

INTRODUCTION

Diabetes affects millions around the world and is responsible for 73,000 deaths per year. (CDC, 2015). Without proper management, diabetics are at risk for heart disease, strokes, amputations, kidney failure, blindness and death. The American Diabetes Association sets recommendations for providers and diabetics to manage the disease, however some diabetics do not have the self-efficacy to follow these recommendations daily.

Improved self-efficacy is associated with improved self-care and better controlled diabetes (King et al., 2010).

Effective strategies for improving self-efficacy among diabetics:

- Individualized education can improve self-efficacy and self-care (Ludman et al., 2014; Cinar & Schou, 2014)
- Barrier Identification and problem solving can improve self-efficacy, self-care and lower HgbA1c levels (Tang et al, 2014; Shi Ostwald, & Wang, 2010; Shi et al., 2009; Lorig et al., 2010)

PURPOSE

The purpose of this project is to implement a diabetic education program aimed to improve self-efficacy among type 2 diabetics in a primary care office. The program includes individual barrier identification and problem solving activities to increase self-efficacy among the diabetic.

PICOT: Among adults ages 18 years and older diagnosed with diabetes mellitus, type 2 (P), how does an individualized self-efficacy education program provided by primary care providers (I) affect self-efficacy (O) after two weeks (T)?

OBJECTIVES

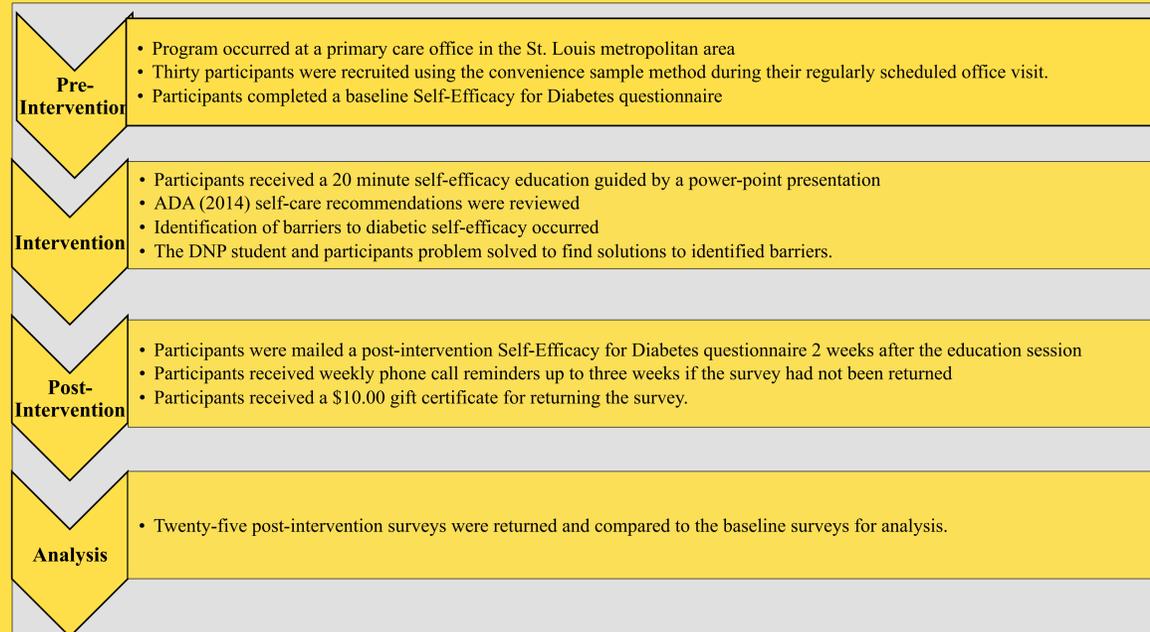
Primary Objective

Improvement in overall self-efficacy as shown by increased scores on Self-Efficacy for Diabetes questionnaire.

Secondary Objectives

Improvements in self-efficacy among survey subcategories including diet, exercise, and disease management.

