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ORIGINAL RESEARCH

Understanding Mental Health Service Perceptions in Chinese Americans with Type 2 Diabetes and Co-Occurring Mental Health Challenges Living in New York City: A Qualitative Study

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Purpose: Chinese Americans face disproportionately higher rates of Type 2 Diabetes (T2D) and co-occurring mental health challenges. Little is known about how they perceive mental health care during their journey with diabetes. This study aimed to provide an in-depth exploration of mental health care perceptions in this population.

Patients and Methods: Two focus group discussions involving 12 participants were conducted in Mandarin. Participants were purposively sampled from a previous survey of Chinese immigrants with T2D who reported co-occurring mental health challenges and were recruited through referrals from primary care practices and community-based organizations in New York City. Data were analyzed using inductive content analysis.

Results: The participants in this study ranged in age from 45 to 67 years. Most were female, married, and had low educational attainment (less than a college education) and low annual household incomes (less than USD $25,000). All participants were first-generation Chinese immigrants with limited English proficiency and had health insurance. HbA1c levels ranged from 6.5% to 12.6%. Depressive symptoms and elevated stress were the most commonly reported mental health issues in this sample. Data analysis revealed five categories related to participants' perceptions of mental health care: 1) interactions between mental health and T2D, 2) barriers to accessing mental health care, 3) facilitators of accessing mental health care, 4) coping strategies for mental health challenges, and 5) preferences for mental health services.

Conclusion: This study suggests the complex interactions between T2D and mental health issues among Chinese Americans. The findings indicate that seeking professional mental health services is uncommon among many individuals in this population and highlight several barriers and facilitators to access. The findings also suggest directions for future interventions to support mental health among Chinese Americans with T2D. Addressing mental health needs through effective interventions is essential for providing comprehensive care to this underserved population. Future research should explore the role of stigma in mental health-seeking behaviors, as well as design and assess the effectiveness of mental health interventions for Chinese Americans with T2D.

Keywords: Chinese Americans, minority health, mental health, qualitative, type 2 diabetes, underserved population

Introduction

Mental health issues are common comorbidities for individuals living with Type 2 Diabetes (T2D).[1,2] It is estimated that roughly one in five individuals with T2D experience depressive symptoms, and nearly one in three suffer from diabetes-related emotional distress.[3–5] Besides, individuals with T2D are at a higher risk of developing mental health problems compared to those without, such as anxiety, stress, and depressive symptoms.[6,7] These mental health problems can hinder individuals from managing their T2D effectively,[1,3,8] such as maintaining a healthy diet and engaging in regular physical

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activity, both of which are critical for managing blood glucose levels and preventing diabetes complications. Poorly controlled diabetes can, in turn, exacerbate mental health conditions,[6,7] creating a vicious cycle of deteriorating diabetes outcomes and mental health. Because of this, national organizations, such as the American Diabetes Association, recommend routine mental health screenings and integrating mental health services into diabetes management to provide integrated support for individuals with T2D and improve their overall health outcomes.[7,9]

Chinese Americans experience significantly higher rates of T2D compared to non-Hispanic Whites.[10,11] Nearly one in two Chinese American adults is affected by either T2D or prediabetes.[11] Our recent study revealed that nearly 50% of Chinese Americans with T2D residing in New York City reported experiencing at least one mental health condition (eg, elevated stress, depressive symptoms, or anxiety symptoms).[12] This rate appears to be notably higher than the previous national estimate for the general American population with T2D based on Medical Expenditure Panel Survey data (approximately 23.3% had at least one mental health condition).[13] Our higher rate may be explained by the different criteria used in our study. While the national study assessed mental health among the general American population with T2D based on mental health–related healthcare expenditures using data from the Medical Expenditure Panel Survey, our study directly evaluated mental health by screening for elevated depressive symptoms, anxiety, stress, and diabetes-related distress among a small sample of Chinese Americans with T2D in a single urban setting. It is also worth mentioning that mental health is considered a highly stigmatized issue in the Chinese population,[14] which may result in individuals not seeking help from professionals and underreporting of mental health issues in Chinese Americans with T2D.[15] Therefore, the population affected by mental health issues among Chinese Americans with T2D could be larger than currently reported.

