Bridging the Gap: Opportunities and Barriers in Diabetes Self-Management Education

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Background

- Diabetes self-management education and support (DSMES) programs play a critical role in managing diabetes, yet engagement remains suboptimal, particularly among Asian Americans (AAs).
- The exclusion of AA perspectives and the tendency to treat them as a homogeneous group overlooks nuanced cultural and social experiences, hindering the development of effective interventions to enhance DSMES engagement.

Aim

To describe the determinants of diabetes self-management education and support (DSMES) program engagement among Asian Americans living in California with type 2 diabetes.

Methods

- Qualitative descriptive study using semi-structured interviews with Filipino, Korean South Asian, Cambodian, Taiwanese, and Vietnamese Americans.
- Recruitment Methods: Outreach, referrals, and social media.
- Sample Size: 12 participants. Information power for data saturation.
- Interviews: audio-recorded & transcribed verbatim.

Data Analysis

- Rigorous, iterative approach using open coding to develop initial codes.
- Codebook created to categorize findings.
- Thematic analysis performed to identify key patterns and insights.

Demographics

Characteristic	N = 12[1]
Years living with Diabetes	
Mean (±SD)	11 (±9)
Years living in the US	
Mean (±SD)	33 (±12)
Number of comorbidities	
comorbidities = 0	5 (42%)
comorbidities = 1	4 (33%)
comorbidities = 2	1 (8.3%)
comorbidities = 3	2 (17%)
Ethnicity	
Khmer (Cambodian)	1 (8.3%)
Chinese	1 (8.3%)
Filipino	2 (17%)
Korean	2 (17%)
South Asian (Tamil, Hindi)	4 (33%)
Thai	1 (8.3%)
Vietnamese	1 (8.3%)
Age	
Mean (SD)	58 (13)
Education	
College graduate and above	7 (58%)
Some college or below	5 (42%)
Employment	
Employed full time	6 (50%)
Employed part time	1 (8.3%)
Other or retired	5 (42%)
Gender	
Man	5 (42%)
Woman	7 (58%)
Participated in DSMES	
Not sure/Yes	4 (33%)
No	8 (67%)
A1C	
Median (Q1, Q3)	7.35 (6.40, 8.50)
Mean (SD)	7.75 (1.65)
Number of Medications[2]	
Up to 3 medications	6 (50%)
Up to 4 medications	4 (33%)
Up to 7 medications	2 (17%)
Effectiveness of SM	
Not effective at all	1 (8.3%)
Slightly effective	3 (25%)
Moderately effective	5 (42%)
Very effective	3 (25%)

[1]Median (IQR) and Mean (sd) or Frequency (%)
[2]Medications may include Januvia, Metformin, Glucophage

Results

Analysis revealed four major themes, and ten subthemes organized using the socioecological model.

Individual-level Enablers and Constraints

Emphasizes the variability in how individuals engage with DSMES and self-management, ranging from conditional engagement to full disengagement to fear-driven responses. Some participants expressed feelings of detachment, disinterest, or lack of investment in DSMES programs or advice.

"Probably if my blood A1C go up again, that's the time I might be thinking to follow the doctor's advice. Been telling me to exercise, walk every day, but I hope it will keep that way if my A1C's down. That's the only thing going to make me worried if my A1C go up again (P3, FA)."

Cultural and Social Influences

Captures the cultural and interpersonal factors that shape DSMES engagement, highlighting both potential motivators and barriers rooted in societal, familial, and cultural norms and relationships.

"It's not something I should feel ashamed about things that people say, and now I'm okay, but at the same time, I was a little bit ashamed of having diabetes,. I'm overweight. I don't really have this control about myself. All those things. It was not something that I would like to talk about with others (P5, KA)."

Systemic and Structural Barriers

Reflect the structural factors that impact AA's engagement with DSMES including limited access to programs and high cost of healthcare.

"I feel like not everything is geared towards me and my situation" (P1, FA), while another added, "The other thing is I need to feel comfortable that the knowledge base is good, also personalized to my need" (P2, OA).

"My insurance company stopped my glucose meter [CGM], uh, paying payment, you know, I mean, and then it jumped to 200 bucks or something, which I could not—I didn't want to pay for that. I couldn't afford that, so then I stopped the glucose meter" (P11, SA)."

Optimizing DSMES for Inclusive Diabetes Care

Need for systemic-level improvements with changes in program accessibility, informational needs, and the need for healthcare provider alignment.

"They say about setting up with a nutritionist and everything. I was like, It's okay. Nah… I eat more Korean food. I felt like the nutritionists wouldn't really know about Korean food. (P5, KA).

"Actually, the language, I'm not worried too much as the understanding my culture and being Asian… some of them, they don't understand our culture and us …" (P8, OA).

Discussion

- Key Barriers: logistical challenges (time, transportation, scheduling), financial constraints, lack of perceived benefits, cultural stigma and reluctance to disclose diabetes status.
- Cultural beliefs and practices plays major role as there was a strong preference for culturally tailored diabetes education that aligns with their dietary and lifestyle practices.
- Reliance on social media and informal networks to access diabetes-related information.
- Family and community support: key facilitators of self-management, reinforcing the importance of community-driven interventions.
- Participants reported negative experiences with healthcare providers, contributing to feelings of marginalization and distrust in the healthcare system.
- Participants emphasized that online platforms (e.g., social media and mobile health apps): valuable sources of diabetes education and does no necessarily mean in-person sessions.

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Conclusion

- Need for culturally responsive DSMES programs, emphasizing family-centered approaches, language support, and prioritization of cultural beliefs.
- Improving DSMES engagement requires multi-level interventions addressing systemic and individual barriers
- Future Directions – Exploration of tailored interventions, mobile health solutions, and policy-driven strategies can enhance DSMES effectiveness for diverse populations.

Exemplars | References

Implications to Practice

- Healthcare providers: proactively discuss DSMES programs, ensure culturally tailored, accessible, and adaptable to diverse needs.
- Expanding DSMES beyond traditional in-person formats: integrating telehealth, social media, and community partnerships can improve engagement and diabetes self-management among AAs.