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The Perspective of Care Providers about Barriers to Medication Adherence among Asian

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The perspective of care providers about barriers to medication adherence among Asian Americans suffering from depression

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Abstract

Background: Asian Americans form a growing part of American society, and it is critical to address the mental health challenges of this growing population. Due to the minority status of this community, limited information is available regarding the details of unique issues experienced by members of this community in accessing and continuing treatment for mental health disorders. Depression is a critical high-prevalence mental health illness affecting Asian Americans, and low depression medication adherence is an important factor in this illness remaining undertreated in community members. Understanding the barriers to depression medication adherence for Asian Americans is thus critical to effectively addressing this community's mental health needs.

Aim: This qualitative research study explores the barriers to depression medication adherence in Asian Americans from the perspective of mental health professionals, including mental health prescribers and behavioral health counselors.

Study Design: In this qualitative research study, we conducted in-depth interviews with 13 participants, including five mental health prescribers and eight behavioral health counselors from a local institution with extensive experience treating and working with Asian American clients with depression. To analyze the data, a thematic analysis approach was employed. Audio recordings of interviews were transcribed and analyzed with the help of a coding tool. The information obtained through the study was then systematically categorized into themes, sub-themes, and codes to derive systematic conclusions supported by quotes from participants.

Result: This study identified several barriers to medication adherence in Asian Americans with depression that fall under five broad themes: personal barriers, financial burden, the family's

dual role as a facilitator or a hindrance, cultural and personal beliefs, and the role of healthcare system and strategies to overcome barriers to medication adherence. Some barriers unique to Asian Americans, such as stigma associated with mental illness, cultural beliefs, psychosocial problems like language barriers and cultural differences, and strong family influence in mental health decisions, were also highlighted by the participants in this study. Furthermore, several strategies employed by mental health professionals to overcome barriers to medication adherence for their clients were also uncovered through the analysis in this study.

Keywords: Asian Americans, depression, medication adherence, family, mental health professionals, and qualitative research.

Asian Americans (AAs) term in this study refers to a diverse array of people, including immigrant and refugee individuals from Asian countries, individuals with Asian backgrounds but born in America, and individuals with Asian Pacific Islander backgrounds.

Mental health prescribers include psychiatrists and psychiatric-mental health nurse practitioners, and behavioral health counselors include roles such as social workers, case managers, and counselors.

Introduction

Asian Americans (AAs) form a rapidly growing part of the American population. They already comprised 5.7 percent of the United States (US) population in the 2019 census (*Asian American - the Office of Minority Health*, 2019). Despite being a significant part of the population, the subtleties of this group's mental health needs and treatments are still not well understood. Among mental health conditions, depression is a common disorder that affects 5% of the adult world population, according to the World Health Organization (World Health Organization, 2023). Not surprisingly, depression is a significant disorder among AAs. The Covid-19 pandemic has increased public awareness of the increased prevalence of depression in the general community (Twenge & Joiner, 2020). However, the impact of Covid-19 on mental health varies by ethnicity. For example, the pandemic has dramatically worsened depression in AAs, possibly related to the rise in violent and discriminatory episodes directed toward this community (Lozano et al., 2021). This significant unmet need requires a systematic study of depression in AAs while considering the cultural diversity in this population and identifying treatment protocols that are more likely to be adopted and effective in AAs.

Many different factors, some specific to depression and some specific to the AA population, are responsible for the difficulty in diagnosing and addressing the problem of depression in the AA community. First and foremost, AA subgroups include individuals with a vast array of different cultural backgrounds. This issue is further complicated because a significant fraction of these immigrants and refugees have had to adjust to the culture in the US and can have different levels of acculturation (Kalibatseva & Leong, 2011). A common reason for the difficulty in diagnosing depression in AAs is the heavy reliance of diagnostic criteria on

Western culture, making them less sensitive to depression experienced by individuals from other cultures (Kalibatseva & Leong, 2011). For instance, individuals who grow up in Western society are comfortable expressing sadness, feeling worthless, or hopelessness. At the same time, AAs are less likely to express these feelings and report somatic symptoms like changes in appetite, body aches, headaches, and insomnia (Kalibatseva & Leong, 2011; Kim et al., 2015). In addition to differences in symptom reporting between AAs and Western individuals, Asian society also feels stigma, shame, or embarrassment associated with mental health disorders (Chen et al., 2015; Kim & Im, 2015). As a result, AAs are less likely to seek help when experiencing mental health disorders like depression. For instance, according to the U.S. Department of Health and Human Services, Asians were 60% less likely to have received mental health treatment than non-Hispanic whites in 2018 (Mental and Behavioral Health - Asian Americans. 2021). This treatment-seeking behavior is significantly affected by the acculturation level in AAs. AAs with low levels of assimilation with American culture are less likely to seek help for mental health-related issues (Miller et al., 2011). Furthermore, at least for some fraction of immigrant AAs, the difficulty expressing themselves fluently in English and lack of knowledge regarding avenues to seek help related to mental health disorders can keep them from getting the help they need (Kim et al., 2015). The language barrier is also a major factor in preventing the proper diagnosis of mental health disorders like depression in AA (Kim et al., 2015).