Despite the importance of and national calls for screening mental health issues among individuals with T2D, there is limited understanding of mental health among Chinese Americans with T2D, many of whom are low-income immigrants with limited English proficiency. It remains largely unclear how this minoritized group perceives professional mental health services and what barriers and facilitators exist in accessing them. Even though several studies explored mental health among Chinese Americans, these studies have primarily focused on the general population rather than specifically addressing those with T2D.[16,17] Several quantitative studies have examined and reported the prevalence of mental health issues among Chinese Americans with T2D.[12,18,19] However, the design of these studies limits their ability to provide an in-depth understanding of perceptions on mental health care, as well as the barriers and facilitators in accessing mental health services. To our knowledge, no prior qualitative study has explored how Chinese Americans with T2D perceive and navigate mental health care.

The current study used a descriptive qualitative design and conducted focus group discussions with Chinese Americans with T2D and co-occurring mental health challenges to gain an in-depth understanding of their perceptions of mental health issues and professional mental health service utilization. This study utilized Andersen's Behavioral Model[20] as the guiding conceptual framework. Originally developed to examine factors influencing the use of health services, Andersen's model posits that health service utilization is determined by a combination of environmental (eg, health care system and external contextual factors) and population characteristics (eg, predisposing characteristics, enabling resources, and perceived need). Grounded in this framework, the present study investigated mental health service access and utilization among Chinese Americans with T2D, with a particular focus on identifying the barriers and facilitators that influence their access to mental health care (environmental and enabling resources, predisposing socio-cultural factors), as well as their need and preference for mental health support (perceived need).[20] The conceptual framework was used to inform the interview questions and guide the data interpretation. Understanding perceptions of mental health services among Chinese Americans with T2D could inform culturally tailored interventions to improve integrated T2D care, given the high prevalence of co-occurring mental health issues in this population. The study findings will enhance our understanding of the mental health needs of this population and inform future strategies for providing comprehensive support, ultimately improving health outcomes in this underserved group.

Methods

Study Aim

This study aimed to obtain an in-depth understanding of perceptions of mental health care among Chinese Americans with T2D and co-occurring mental health challenges. We identified the Population, Phenomena of Interest, and Context (PICO) elements of this study: The population of interest was Chinese Americans with T2D and co-occurring mental health challenges. The phenomenon of interest was their perceptions of mental health care alongside their diabetes journey. The context of this study was New York City.

Study Design

This study employed a descriptive qualitative design using focus group discussions. Descriptive qualitative research aims to provide an in-depth understanding of phenomena that are not yet well understood, making it suitable for the objectives of the present study.

Sample

Purposive sampling was employed. To recruit Chinese Americans with T2D and co-occurring mental health challenges, we purposefully sampled participants who reported co-occurring mental health challenges in our previous survey[12,21–23]. Participants in the previous survey were recruited through referrals from multiple primary care practices and community-based organizations in New York City. At the time of recruitment for the survey, the researchers also explained the current qualitative study to potential participants, including the rationale for conducting follow-up qualitative research, study aims, procedures, and voluntary participation. Those who consented to participate in the follow-up qualitative study and reported at least one co-occurring mental health challenge (elevated stress, depressive symptoms, anxiety symptoms, or a diagnosed mental health disorder) in our previous research were invited to join the current focus group discussions.

Inclusion and Exclusion Criteria

The inclusion criteria for this study were: 1) self-identified as Chinese American or Chinese immigrant; 2) aged 18 years or older; 3) diagnosed with T2D; 4) had attended a mental health screening and reported having mental health symptoms in our prior studies; 5) able to understand and speak Mandarin; and 6) willing to provide written consent to participate in the focus group discussion. Individuals who were unable to understand or speak Mandarin, or unwilling to provide consent to participate were excluded.

Study Setting

The focus groups were conducted in a separate, quiet meeting room in the community-based organization in New York City. The room was maintained at appropriate temperature, humidity, and noise levels to minimize external biases and distractions that might affect participants' responses. The two focus groups were conducted during March and April 2023. Each participant received a $25 gift card as compensation for their time. Ultimately, a total of 12 participants took part in the study.

Data Collection

This study used semi-structured focus group discussions for data collection. A tailored interview guide was developed by extensive discussions within the research team. Examples of the interview questions included: "When you hear the term 'mental health,' what comes to mind?" and "When you are feeling sad or down, what do you normally do to make you feel better?" The detailed interview guide is presented in Supplementary File 1.

Two focus groups were conducted: one with seven participants and the other with five. The interview began with a restatement of the study overview, purpose, procedures, and participants' rights. Participants were asked to answer and discuss the interview questions one by one and were encouraged to provide in-depth responses through follow-up questions such as, "Can you share more about that?" To ensure consistency, the focus groups were facilitated by the same

three researchers from the research team (one as the primary facilitator, one as the secondary facilitator, and one as a note taker), all of whom received training in facilitating focus group discussions. All focus group discussions were conducted in Mandarin. Field notes were taken. All discussions were audio recorded. The researchers transcribed the recordings verbatim immediately after each discussion. Each focus group discussion lasted about 90 minutes.

Data Analysis

Data were analyzed using inductive content analysis, a qualitative data analysis technique in which findings are derived directly from the text rather than being based on pre-defined categories.[24] In this study, the researcher reviewed the transcripts multiple times to familiarize themselves with the data. The textual data were read line by line, and the content relevant to the research questions was identified. Initial codes were generated to capture key ideas related to the participants' perceptions of mental health care. These initial codes were subsequently grouped into broader subcategories and categories. The data were analyzed in Chinese, and categories, subcategories, and quotations were translated into English for reporting. The data analysis process was extensively discussed in regular meetings within the research team.

All researchers involved in this study are dedicated to understanding and promoting overall well-being among Chinese immigrants with T2D. The research team included both researchers and health care providers, with collective expertise in chronic disease research and specialized experience in serving Chinese immigrant communities. All researchers have Chinese backgrounds, which contributes to a deep understanding of how Chinese culture may influence individuals' disease management. The researchers acknowledged that their cultural backgrounds could introduce potential bias in data interpretation. To mitigate this, they practiced reflexivity throughout the data analysis process, engaging in ongoing reflection and discussion. The entire team participated in data coding, analysis and interpretation. Disagreements were resolved through regular team meetings until consensus was reached.

Ethical Approval

This study was conducted in accordance with the Declaration of Helsinki. This study was reviewed and approved by the Institutional Review Board of the New York University Grossman School of Medicine (S18-00609). Written informed consent was obtained from all participants before the focus group discussions. The participants' informed consent included publication of anonymized responses and direct quotes. During these discussions, the researchers closely observed participants for any signs of mental health concerns. If a participant exhibited symptoms of mental health issues, such as anxiety or stress, they were promptly provided with information about available mental health services. In this study, no participants were observed to show signs of mental health issues throughout the focus group discussions.

Results

A total of 12 Chinese Americans with T2D participated in two focus groups, with ages ranging from 45 to 67 years. Most participants were female (n = 7), married (n = 9), had educational attainment below college level (n = 8), and had annual household incomes lower than USD $25,000 (n = 10). All participants were first-generation Chinese immigrants with limited English proficiency and had health insurance (n = 12). The median duration of US residency was 19 years (range: 5 to 38 years). HbA1c levels varied from 6.5% to 12.6%. Most participants experienced multiple mental health challenges (n = 8). Depressive symptoms (n = 10) and elevated stress (n = 9) were the most reported mental health issues, followed by anxiety symptoms (n = 4). Three participants also reported a prior diagnosis of mental health conditions (2 with diagnosed depression and 1 with diagnosed anxiety disorder). Table 1 presents the characteristics of the participants.

