ABSTRACT

CM/DPP is a partnership between Gleaners Community Food Bank (GCFB), National Kidney Foundation (NKF) of Michigan, and Wayne State University. We aim to measure the impact of pairing healthful food with the DPP curriculum. DPP is a validated intervention program that reduces progression to Type II diabetes 58%. However, there is outcome disparity for DPP workshops held in low-income communities. This project aims to determine whether improved outcomes result when food is provided for low-income DPP participants. The Food Insecurity (FI) rate in Wayne County is 19.5%, the highest in Michigan. As chronic disease and FI are known to be highly correlated, improving access to food and reducing FI are critical steps to reduce disproportionate chronic disease rates in low-income communities. In a year-long program, two cohorts of low-income DPP participants (n=29) receive boxes containing healthful food delivered to Share Our Strength: Cooking Matters(CM) workshops. Boxes contain the items of food of the Cooking Matters recipe of that session. Contents are determined by GCFB Registered Dietitians, and contain a variety of fresh, frozen, and shelf-stable items. Cooking demonstrations are incorporated into the DPP curriculum. Survey information is collected throughout the study. Biometric data is collected at the onset and conclusion of the program. 30% of participants will lose 5% of their body weight; 75% will have Hemoglobin A1C ≤5.7. Participants will be surveyed. This is a pre-post study with a 19-week intervention. Diabetes is a chronic disease that increases risk for blindness, kidney failure, and heart disease. There are highly correlated, improving access to food and reducing FI are critical steps to reduce disproportionate chronic disease rates in low-income communities. In a year-long program, two cohorts of low-income DPP participants (n=29) receive boxes containing healthful food delivered to Share Our Strength: Cooking Matters(CM) workshops. Boxes contain the items of food of the Cooking Matters recipe of that session. Contents are determined by GCFB Registered Dietitians, and contain a variety of fresh, frozen, and shelf-stable items. Cooking demonstrations are incorporated into the DPP curriculum. Survey information is collected throughout the study. Biometric data is collected at the onset and conclusion of the program. 30% of participants will lose 5% of their body weight; 75% will have Hemoglobin A1C ≤5.7. Participants will be surveyed. This is a pre-post study with a 19-week intervention. Diabetes is a chronic disease that increases risk for blindness, kidney failure, and heart disease. There are highly correlated, improving access to food and reducing FI are critical steps to reduce disproportionate chronic disease rates in low-income communities.

OBJECTIVES

Promote diabetes prevention in low-income communities by offering Cooking Matters™ (CM) in coordination with the Diabetes Prevention Program with the following outcome goals:
- Reduce outcome disparities
- 30% of participants will lose ≥5% of their body weight.
- 50% of participants will report ≥150 minutes of physical activity per week.
- 75% of participants will have Hemoglobin A1C ≤5.7.
- All participants will have improved access to healthful food.

METHODS

Completion Rate determination: DPP methodology traditionally calculates completion rate as a combined function of the number of sessions attended in the first half of the program and the number of participant attended in the second half of the program (Khan, 2017). The inclusion of additional sessions in this program prevents this calculated rate from overstating completion. The following formula is used:

\[ \text{Completion Rate} = \left( \frac{\text{sessions attended}}{\text{total sessions}} \right) \times 100 \]

Biometric Data:
- HbA1C: Collected by a licensed phlebotomist, using A1CNow. The following A1C cutoff levels were indicated:
  - Normal: below 6.7
  - Prediabetes: 5.7–6.4
  - Diabetes: ≥6.5

Cooking Matters Survey: A 36-item measure that assessed participation and effectiveness:
- Physical Activity and Food Intake: Self-reported participant food consumption and physical activity
- Weight: Participant weight at the beginning of the program
- Diabetes Survey: A Community Based Intervention Reduces Diabetes Risk in a Low-Income Community

CONCLUSIONS/FUTURE

- Combining DPP and CM resulted in a 79% program completion rate. Mean HbA1C dropped 10.6% (paired t-test, p<0.01), and all participants demonstrated lower post-test HbA1C value.
- Participants experienced a mean weight loss of 7.6% (paired t-test, p<0.01), and >75% of participants exceeded the 5% DPP weight loss outcome objective at 12 months.
- Cooking Matters™ coupled with the Diabetes Prevention Program is an effective strategy to improve outcomes and reduce diabetes in low-income communities.
- Food banks can be coupled with existing chronic illness prevention programs to improve both diabetes risk and food security.

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REFERENCES