

Background and Significance

- Oklahoma has the 12th highest diabetes prevalence and 5th highest age-adjusted diabetes mortality rate in the United States (US) (Oklahoma Department of Mental Health and Substance Abuse, 2020).
- Oklahoma scores near bottom on healthcare and access to care (US News & World Report, 2023).
- Diabetes prevalence is higher in Hispanic adults compared to whites and Asians (United Health Foundation, 2021).
- Hispanic Oklahomans have the highest uninsured rates in the state at 53.3% (State of Oklahoma, 2019).
- Diabetes prevalence is highest in the US among adults with family income below poverty level (Centers for Disease Control and Prevention [CDC], 2020).
- Diabetes Self-Management Education (DSME) improves glycemic control, reduces risk of diabetes complications, and improves quality of life for patients with diabetes (American Diabetes Association [ADA], 2021).

Purpose

- To evaluate patient perceived diabetes self-efficacy following interprofessional student team delivered DSME compared to diabetes self-efficacy before DSME.

Literature Review

- A comprehensive literature search was performed using Google Scholar, PubMed, and CINAHL databases in English language from 2019-2022
- Keywords: interprofessional education (IPE), diabetes education, diabetes self-efficacy, interdisciplinary, diabetes self-management education, team education
- 4 systematic reviews, 3 retrospective cohort, 3 quasi-experimental, 2 qualitative, 2 mixed methods, and 1 cross-sectional studies were included. 1 landmark randomized control trial from 1993 was also included.



Quality Improvement Project

- By utilizing interdisciplinary student teams to deliver DSME, we were able to overcome barriers such as cost and language and provide access to care while remaining budget neutral. There were no costs to the Unity Clinic or to the patients.
- Interdisciplinary student teams worked with an Advanced Practice Registered Nurse/Certified Diabetes Care and Education Specialist/OUHSC faculty to develop and deliver DSME in a culturally appropriate manner and at a suitable education level.
- The Association of Diabetes Care and Education Specialists 7 Self-Care Behaviors served as a guide for class objective development and education topics.
- Comprehensive DSME was provided over three-classes. We offered the three-class series twice with two different groups of participants.
- Patient perceived self-efficacy was evaluated before the first class in the three-class series and after each participant completed the three-class series.



Fig. 1. ADCE7 Self-Care Behaviors. Adapted from Kolb L. An Effective Model of Diabetes Care and Education: The ADCE7 Self-Care Behaviors™. *The Science of Diabetes Self-Management and Care*. 2021;47(1):30-53. doi:10.1177/0145721720978154

Plan-Do-Study-Act Cycle for Improvement

- The PDSA Cycle was utilized to ensure continuous improvement.
- The student team debriefed between the two DSME sessions to evaluate what went well and what could be improved for the next three-class series.
- Patients completed a post-class questionnaire about what went well, what they learned, and what we could improve for the next three-class series.