MATERIALS AND METHODS



RESULTS

Primary Objective :

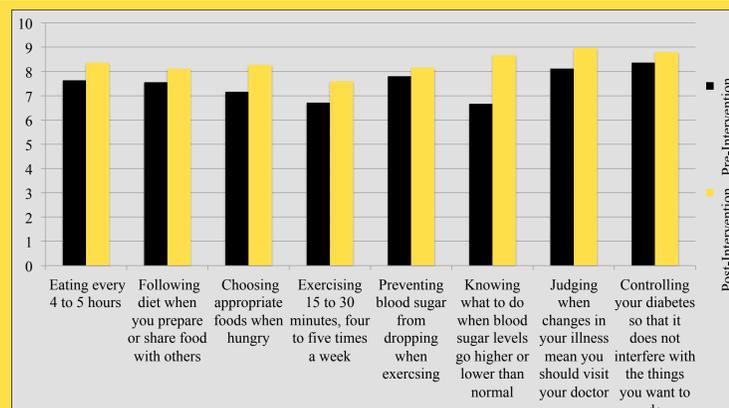
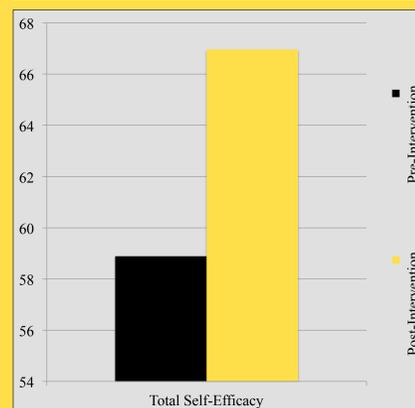
Statistically and clinically significant improvements in overall self-efficacy of self-management among type 2 diabetics as scores on the Self-Efficacy for Diabetes questionnaire improved almost 8 points ($t(24)=-3.11, p=.005, 95\% \text{ CI } [11.39, 2.28], d=.6$.)

Secondary Objectives:

Diet: There were clinically significant improvements in confidence with eating every four to five hours including breakfast ($t(24)=-1.57, p=.13, 95\% \text{ CI } [-1.67, 0.23], d=.3$) and following the appropriate diet when preparing food with others ($t(24)=-3.13, p=.005, 95\% \text{ CI } [-1.86, 0.39], d=.6$). There were statistically and clinically significant improvements in confidence in choosing appropriate foods when hungry ($t(24)=-3.13, p=.005, 95\% \text{ CI } [-1.86, 0.39], d=.6$.)

Exercise: There was a clinically significant improvement in confidence exercising 15 to 30 minutes four to five times per week ($t(24)=-1.69, p=.1, 95\% \text{ CI } [-1.95, 0.19], d=.3$)

Disease Management: There were statistically and clinically significant improvements in confidence knowing what to do when blood sugar is higher or lower than normal ($t(24)=-3.41, p=.002, 95\% \text{ CI } [-3.08, -0.76], d=.7$) and judging when your changes in ones illness means visiting the doctor ($t(24)=-2.34, p=.028, 95\% \text{ CI } [-1.58, -0.1], d=.5$). There was also a clinically significant improvement in confidence in controlling one's diabetes so that it does not interfere with activities ($t(24)=-1.75, p=.09, 95\% \text{ CI } [-.96, 0.08], d=.3$).



RESULTS

Variable	Pre-Intervention Mean Score and SD (N=25)	Post-Intervention Mean Score and SD (N=25)	p Value	Cohen's d
Total Self-Efficacy Score	58.88 (SD=15.63)	66.96 (SD=11.53)	.005	.6**
Eating every 4 to 5 hours including breakfast	7.64 (SD=2.4)	8.36 (SD=1.95)	.13	.3*
Following diet when you prepare or share food with others	7.56 (SD=2.66)	8.12 (SD=1.81)	.2	.3*
Choosing appropriate foods when hungry	7.16 (SD=2.25)	8.28 (SD=1.88)	.005	.6**
Exercising 15 to 30 minutes, four to five times a week	6.72 (SD=3.17)	7.6 (SD=2.5)	.1	.3*
Doing something to prevent blood sugar from dropping when you exercise	7.8 (SD=2.6)	8.16 (SD=2.15)	.1	.1
Knowing what to do when blood sugar levels go higher or lower than it should be	6.76 (SD=3)	8.68 (SD=1.51)	.002	.7**
Judging when changes in your illness mean you should visit your doctor,	8.12 (SD=2.15)	8.96 (SD=1.43)	.028	.5**
controlling your diabetes so that it does not interfere with the things you want to do	8.36 (SD=1.96)	8.8 (SD=1.38)	.09	.3*

*Indicates small effect size **Indicates moderate to large effect size.

CONCLUSIONS

- Individualized self-efficacy education program was found to be effective at improving self-efficacy among type 2 diabetics age 18 years or older.
- The individualized self-efficacy program was also found to improve self-efficacy related to diet, exercise, and disease management.
- Strengths of this project include statistical and/or clinical significance in most outcomes.
- Limitations of this project includes a small sample size and number lost to follow up.
- Recommendations for future projects include expanding education to several different sessions covering self-care topics and individual barriers more in-depth and to have the diabetic answer the initial survey with the healthcare participant as it sparks conversation and elicits the concerns of the diabetic.

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