

Community-Based Diabetes Education Program for Rural Residents



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Setting/Background

West Texas is a rural and vast area with limited healthcare related community resources. Diabetes is a prevalent, chronic condition that is growing at an alarming rate within United States communities large and small. It is of importance to increase focus on reducing the burden that diabetes has in this country. To understand what ‘rural’ is, one must also understand the term ‘urban.’ According to the United States Census Bureau (2010) urban is a continuously built-up area with a population of 50,000 or more. Moreover, the United States Census Bureau (2010) defines rural, as areas encompassing all population, housing, and territory located outside of an urban area, with fewer than 2,500 inhabitants. In West Texas, It is not uncommon for individuals to travel over an hour to receive specialized care. Furthermore, diabetes educational programs are only accessible to those who have the resources to travel out of the community’s perimeters. Chronic conditions such as diabetes can have a great impact on one’s daily living. This evidence-based project aimed to provide community members living in a rural setting, with diabetes education and interventions to improve understanding of health and wellness, which can contribute to quality of life. This project provided a culturally relevant, community-based education, involving life-skill strategies for people living with diabetes. The community identified is an under-served senior center located in rural West Texas. The project addresses the challenges disparities an underserved area, by offering health education through community service.

Pico Question

Are community-based educational interventions an effective method to improve understanding of self-management strategies for older adults living with diabetes?

Significance

Occupational therapy is an integral part of diabetes care among individuals across the nation. It has the capacity to enrich lives and promote health and wellness to all communities (American Occupational Therapy Association, 2011). Occupational therapy practitioners can assist clients to develop simple, concrete, measurable, and achievable self-management goals consistent with the seven (7) behaviors advocated by the American Association of Diabetes Educators (AADE). The Centers for Disease Control and Prevention (CDC, 2018) states that diabetes self-management (DSM) skills provide people with information on how to manage diabetes and related conditions. Diabetes-self management skills should be tailored to individual needs, goals, and life experiences and is guided by evidence-based standards. Furthermore, people learn how to: eat healthy, be physically active, monitor themselves, take medications, problem solve, reduce risks, and learn how to cope with emotions.

The 7 AADE Diabetes Self Management Skills Are:

1. Eating Healthy
2. Being Physically Active
3. Monitoring
4. Taking Medications
5. Problem Solving
6. Reducing Risks
7. Healthy Coping

Literature Review

Atler et al. (2018) discovered that participants who received DSM training and education, improved dietary habits, glycemic control, and blood glucose readings. The DSM training included diet, physical activity, medication education, goal setting and translation of information when it was unclear. In addition, it was concluded that occupation-centered diabetes interventions completed in a social setting provided support, by offering a greater presence through interpersonal exchange, needed for DSM. Stav, Hallenen, Lane & Arbesman, (2012) conducted a systematic review related to productive aging that explored benefits in occupations among community-dwelling, older adults. Community-dwelling adults suffer from a variety of health problems that include ailments due to the aging process, or to more specific diseases/medical diagnoses. Moreover, it was discovered that this population viewed successful aging, by having a balance between self-acceptance of chronic conditions, along with self-growth. There was strong evidence that supported the link of positive health outcomes by engagement in physical activity. (Stav et al., 2012).

Methods

The occupational therapist implemented an occupation-centered DSM skills program by providing health education to the community-dwelling older adults. There were **3 parts** to the educational program, which took place in a large conference room of the Yoakum County Senior Center located in the rural West Texas town of Denver City, TX.

Part 1: The first part of the educational program introduced the 7 AADE strategies for DSM. A short Adobe Spark© video had been developed by the occupational therapy educator and contained appropriate visuals, including stimulating fonts, styles, colors, pictures and organization, to facilitate and stimulate older adult learning. The content refrained from using medicalese. The occupational therapy educator also had a Spanish version of the video available for participants who spoke Spanish

Part 2. The evidence supports the benefits of physical activity for community-dwelling older adults. The **physical activity** strategy of the 7 AADEs was spotlighted, with the participants engaging in a **gardening activity**. The occupational therapy educator facilitated older adult learning, by engaging the participants in re-potting plants into their own planting pot. The occupational therapy educator provided supplies for all participants, which included: potting mix, coffee filters, planting pots, gloves, trowels, small plants and watering cans. Water was obtained from the senior center facility. The occupational therapist educator leads the participants through the planting process, with step-by-step instructions from The Old Farmer’s Almanac (2019). Participants were invited to keep their own potted plants at the completion of the activity. Hand washing and clean-up was encouraged at the end of the activity.

Part 3. Participants were asked to take a satisfaction survey at the end of the educational session. The survey directions were read aloud by the occupational therapist educator. The surveys were provided in English and Spanish. Pens and built-up writing handles were provided by the educator. One participant did not complete the survey and left post re-potting and handwashing/clean-up.

Results

The average age of the participants in attendance ranged from 65-79 (40%) to 80+ years of age (40%). There was an equal number of males (50%) and females (50%) who participated in the DSM skills educational program. A majority of participants (80%) reported to having or knowing someone with diabetes. A large percentage of participants (90%) indicated that they would share what they learned with family and/or friends. There was also a great percentage of participants (80%) who indicated they would come to another class given by the occupational therapy educator. A high percentage (80%) resulted when asked if the participants would recommend the educational DSM skills class to family and/or friends. A majority of participants (90%) indicated that they will follow some of the educational strategies to help improve their overall health and wellness.

Two themes emerged from the qualitative portion of the survey which are satisfaction and impact. The close-ended questions asked were: What information that you learned today will you share with others? and What information that you learned today will you use in your daily life? (see Table 3). The first theme of satisfaction was indicated by responses that described the educational planting experience with words such as “fun” and “easy.” Some participants stated that they want to teach their grandchildren how to plant and also plant their own flower bed. Responses to further indicate satisfaction included the response of “how to care” for their plants. The second theme, impact, was indicated when responses included the importance of “eating healthy, how to care for one’s self if they have diabetes” and “how to be physically active.” Two responses stated participants want to try and utilize all of the “information” and “key points” that the educator delivered.

Table 1: Percentages representing participants’ responses on a 5-point Likert scale

Participants (N=10)	F=female	M=male	Y=yes	N=No
Quantitative Results of the Community 1 Survey				
Age (in years)	20% 41-64	40% 65-79	40% 80+	
Gender	50% F	50% M		
Know someone who has diabetes?	80% Y	20% N		
Would you share this information?	90% Y	10% N		
Would you come to another class?	80% Y	20% N		
Extremely/ A lot	Very/ Some	Somewhat/ Little	No/ None	N/A
Satisfied with the class?	40%	50%	10%	
How helpful was this class?	30%	50%	20%	
How much prior knowledge did you have?	60%	30%	10%	
How important is community education?	60%	30%	10%	

Qualitative Results of the Community 1 Survey

Theme 1: Satisfaction

Planting is fun and easy
Plant my own flower bed
Teach grandkids how to plant
Keep plants for my well-being

Theme 2: Impact

How to care for one’s self with diabetes
A better way to live with diabetes
How to keep busy
Eating Healthy
Adding physical activity into daily life

Conclusion

This educational evidence-based project was successful in measuring participants’ satisfaction in learning about DSM skills. The project was successful by providing a culturally sensitive, relevant and appropriate program that engaged community dwelling older adults to learn about DSM skills. Due to successful reception, duplication of this educational program can be applied to other rural populations in order to fill the need of community education by an occupational therapist. Future programs could be developed that involve engaging community dwelling older adults to other aspects of the 7 AADE DSM skills.

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