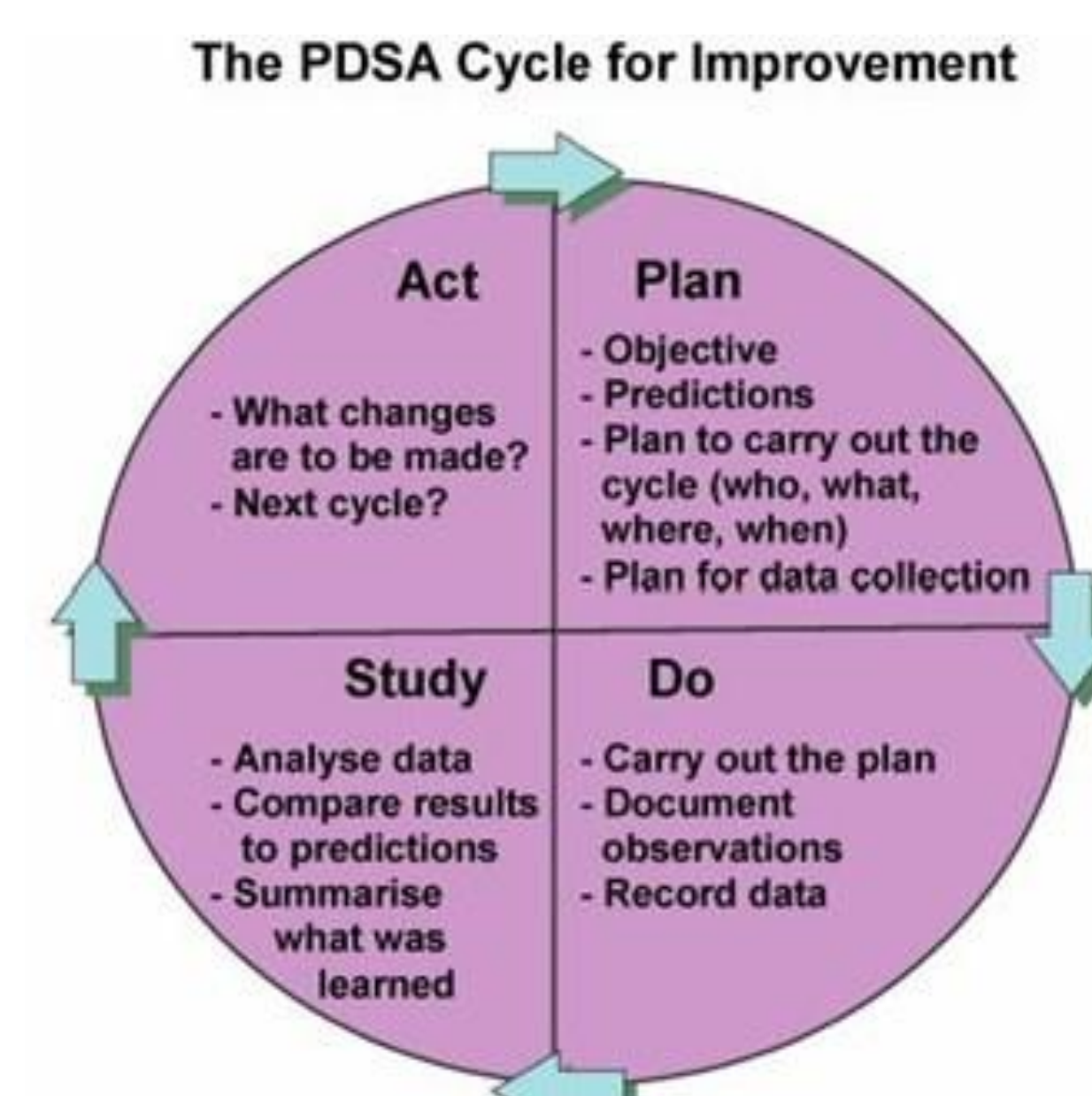
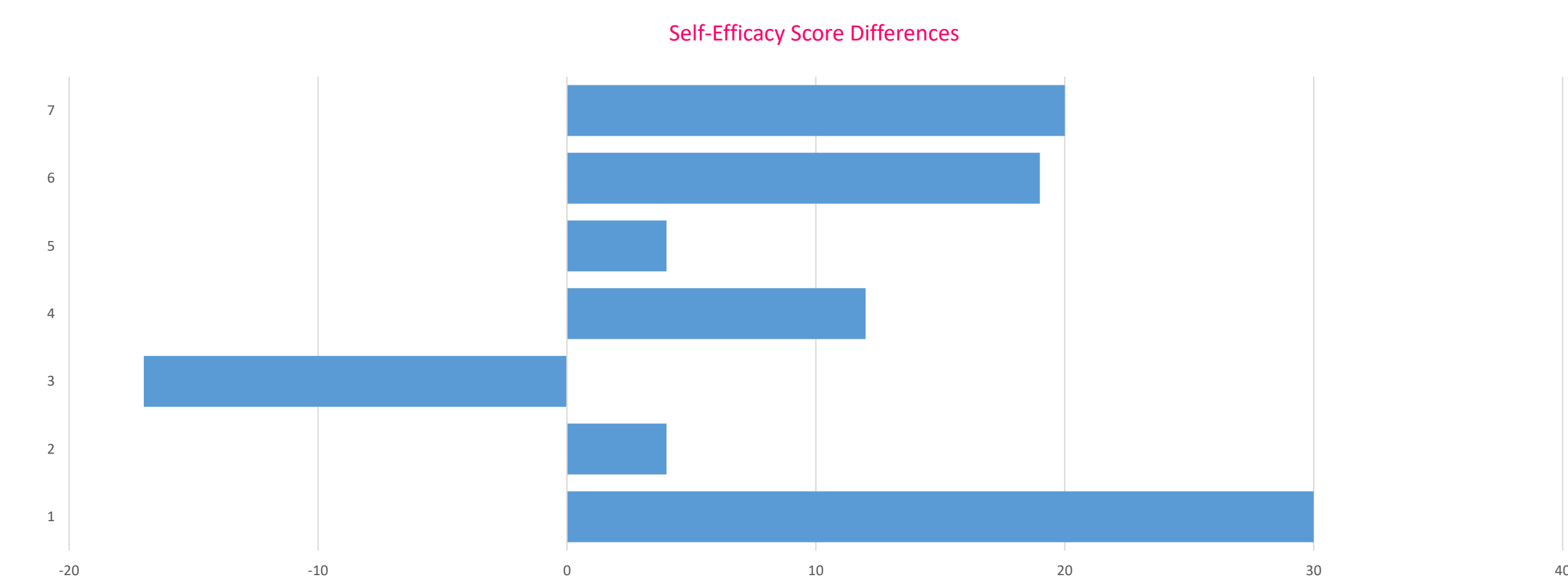


Fig. 2. Adapted from <https://www.healthnavigator.org.nz/clinicians/p/pdsa-cycle/>

Outcomes

- Our **primary outcome** of interest was patient-perceived diabetes self-efficacy. The Stanford Self-Efficacy for Diabetes (Saint Louis University, 2008) 8-question validated scale was used to measure self-efficacy.
- Pre-intervention scores were 32-72 out of 80 and post-intervention scores were 39-80. The scores were paired and analyzed with a median improvement of 12 points.



- Our **secondary outcome** of interest was student perception of IPE teamwork. Students scored their IPE experience with the Jefferson Teamwork Observation Guide (Lyons et al., 2016).
- The students reported a median score of 7, which is the highest score or “demonstrates to an exceptional level”.
- One patient had statistically significant improvements in A1c 9.1% to 6.8% and BMI 28.8 to 26.1.

Discussion

- Limitations: small sample size. This project was implemented during an organizational change which impacted recruitment.
- Conclusion: the sustainability of this project depends bilingual and willing students and the support of OUHSC faculty and colleges. This project is replicable to improve access to DSME for uninsured, low-income, and Spanish-speaking patients while providing an innovative education opportunity for students.

Acknowledgements

THANK YOU: Kathrin Eliot, PhD, RDN, LD, FAND and Raina Leckie, LCSW, DSW Candidate for supporting this project! Alicia Ortiz, Viki Castaneda, Yissel Rios, Elsa Ruiz, and TeAnna Del Hierro Lozano – the awesome interdisciplinary student team who made this project happen! James Cutler, biostatistician for statistical analysis assistance.