All participants actively engaged in the discussion and shared their views on mental health care in the context of T2D. Five categories emerged from the data analysis: 1) interactions between mental health and T2D, 2) barriers to accessing mental health care, 3) facilitators of accessing mental health care, 4) coping strategies for mental health challenges, and 5) preferences for mental health services. Table 2 presents the categories and subcategories that emerged from the analysis.

Table 1 Characteristics of the Participants (n = 12)

No.	Age	Gender	Highest Education Level	Marital Status	Annual Household Income	Employment Status	Insurance	Born outside the US	Limited English proficiency	Duration of Residency in the US (years)	Mental Health Issues/Symptoms [a]	HbA1c level [b]
P1	45	Male	Elementary school	Married	> $25,000	Full-time employment	Medicaid	Yes	Yes	20	Moderate perceived stress	7.7
P2	67	Male	High school	Married	< $25,000	Retired	Medicaid, Medicare	Yes	Yes	35	1. Moderate perceived stress 2. Moderate depressive symptoms	8.7
P3	52	Female	College	Married	> $25,000	Part-time employment	Private insurance	Yes	Yes	9	1. High perceived stress 2. Severe depressive symptoms 3. Anxiety symptoms	9.8
P4	55	Female	College	Married	< $25,000	Self-employed	Medicaid	Yes	Yes	20	1. Moderate depressive symptoms 2. Anxiety disorders (diagnosed) [c] 3. Anxiety symptoms	10.5
P5	59	Female	High school	Married	< $25,000	Not employed	Other types of public/ government insurance	Yes	Yes	19	1. Moderate perceived stress 2. Moderate depressive symptoms	7.3
P6	59	Female	High school	Married	< $25,000	Part-time employment	Other types of public/ government insurance	Yes	Yes	13	1. Moderate perceived stress 2. Moderate - severe depressive symptoms 3. Borderline abnormal anxiety symptoms	6.5
P7	60	Male	College	Married	< $25,000	Not employed	Medicaid	Yes	Yes	13	1. Moderate perceived stress 2. Moderate depressive symptoms	7.1
P8	58	Female	Never attended school	Married	< $25,000	Not employed	Medicaid	Yes	Yes	5	1. Moderate perceived stress 2. Severe depressive symptoms 3. Anxiety symptoms 4. Depression (diagnosed) [c]	7.2
P9	59	Female	High school	Never married	< $25,000	Not employed	Medicaid	Yes	Yes	13	Moderate depressive symptoms	7.5
P10	61	Male	High school	Married	< $25,000	Not employed	Medicaid	Yes	Yes	32	Moderate perceived stress	12.6
P11	59	Male	College	Never married	< $25,000	Not employed	Other types of public/ government insurance	Yes	Yes	25	Moderate depressive symptoms	11.1
P12	59	Female	High school	Divorced	< $25,000	Not employed	Medicaid	Yes	Yes	38	1. Moderate perceived stress 2. Moderate-severe depressive symptoms 3. Depression (diagnosed) [c]	7.1

Notes: [a] Stress symptoms were assessed using participants' self-reported scores on the Perceived Stress Scale from the previous survey. Anxiety symptoms were evaluated based on participants' self-reported scores on the anxiety subscale of the Hospital Anxiety and Depression Scale. Depressive symptoms were determined using participants' self-reported scores on the Patient Health Questionnaire-9. [b] The most recent HbA1c level was used for assessment. [c] The participant reported that the mental health issues mentioned had been previously diagnosed by a healthcare provider.

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Table 2 Categories and Subcategories That Emerged from the Analysis

Categories	Subcategories
1. Interactions between mental health and T2D	1) Impact of high glycemic levels on mental health.
	2) Impact of mental health on T2D self-care behaviors.
2. Barriers to accessing mental health care	3) Social stigma
	4) Lack of understanding
	5) High costs of professional services
	6) Language barriers
3. Facilitators of accessing mental health care	7) Having knowledge and awareness
	8) Receiving support from friends and family
	9) Availability of mental health services
4. Coping strategies for mental health challenges	10) Seeking support from family and friends
	11) Engaging in physical activity and other hobbies
	12) Maintaining a positive mindset
5. Preferences for mental health services	13) Preference for delivery methods
	14) Preference for culturally competent providers

Interactions Between Mental Health and T2D

Participants believed that mental health issues are common in individuals with T2D. They also agreed that T2D diagnosis and management caused mental health issues for them, such as anxiety, stress, and low mood. They believed these mental health issues primarily came from uncontrolled blood sugar levels. Participants also mentioned that living as an immigrant was inherently stressful, and a diabetes diagnosis further exacerbated their stress.

> Sometimes the blood sugar result is very high, it makes me stressed out and worried about why my blood sugar is getting higher and whether it can be well controlled…Reducing blood sugar is not easy. Sometimes, my mood is not good because of it (when my blood sugar is high), I find myself, sometimes, unable to laugh at comedies like I used to… then I realized that I was a bit depressed, and my mental health is not as good as it was before.*(P5)*

> Living as an immigrant is not easy; stress comes from many aspects of life, like work, housing, and family relationships… In this situation, having diabetes adds additional stress to our lives.*(P3)*

Some participants also stated that anxiety caused by uncontrolled blood sugar levels motivated them to become more adherent to medication taking or physical activity:

> When my blood sugar is high, I feel anxious about it, I try to recall what I have done during the past days, like whether I missed any diabetes medications…then I pay more attention to taking my medication as prescribed by the doctor. *(P11)*

Barriers To Accessing Mental Health Care

Participants reported multiple barriers to accessing professional mental health services during their T2D journey. A primary barrier was the social stigma associated with mental health conditions. Participants mentioned that mental health issues are often perceived as a sign of being "crazy", making them reluctant to seek support from mental health professionals. For instance, they said:

> In our (the Chinese) community, seeing a psychiatrist is misunderstood. People think it means you're crazy, and they feel scared of you. So, I didn't go to see a psychiatrist. *(P10)*

> Chinese people have this belief that once you have 'mental health' issues, it's as if you are out of your mind.*(C9)*

Another barrier was the lack of awareness and understanding of mental health. Participants expressed difficulty in recognizing the signs or symptoms of mental health conditions. They were uncertain whether their negative emotions and behaviors were indicative of mental health issues. One participant said:

> I don't even know what's wrong with my mental health. Sometimes I overthink things, but I'm not sure why. It feels like we talk about these things all the time, but we don't really understand what it means to have mental health issues. I'm not sure if what I'm doing is right, or if it's wrong. I feel lost—like nothing feels right. Is that a sign of mental health issues? Sometimes I feel really confused, like I'm doing things without knowing why. If this is a problem, who should I go to for help? I don't know. *(P2)*

Participants viewed the high cost of mental health care as another barrier to seeking help. One participant said:

> Basically, I don't go to see a mental health professional at all because it's really expensive. No one in Flushing [Chinatown in Queens, New York] can afford to spend $100 or $200 an hour on something like that. It's hard to justify when you're already feeling stressed. Honestly, I don't need to spend that kind of money. People work hard just to earn $200 a day—that's already a lot of effort. To then spend that entire amount in one hour with no guarantee that it will actually help, or that it will work for me, just doesn't seem worth it. *(P4)*

One participant who speaks Cantonese also mentioned that language was a barrier, and it was hard for her to find a mental health provider who can speak Cantonese. She said:

> Language is a problem… even though I can understand very basic English, I cannot communicate in English well. I also cannot accurately describe my situation in English. So, I expected the provider could speak Cantonese for more convenient communication. *(P3)*

Facilitators of Accessing Mental Health Care

Despite these barriers, several factors were reported as facilitators of utilizing professional mental health services. Primarily, education and increased awareness about mental health were viewed as crucial for reducing stigma and promoting help-seeking behaviors. Participants highlighted the importance of normalizing mental health issues and acknowledging them as prevalent health concerns experienced by every individual in daily life. One participant said:

> Mental health isn't about being crazy. It's like diabetes—if untreated, it can cause serious issues. I don't know what you can do to deal with it other than seeking professional help. *(P13)*

Second, the support of friends and family was identified as a key facilitator in encouraging the use of mental health services. Many participants shared how their friends had encouraged them to seek help during times of struggle. One participant said:

> I quickly called my friends to ask for advice. They told me that people who are seriously ill are more prone to depression. They said I shouldn't be alone at home, especially when I start feeling like I might jump from the fourth floor. That's how I felt. Later, each of them told me the same thing: they said I should see a mental health professional. *(P3)*

Lastly, the availability of mental health resources in the community was cited as an important facilitator. Participants emphasized that easier access to professional services would make it more likely for them to seek help. For them, having accessible services within their local community could reduce the barriers to seeking help and encourage individuals to engage with mental health professionals. For example, one participant noted,

> Yes, it can be easier if get professional help from the community. *(P8)*

Coping Strategies for Mental Health Challenges

Coping strategies refer to patients' thought processes or actions that help them deal with unpleasant or stressful situations. Participants reported several coping strategies that they used to manage mental health issues while living with T2D. One key strategy was seeking social support from friends and family. Many participants mentioned that sharing their experiences with friends and family helped them overcome mental health challenges and alleviate stress. This sense of connection with others was essential in providing emotional relief and a sense of understanding. For example, two participants said:

> During gatherings with friends and family, we chat, and everyone offers advice or shares their perspectives on how to manage stress and anxiety, I would also listen to others' stories. Gradually, I felt better. *(P3)*

> If you have friends to talk to, you can share with them. Having a good friend to talk to can reduce your stress from 100% to 50%. *(P11)*

Many participants found that exercise and hobbies helped them manage stress effectively. They said:

> I play the *Erhu* (a traditional Chinese musical instrument) when I feel upset and distressed. Time flies when I'm immersed in playing it. *(P2)*

> Over the past two years, through diet, medication, and exercise, my blood sugar levels have become almost normal. Now, I feel a bit better and not as stressed as before. *(P10)*

Participants also mentioned that maintaining a positive mindset is effective in coping with mental health challenges alongside their diabetes journey. For these participants, maintaining a positive outlook was crucial in navigating both the challenges of their health and the stresses of daily life. They said:

> Your mindset matters; a lot of things happen these days, but you have to stay open and positive. *(P8)*

> Whether you're in a bad mood or a good mood, it's just one day. Don't take things too personally. Eat your own food, do your own thing, and live in a way that makes you happy. That's it, right?. *(P6)*

Notably, although participants discussed various coping strategies, they did not spontaneously mention seeking help from formal mental health professionals, such as therapists or psychiatrists.

Preferences for Mental Health Services

When it came to preferences for mental health services, most participants expressed a strong preference for in-person mental health services. They believed that face-to-face interactions made them feel more relaxed and comfortable Besides, participants also acknowledged that online services could be acceptable. They mentioned:

> I think face-to-face is best because some people have privacy concerns. *(P9)*

> Some aspects of what we discuss are more personal and private, so one-on-one sessions are necessary. *(P11)*

Group sessions were also brought up as a preferred service format. Participants believed that group settings could facilitate communication and mutual understanding. Two participants added:

> Group settings would work because people may have shared experiences, and we can learn from each other. *(P3)*

> In group settings, everyone can feel free to share, and the doctor (referring to the mental health professional) can better understand the challenges we face. *(P4)*

In addition to the format of services, participants emphasized the importance of working with providers who were not only skilled but also reliable, trustworthy, and culturally competent. The need for mental health professionals who understood their cultural background and spoke their language was a key factor in accessing and benefiting from mental health care. For example, one participant said:

> Of course, language matters. While I can understand English, I'm not able to communicate in it [English] effectively. *(P3)*

Discussion

Guided by the Andersen's Behavioral Model, this study employed a descriptive qualitative design to provide an in-depth understanding of the perceptions of mental health care among Chinese Americans with T2D and co-occurring mental health challenges. Our findings suggested the complex interactions between mental health issues and T2D and identified several coping strategies managing their mental health while living with T2D. This study also identified facilitators and

barriers to accessing mental health care, along with participants' preferences for mental health services. Considering the high prevalence of mental health challenges among Chinese Americans with T2D, these findings contribute important insights to the limited research on mental health in this population. This study's findings are valuable for understanding the unique mental health needs and preferences of Chinese American patients with T2D and co-occurring mental health challenges, as well as for the development of culturally and linguistically tailored care access for this population. This knowledge is essential for enabling integrated T2D care for this community in real world setting. These findings are also important for healthcare providers to take meaningful action, develop effective strategies for addressing both physical and psychological needs, and deliver comprehensive care to this underserved group.

This study confirmed that uncontrolled blood sugar levels can lead to or exacerbate mental health issues (such as anxiety, stress, and depressive symptoms) for Chinese Americans. This finding is consistent with previous research indicating that individuals having T2D experience significantly higher rates of mental health issues compared to those without T2D.[6] This finding also aligns with previous quantitative studies on Chinese Americans with T2D, suggesting that a significant proportion experience diabetes-related distress,[12,18,19] with emotional burdens identified as the most prevalent source of distress for Chinese Americans with T2D.[18]

Previous evidence suggests that mental health issues are associated with poor self-care activities, such as maintaining a healthy diet and engaging in physical activity, which may subsequently result in sub-optimal diabetes control.[3,8] However, this study found that for Chinese Americans with T2D, diabetes-related mental health challenges sometimes motivated them to reflect on their self-care behaviors and take action to improve diabetes management. This discrepancy may be related to the study sample: most participants experienced manageable mental health symptoms instead of suffering from severe mental health disorders. Besides, it may also be related to the fact that participants in this study are self-nominated; those with T2D and severe mental health issues may be reluctant to participate in this study, leading to their voices being underrepresented. However, this finding is important as it highlights the complex interactions between mental health and T2D management. Future research is recommended to consider investigating the impact of different levels of mental health severity (mild versus severe) on T2D management.

An important finding of this study is that, although participants described various coping strategies for managing mental health issues (such as seeking support from family and friends, engaging in physical activity, and maintaining a positive mindset), none of them spontaneously mentioned seeking help from a formal mental health service. This finding aligns with results from a previous survey, which showed that despite nearly half of 74 Chinese Americans with T2D experiencing mental health problems, only 3% used mental health services.[12] This finding echoes a previous study on help-seeking behaviors among 907 older Chinese immigrants with depression in Chicago, which showed that less than 1% sought help from professional mental health services (psychologists and psychiatrists) to manage their depression.[17] Our finding, together with previous evidence, suggests that access to professional mental health care remains an unmet need in the Chinese American community. Since not seeking help from professionals may prevent individuals from receiving timely assistance to manage their mental health conditions and could also worsen their diabetes management, healthcare professionals should be aware of the co-occurrence of mental health issues in Chinese Americans with T2D. Healthcare providers may consider screening Chinese Americans with T2D to identify those at risk of mental health challenges and offer appropriate support, such as referrals for mental health interventions, if they screen positive.

Notably, this study identified several barriers that may explain why Chinese Americans with T2D are reluctant to seek professional help, with social stigma surrounding mental health emerging as a particular factor. This finding is consistent with another qualitative study on Chinese Americans,[16] which found that shame and the negative perception of having mental health issues are prevalent, making individuals reluctant to discuss their mental health struggles with others and discouraging them from seeking help. This finding also reinforces that mental health is considered a highly stigmatized issue in Chinese culture.[14] It is important to note that stigma is not limited to mental health; individuals diagnosed with T2D may also experience significant diabetes-related stigma.[25] It is thus recommended that stigma be further examined among Chinese Americans within the context of T2D, such as its prevalence, severity and associated factors, to facilitate a more comprehensive understanding of this barrier. In clinical practice, we recommend that healthcare providers serving Chinese Americans with T2D and mental health issues be aware of this stigma and work to address this barrier, such as by creating a non-judgmental environment, which may encourage them to seek professional mental health care.

