Improving T2DM Self-Care Management & Medication Adherence for Underserved Adults in Primary Care

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Introduction

- The WHO estimated that 422 million adults were living with diabetes globally, compared to 108 million adults in 1980. [1]
- Patient knowledge and perception of T2DM are key variables for managing this disease. [2]
- Primary care becomes a central point for T2DM management because of the lower costs of managing chronic illness and its holistic approach to care.[3]

Purpose & Aims

Aim 1: Assess self-care confidence in diabetes management.

Aim 2: Assess beliefs about diabetic medicine

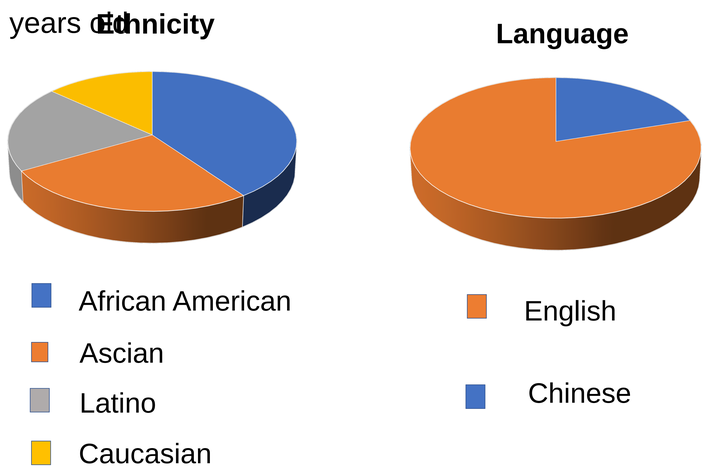
Aim 3: Assess the project's feasibility during COVID-19 pandemic

Methods

- **Design and Setting:** Prospective, one-group pre/post-test design at an underserved primary care office from November 2021 through January 2022
- **Intervention**: tailored 1-hour evidence-based educational meeting in English and Chinese
- **Measures:**
  - Modified Morisky, Green Levine Scale
  - Diabetes Self-Management Questionnaire
  - Beliefs in Medicine Questionnaire

Sample Characteristics

- 30 participants (100% participation rate; 88% participants completed all survey questions)
- Ages ranged from 48 to 82, with a mean of 67.53 years old



Results

Aim 1: The tailored educational program improved participants' diabetes self-management (p<0.05, mean= 8.03): Glucose Management, Dietary Control, Physical Activity, and Health-Care Use.

Aim 2: Although the participants believed diabetic medication use were necessary and showed less concerns after the medication. the result was not significant (p<.972) on medication necessity before and after the project.

Aim 3: The project can be replicated by clinicians following the same process to evaluate this and other chronic diseases in primary care settings, even during the COVID-19 pandemic.

Discussion/Limitation

- Enhanced participants' self-glucose monitoring skills, medication adherence, and a healthy lifestyle, including a nutrition guide and a list of physical activities that reduce glucose levels.
- Improved patient satisfaction about the interview experiences and facilitated patient-provider rapport.
- Limitations: Small sample size, COVID related challenges, a short period time to implement the project

Conclusion

- A personalized patient education approach helped improve diabetes self-care management and medication adherence among underserved adults.
- **Sustainability:** Similar individualized approaches may have other applications in chronic disease self-management. The project can be replicated by clinicians following the same process to evaluate this and other chronic diseases in primary care settings, even during the COVID-19 pandemic.

References

1. World Health Organization. (2021, November 10). *Diabetes*. https://www.who.int/news-room/fact-sheets/detail/diabetes
2. Islam, S. M. S., Biswas, T., Bhuiyan, F. A., Mustafa, K., & Islam, A. S. (2017). Patients' perspective of disease and medication adherence for type 2 diabetes in an urban area in Bangladesh: a qualitative study. *BMC Research* Notes,*10*(1). https://doi.org/10.1186/s13104-017-2454-7
3. Vigersky, R. A., Fish, L., Hogan, P., Stewart, A., Kutler, S., Ladenson, P. W., McDermott, M., & Hupart, K. H. (2014). The clinical endocrinology workforce: Current status and future supply and demand projections. *The Journal of Clinical Endocrinology & Metabolism, 99*(9), 3112-3121. https://doi.org/10.1210/jc.2014-2257