Telehealth education for South Asian immigrants in America with type 2 diabetes and hypertension

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Implications for practice and research

- Type 2 diabetes and hypertension affect a disproportionate number of South Asian immigrants in America.
- The comorbidity of type 2 diabetes and hypertension is associated with increase morbidity and mortality rate.
- Community-based solutions are necessary to provide culturally suitable health education tailored to a patient's specific needs.

Context

Multimorbidity is one of the pressing global medical issues facing health systems in the developed world today[2]. The co-existence significantly worsens the prognosis of both diseases and language differences may make it difficult for immigrants to learn about the disease condition[1-2]. Whilst there are several management techniques for this condition, it is important to provide culturally and linguistically adapted interventions for this group of individuals[1]. In the last decade, experts in diabetes education from numerous nations have identified the benefits of individualised education encompassing linguistic and cultural considerations. The Diabetes Research, Education, and Action for Minorities (DREAM) study examines the feasibility and benefits of an evidence-based community health worker (CHW) led culturally tailored telehealth education in improving diabetes care[1].

Methods:

A randomized controlled trial was conducted to examine CHW telehealth intervention designed to enhance positive health outcomes for South Asian immigrants. The inclusion criteria are South Asian, age range 18 – 85 years with diagnosis of both type 2 diabetes and hypertension while the exclusion criteria are pregnancy, secondary diabetes and inability to manage self-physical activities[1]. The randomization was completed by someone who had no direct contact with the study participants or the practitioners.

The treatment group of 26 family units received 6 months five virtual group-based telehealth interventions (health education sessions) within 6 months, an action plan, and follow-up calls to assess the set goal. In contrast, a control group of 17 family units received only 5 virtual group-based education sessions. All participants were trained and provided with blood pressure monitor and digital weighing scale. Baseline and 6 months follow-up readings were collected while monitored virtually. HbA1c was collected from their clinical electronic records and patient-centred outcomes included self-reported physical activity, daily diet intake, medication adherence, diabetes self-management, depression risk by using existing validated instruments[1].

Findings:

Out of 403 assessed for eligibility, 183 completed the study due to reasons such as lost to follow-up, health issues, no longer interested, death, and 1 left the country. The study compared the two groups involving treatment group (n = 92), and the control group (n = 91). Baseline socio-demographic data of the two groups revealed thus: female (56.3%), mean age (56 years), place of birth (Bangladesh 93.2%; India 3.7% and Pakistan 3.2%).

The clinical measurements from baseline to endpoint showed that BP control increased by 33.7% ($p< 0.001$) in the treatment group in contrast to 16.5% among the control group. Moderate weekly activity for the group increased by 191 minutes and 22.4 minutes for the control group. Daily fruit intake increased by 0.2 in the treatment group while the control group decreased by 0.4. Additionally, the intervention group reported significant positive changes in medication adherence, engagement in physical activity, and diet control.

Commentary:

This study found CHW-led telehealth intervention to be feasible and showed cardiovascular improvements. The intervention helps to overcome linguistic and cultural difficulties that SA immigrants may face in accessing and utilising healthcare system. As opposed to the traditional face-to-face approach, online learning offers flexible and engaging learning opportunities with no travel time and cost which may aid participant retention. Evidence-based practice supports personalised approach to care, and this includes individual values and preferences. Against the traditional generic patient education, providing culturally adapted education aligns with national and international best practice[2].

The study presents methodological deficiencies such as incomplete follow-up data for face-to-face HbA1c and lipids outcomes, due to the impact of COVID-19 pandemic, collection of some measures through self-report and involvement of family members may influence the study outcomes. Also, majority of the study participants are Bangladesh. Nevertheless, this study contributes valuable insight within the scope of its limitations and suggest that customising education to suit various linguistic and cultural backgrounds can improve care and aid engagement.

References

1. Shah MK, Wyatt LC, Gibbs-Tewary C, et al. A culturally adapted telehealth community health worker intervention on blood pressure control among South Asian immigrants with type II diabetes: results from the DREAM Atlanta intervention. Journal of General Internal Medicine 2023. DOI: 10.1007/s11606-023-08443-6
2. NICE (2020) Behaviour change: digital and mobile health interventions. https://www.nice.org.uk/guidance/ng183/chapter/Recommendations#developing-digital-and-mobile-health-interventions (Accessed 06/08/24).
3. WHO (2016) Multimorbidity: Technical series on safer primary care. Geneva: WHO