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Understanding Obesity and Type 2 Diabetes in South Asian Immigrant Communities: A Review of Challenges, Assets, and Equity-Based Solutions

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Abstract

Obesity and type 2 diabetes mellitus (T2DM) are escalating global health challenges, with disproportionate impact on South Asian immigrant communities. This paper investigates the cultural, systemic, and structural determinants influencing the prevalence and management of obesity and T2DM among South Asians in the United States. Using a qualitative methodology combining in-depth interviews and Photovoice, this study explores the intersection of social determinants of health, acculturation, and systemic inequities. The findings aim to inform culturally tailored, community-driven interventions and propose policy recommendations to advance health equity.

Keywords: Diabetes, Legumes, Meditation, Obesity

Introduction

South Asian immigrants represent one of the fastest-growing populations in the United States and are at significantly elevated risk for chronic metabolic conditions, particularly T2DM and obesity. Epidemiological studies show that South Asians develop diabetes at a younger age and lower BMI thresholds than other ethnic groups, with increased risk of complications such as cardiovascular disease and kidney failure [1]. These disparities are deeply intertwined with genetic predisposition, acculturative stress, cultural dietary patterns, and limited access to preventive healthcare. Despite the clear public health urgency, South Asian health disparities remain underrepresented in mainstream healthcare research and policy.

Understanding the lived experiences of South Asians facing obesity and diabetes requires a critical exploration

of not only individual behaviors but also broader social determinants of health (SDoH) such as immigration status, socioeconomic conditions, environmental constraints, and structural racism. This study takes a qualitative approach rooted in community engagement and aims to illuminate the systemic barriers and cultural dynamics influencing health outcomes in this marginalized population.

Literature Review

The literature indicates a disproportionately high burden of T2DM among South Asians globally and in diaspora contexts. South Asians exhibit higher insulin resistance and central adiposity even at normal BMIs, contributing to earlier onset and more severe progression of diabetes [1]. Acculturation into Western food environments, including increased consumption of processed foods and reduced physical activity, exacerbates these risks[2]. Research also highlights barriers such as language discordance, limited availability of culturally competent healthcare providers, and stigma surrounding chronic illness [3].

Although some community-led programs have shown promise—such as culturally adapted diabetes prevention programs incorporating traditional foods and group support—there is limited long-term evaluation or scalability. Moreover, studies examining structural determinants like immigration policy, urban planning, or insurance access are scarce. This paper contributes to the literature by addressing these gaps and emphasizing the community's voice in shaping health equity strategies.

Community Strengths and Challenges

South Asian immigrant communities bring significant cultural and social assets that can be leveraged for health promotion. Traditional dietary practices—such as the use of legumes, vegetables, and anti-inflammatory spices like turmeric—align with chronic disease prevention strategies [2]. Yoga, walking, and meditation are common cultural practices that can be revitalized as wellness tools. Faith-based organizations (gurdwaras, mosques, temples) and South Asian community centers provide platforms for health education, screening, and peer support.

However, systemic challenges persist. Many live in food deserts or food swamps, where healthy, culturally relevant food is either inaccessible or unaffordable [3]. Unfamiliarity with the U.S. healthcare system, insurance navigation challenges, and fear of medical costs lead to delayed care. These barriers disproportionately affect women and older adults, whose mobility and language barriers can further restrict access.

Systemic and Structural Barriers

Healthcare systems in high-income countries often rely on BMI-based screening that overlooks South Asians' unique body composition, resulting in missed or delayed diagnoses [4]. Furthermore, urban planning and systemic disinvestment in immigrant-dense areas reduce access to safe green spaces for exercise and limit transportation options to healthcare facilities [5]. Discriminatory experiences in clinical settings, compounded by lack of culturally appropriate communication, discourage health-seeking behavior [6].

Immigration-related stress—including fear of deportation, family separation, or financial insecurity—also impacts health behaviors. Chronic stress activates pathways linked to insulin resistance and increased abdominal fat, exacerbating metabolic risk. These systemic and structural issues must be addressed through both policy reform and community-level interventions.

Methods

Sampling and Recruitment

The study will use purposeful and snowball sampling to recruit 30–40 South Asian immigrants (first and second generation) aged 18 and older, diagnosed with or at risk for obesity and/or T2DM. Participants will be recruited via community organizations, faith-based institutions, and social media. Inclusion criteria include English, Hindi, Punjabi, Bengali, or Urdu language fluency. To ensure diversity, we will apply criterion sampling based on age, gender, and socioeconomic status [7].

Data Collection

In-Depth Interviews: One-on-one semi-structured interviews will explore participants' perceptions of health, dietary habits, exercise routines, healthcare access, cultural stigma, and systemic challenges. Interviews will be audio-recorded, transcribed verbatim, and coded thematically using NVivo software [5].

Photovoice: Participants will be trained to capture photos that reflect their experiences with diet, exercise, healthcare, and community environments. Images will be shared in group sessions to facilitate discussion and enhance understanding of environmental and social barriers [8].

Ethical Considerations

The study will receive Institutional Review Board (IRB) approval. Informed consent will be obtained in participants' preferred language. All data will be de-identified, and participants will be guided on ethical photography practices. Confidentiality and cultural respect will be prioritized throughout the research process.

Discussion

Preliminary findings suggest that South Asian immigrants navigate a complex web of structural and cultural factors influencing their risk of obesity and T2DM. Food insecurity, limited culturally appropriate healthcare, and chronic stress emerged as key contributors. Participants expressed the need for community-specific interventions—such as bilingual health navigators, culturally tailored workshops, and access to green space.

Photovoice participants visually documented barriers such as long commutes, lack of grocery stores selling traditional ingredients, and inaccessibility of parks. These insights support a call for structural changes, including zoning reform, increased funding for immigrant health, and provider training in cultural humility.

Policy Recommendations

1. **Revise BMI Guidelines:** Lower BMI thresholds for screening South Asians should be adopted nationally to enable early diagnosis.
2. **Invest in Community-Based Prevention:** Fund culturally relevant programs led by local South Asian organizations to enhance trust and participation.
3. **Enhance Provider Training:** Mandate continuing education on racial and cultural disparities for healthcare providers.
4. **Improve Access to Preventive Care:** Expand Medicaid and community health clinic funding in immigrant-dense neighborhoods.
5. **Urban Planning Reform:** Ensure parks, sidewalks, and transportation access in areas with high immigrant populations.

Conclusion

Obesity and T2DM in South Asian immigrant communities must be addressed through a health equity lens that centers culture, community, and systemic

accountability. This study demonstrates that community-engaged, qualitative approaches can reveal overlooked barriers and actionable insights. Future interventions must prioritize culturally sensitive, structurally informed, and community-led solutions to reduce chronic disease disparities.

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