches. “Targeting” has been defined as “a single . . . approach for a defined

population subgroup that takes into account characteristics shared by the subgroup’s members,”<sup>13</sup> whereas “tailoring” has been defined as “any combination of information or change strategies *intended to reach one specific person*, based on characteristics that are unique to that person, related to the outcome of interest, which have been *derived from an individual assessment*.”<sup>13</sup>

Tailored messages, perhaps because they consist of personally relevant content, have been more effective in promoting behavior change than the generic “one size fits all” content that is sometimes delivered in the form of targeted, group-level curriculums.<sup>13</sup> Thus, targeted programs that deal with population-specific needs within a cultural group should also be tailored to the individuals within that group. Physicians referring patients to DSME programs would do well to ask whether the program is targeted or tailored.

### Understanding Barriers to Behavior Change

Health behavior change programs are more effective when they contain content that is relevant to both the patient population and the health behavior at focus.<sup>6</sup> The design of DSME programs should begin with elicitation work to identify population-specific barriers and deficits with respect to the performance of each self-management behavior.<sup>6</sup> Specifically, open- and closed-ended techniques (e.g., interviews, focus groups, surveys) should be used to elicit behavior-specific data on the dynamics of poor self-management from members of the target population.<sup>20</sup> That information should be incorporated into the content and design of the program to ensure that the identified needs of the target population are addressed.<sup>18</sup>

### Use of a Theory-Based Approach

In addition to being based on the specific patient population, the design of DSME programs should be grounded in health behavior change theory. The effectiveness of theory-based health promotion programs has been well supported with a range of health behaviors across populations; however, the application of these theories and models to the design of DSME programs for ethnic minority populations has been limited.<sup>19</sup> Behavior change theories and models are important tools for the design, understanding, and advancement of DSME programs.<sup>20</sup> Resources are available to help make effective choices in selecting and using theories for these purposes.<sup>20</sup>

### Summary

This article offers a set of principles for improving current practice with respect to designing DSME programs. Physicians using such programs should ask whether they are based on similar principles; the mere inquiry may improve the services that patients receive. These principles have been used in theory-based DSME programs at academic medical settings, widely employed in other mainstream health behavior change programs (e.g., smoking cessation, cancer screening, and substance abuse treatment programs), and will prove worthwhile in mainstream clinical and community-based DSME programs as well. Their use should result in the widespread availability of DSME programs that are highly effective, as well as a strong knowledge base regarding how and why they are effective.

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