A unique feature of treatment-seeking behavior among AAs with mental health disorders is the popularity of alternative medicinal treatments (Felicilda-Reynaldo et al., 2019; Mehta et al., 2007), the desire of some Asians to continue using herbal medication while also taking medication prescribed by their mental health prescribers can complicate treatment strategy due to the possibility of adverse interaction between these medications (Mehta et al., 2007).

Furthermore, the belief that a mental health disorder like depression results from psychosocial stress can drive this population towards more psychological rather than pharmacological treatments for depression. For instance, Chen et al. (2015) found that an overwhelming majority of Chinese Americans preferred to use either self-help in the form of self-care, exercise, reading, or help from friends and family to address their depression-like symptoms as against seeking help from professional mental health prescribers (Chen et al., 2015). Similarly, Kim and Im (2015) found that most first-generation Korean Americans were most willing to try an intervention like exercise. At the same time, most Korean Americans were unwilling to try antidepressant medication due to stigma towards Western depression treatments (Augsberger et al., 2015; Kim & Im, 2015). This strong preference to avoid Western medication for mental health disorders can create significant barriers to medication adherence in AAs suffering from depression.

With the rising proportion of Asians in American society and the importance of addressing the issue of mental health in America, we believe it is necessary to study and understand the issue of mental health in AAs in more detail. Therefore, it is essential to acknowledge the inherent diversity in this population in terms of language, culture, social norms, and beliefs to refine treatment approaches for mental health problems in AAs effectively. To assist with this need, this project will aim to collect and organize information that already exists with the providers, albeit disorganized, to hopefully help them achieve better outcomes in AAs suffering from depression in the future.

Structural, Cultural & Racial Inequity

The primary question to be answered through this project, by its nature, is racial inequity in the context of depression treatment. Being a minority in the US, research on the most effective mental health treatments typically does not focus on the preferences of AAs. As a result, they are more likely to abandon courses of treatment that do not suit them well before completion. The outcome of this project will provide a voice to this growing community in the context of their mental health needs, albeit at a local organization as a starting point. Therefore, we believe that the potential future improvements in depression treatments guided by the outcome of this project will help improve the general mental health status of the local Asian community.

Problem Statement

While there are many directions through which characteristics of depression in AAs can be studied to determine strategies to achieve improved outcomes in AAs suffering from depression, this project aims to precisely understand the nature of the barriers to medication adherence for AAs suffering from depression. The effectiveness of a treatment program is critically dependent on the willingness of clients to follow the required course of treatment (Stein-Shvachman, 2013). Therefore, it is essential to consider the target client population's preferences while designing a treatment program. Furthermore, the complicated nature of depression, the psychological as well as biochemical roots of depression, and the variation in the form/symptoms of the disorder experienced/described by clients from one subgroup to another make it very important for mental healthcare professionals to tailor their treatment approach to individual subgroups for high client compliance with the treatment plan as well as high effectiveness in addressing the root cause of the disorder (Kaltenboeck & Harmer, 2018; Kirmayer, 2001; Remes et al., 2021). As an initial step in this direction, the research team will

collect information about these barriers to medication adherence from the perspective of providers and behavioral health counselors with experience with treating depressed AAs clients.

The project will employ a qualitative approach utilizing in-depth interviewing to gather detailed information and identify patterns and themes in the data. The data will be analyzed using the thematic analysis method. Finally, the results will be used to develop recommendations for improving depression treatment strategies for AA clients to reduce medication noncompliance rates.

Background and Significance

Complex Nature of Depression

Depression, which is classified as a major depressive disorder (MDD) in The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), is characterized by persistent feelings of depressed mood and a significant loss of interest or pleasure in previously enjoyed activities (American Psychiatric Association, 2022). These symptoms must persist for at least two weeks and are accompanied by at least five additional symptoms that disrupt the individual's usual functioning (American Psychiatric Association, 2022). These additional symptoms include noticeable changes in weight or appetite, difficulties with sleep such as insomnia or excessive sleepiness, observable restlessness or slowed movements, persistent fatigue or loss of energy, feelings of worthlessness or excessive guilt, impaired ability to think, concentrate, or make decisions, and recurrent thoughts of death, suicidal ideation, or a suicide attempt (American Psychiatric Association, 2022). These symptoms must occur nearly daily and cause significant distress or impairment in critical areas of life, such as social or occupational functioning (American Psychiatric Association, 2022).

Depression is a "Neuroprogressive" disorder characterized by symptoms worsening over time (Moylan et al., 2012). Neuroprogression, as explained by Moylan et al. (2012), involves the progressive nature of the illness, including an increase in the frequency and duration of depressive episodes, greater autonomy of the illness, and a genetic predisposition (Moylan et al., 2012). The risk of an individual developing depression significantly increases if there is a family history of depression (e.g., diagnosis of depression in parents or siblings) (Beurel et al., 2020). Notably, even minor life stressors can trigger subsequent episodes (Berk et al., 2013; Maletic et al., 2007; Moylan et al., 2012).

Treatment Approaches for Depression

The primary forms of treatment for depression include psychotherapy and pharmacotherapy (Kamenov et al., 2017; Stahl, 2021). Psychotherapy can come in many different forms, including 1) Cognitive Behavioral Therapy (CBT), 2) