

# Developing a culturally-tailored social network-based group visit model for South Asians with Type II diabetes and prediabetes in Atlanta

Gabrielle Williams, MD<sup>1</sup>; Alexis Halyard, MSIV<sup>1</sup>, Nithin Kurra<sup>3</sup>; Yunbo Xie<sup>3</sup>; Ebonee Harris<sup>4</sup>; Madhuri Prayaga<sup>3</sup>; Sukyi Naing, MPH<sup>3</sup>; Mohammed K. Ali, MD<sup>1,2,3</sup>, MBA, MSc; KM Venkat Narayan, MD, MBA, MSc<sup>2,3</sup>; Megha K. Shah MD, MSc<sup>1,2,4</sup>,

<sup>1</sup> School of Medicine, Emory University; <sup>2</sup> Emory Global Diabetes Research Center; <sup>3</sup> Rollins School of Public Health, Emory University <sup>4</sup> Emory Healthcare

Department of Family  
and Preventive Medicine

## Introduction

- Lifestyle interventions can prevent, delay and improve management of Type II diabetes.
- Barriers exist to adapt and implement these programs, especially for diverse populations.
- Developing strategies for culturally tailored diabetes prevention and management are especially needed
- South Asians are a high-risk group, when compared with individuals of European descent
- Despite elevated risk, few programs are tailored for South Asians.
- Collaborating with our community-academic partnership, ASHA, we sought to culturally tailor a primary care-based lifestyle program for South Asian Muslim immigrants in Atlanta.

## Methods

### I. Exploratory Study

- Using purposive sampling, we conducted focus groups (n=7, 57 participants) in the South Asian community in North Atlanta
- Codebook from an inductive and deductive process (iterative process with 3 coders used to finalize codebook)
- Thematic analysis done to identify diet, exercise, and health program preferences

### II. Curriculum Adaptation

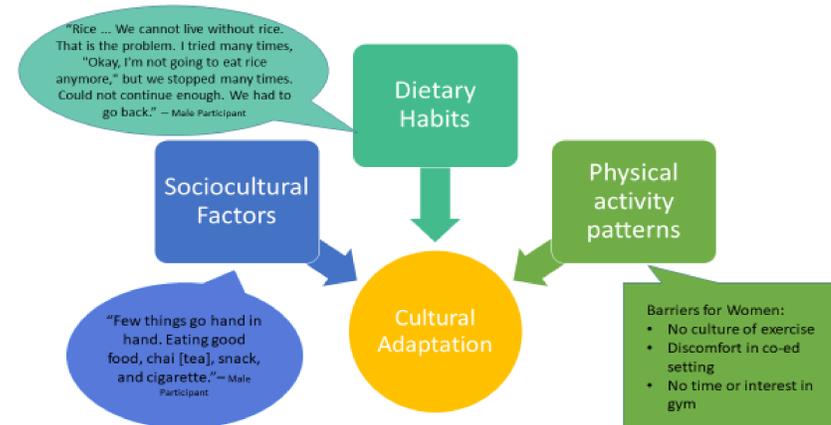
- Informed by the exploratory study, to adapt existing evidence-based curriculum for South Asians

### III. Implementation

- Dyad-based group visit model based in primary care (7 dyads)
- Adults with prediabetes or diabetes, asked to participate in a 16-week lifestyle program with their health influencer (N=14)
- End-point evaluations show high levels of satisfaction (5/5)

## Results

### I. Exploratory Study: Focus Groups Thematic Analysis



### II. Curriculum Adaptation

Elements of Adaptation	Method to Adapt
Sociocultural Factors	<ul style="list-style-type: none"> <li>• Incorporate aspects of Islamic Faith</li> <li>• Support from family and peers</li> </ul>
Dietary Habits	<ul style="list-style-type: none"> <li>• Focus on portion sizes of rice</li> <li>• Timing of meals</li> <li>• Healthy versions of traditional meals</li> </ul>
Exercise beliefs	<ul style="list-style-type: none"> <li>• Home exercise programs (YouTube videos, free resources)</li> <li>• Gender specific groups for physical activity</li> <li>• Exercises for non-form fitting attire</li> </ul>
Program Logistics	<ul style="list-style-type: none"> <li>• Meet every other week</li> <li>• Text for phone check-ins</li> <li>• Weekend program (Sundays)</li> <li>• Modified for Ramadan</li> </ul>

### III. Implementation

- Based at Emory Family Medicine at Dunwoody
- Patients recruited through chart review and physician referrals
- Incorporates guest speakers from community academic partnership, physician supervised.



## Results

Table 3: Cardiometabolic risk factors at baseline to six months, n (%) or mean (standard deviation)

Variable	Baseline for all participants (N=14)	Baseline for participants with follow-up data (N=10)	Four Months (N=10)	p value
<b>Glycemic Status</b>				
HbA1c (%)	6.26(0.96)	6.11(0.61)	6.10(0.55)	0.46
<b>Anthropometry</b>				
Weight (kg)	75.11(12.54)	77.14(13.56)	75.70(13.00)	0.03
<b>Other Cardiometabolic Markers</b>				
Systolic Blood Pressure (mm Hg)	133.14(21.94)	134.1(19.58)	121.4(9.03)	0.01
Diastolic Blood Pressure (mm Hg)	79.93(8.04)	82(6.31)	78.3(7.47)	0.02
Total Cholesterol (mg/dl)	167.64(39.00)	169(43.62)	162.3(33.30)	0.21
HDL (mg/dl)	46.79(21.00)	45.3(22.47)	45.8(21.74)	0.41
Triglycerides (mg/dl)	180(84.11)	204.5(84.76)	141.9(62.83)	0.02

HbA1C= Hemoglobin A1C; HDL= high-density lipoprotein; Kg= kilograms

Program Measures
Recruitment = 14
Retention = 10 (71%)
Program satisfaction = 5/5
Change in exercise and diet practices (self-reported survey)
Change in weight, blood pressure HbA1c, LDL

## Summary and Conclusions

- Exploratory themes suggest sociocultural factors such as value placed on family and peers, religious beliefs, diets high in carbohydrates, and lack of emphasis on exercise, especially for women, influence the community’s engagement in healthy behaviors
- Elements of adaptation of a lifestyle program for South Asians include involvement of family and friends, diet recommendations focused on portion control and meal scheduling, exercise modification for women of Islamic faith, rooting guidance on support and controlling thoughts in participants’ faith.
- A lifestyle program based in primary care is feasible and acceptable for South Asians and suggests possible broader application to other diverse, high-risk communities with positive results
- Cardiometabolic factors may be positively impacted by culturally tailored lifestyle curriculum

## References and Acknowledgments

1. Long Term Effects of a Lifestyle Intervention on Weight and Cardiovascular Risk Factors in Individuals with Type 2 Diabetes: Four Year Results of the Look AHEAD Trial. Arch Intern Med. 2010;170(17):1566-1575. doi:10.1001/archinternmed.2010.334
  2. Pi-Sunyer X. The Look AHEAD Trial: A Review and Discussion Of Its Outcomes. Curr Nutr Rep. 2014;3(4):387-391. doi:10.1007/s13668-014-0099-x
  3. Diabetes Prevention Program Research Group, Knowler WC, Fowler SE, et al. 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. Lancet. 2009;374(9702):1677-1686. doi:10.1016/S0140-6736(09)61457-4
  4. Ali MK, Echouffo-Tcheugui J, Williamson DF. How effective were lifestyle interventions in real-world settings that were modeled on the Diabetes Prevention Program? Health Aff (Millwood). 2012;31(1):67-75. doi:10.1377/hlthaff.2011.1009
- \*\*Supported in part by the National Center for Advancing Translational Sciences of the National Institutes of Health under Award Number UL1TR002378is project was supported in part by the National Center for Advancing Translational Sciences of the National Institutes of Health under Award Number UL1TR002378 and KL2TR002381