This study also identified a lack of understanding and awareness about mental health as a barrier to seeking mental health services, while having knowledge and awareness about mental health were identified as facilitators of accessing mental health care. This finding is not surprising and is consistent with previous studies on mental health needs in Chinese Americans, which reported that many participants reported limited understanding of mental health and emphasized the need to learn more about mental health.[16] Without adequate knowledge, Chinese Americans with T2D may not be able to recognize the symptoms of mental health issues or be aware of the potential co-occurrence of mental health conditions and therefore may not seek timely help. A population-based survey from China showed that a substantial portion of Chinese people had limited knowledge about the causes, treatment, and prevention of mental illness and had some misunderstandings about mental health issues.[14] For example, nearly 60% thought that mental illness cannot be prevented, and 43% thought that mental health problems cannot be cured.[14] Therefore, our findings highlight the importance of providing education on potential mental health issues in individuals with T2D to enhance knowledge and awareness about mental health.

This study also identified mental health needs and shed light on directions for future interventions and strategies designed to support mental health in Chinese Americans with T2D, as participants identified key facilitators and preferences for mental health services. Based on their feedback, several factors should be taken into consideration when designing mental health support interventions: 1) inclusion of culturally and linguistically competent providers, 2) preference for in-person group session delivery, 3) involvement of support from family members and friends, and 4) ensuring easy accessibility. Participants also raised concerns about the high financial costs associated with these mental health services, so the cost-effectiveness of these interventions should be considered when designing supportive interventions for this population. Incorporating these needs into the intervention design may be effective in promoting the use of mental health services during their diabetes journey and subsequently improving their diabetes outcomes.

Some limitations must be acknowledged. Firstly, participants in this study were recruited from a metropolitan city in the US. Most participants were from older age groups, with lower levels of education, income, and limited English proficiency. If younger individuals with higher education, income, and English proficiency, or those residing in more rural regions had been included, the findings might have been enriched. Second, the self-selection of participants who volunteered to share their views may introduce bias. Since mental health is often considered a stigmatized topic in Chinese culture, individuals with different experiences or those reluctant to discuss their perspectives may not be adequately represented in this study. Another limitation is the potential for response bias, including social desirability bias, in participants' answers to the interview questions. To address this, the research team made it clear that the researchers were independent of the participants' healthcare providers and transparently communicated the study's purpose. Additionally, participants were sampled from our previous studies, and many had already developed rapport with the research team. This existing relationship helped create a trusting environment that encouraged open and honest discussion. Another limitation is the uncertainty regarding data saturation, as only a small number of participants consented to participate. This may be due to the small sampling pool and stigma associated with mental health and reluctance to discuss such issues, which could affect the comprehensiveness of the findings. Lastly, individuals with severe mental health issues (such as severe depression) might not be represented in this study, as the severity of their conditions could have reduced their interest or capacity to participate. Given the descriptive nature of this qualitative study, this study was not able to identify patterns or potential links between clinical characteristics of T2D and levels of mental health challenges. Future quantitative research is recommended to provide robust evidence in this area. Despite these limitations, the current study offers rich and nuanced insights into mental health perceptions among Chinese Americans with T2D, which remains not well-understood.

Conclusions

This study offers rich knowledge about mental health perceptions among Chinese Americans with T2D and co-occurring mental health challenges. This study suggests the complex interactions between mental health issues and T2D. The findings reveal that seeking help from a professional is not common in this population and identified several barriers and facilitators related to accessing mental health services. The findings also point out directions for future interventions to support mental health in Chinese Americans with T2D. The findings are important for healthcare providers to take

meaningful action, develop effective strategies to address both physical and mental health needs, and provide comprehensive care to this underserved population. Future research should focus on exploring the stigma experienced by this population. Ongoing studies designing and evaluating mental health interventions in Chinese Americans with T2D are also encouraged.

Data Sharing Statement

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate

This study was reviewed and approved by the Institutional Review Board of the New York University Grossman School of Medicine (S18-00609). Written informed consent was obtained from all participants prior to the focus group discussions.

Consent for Publication

Not applicable for the current review.

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Disclosure

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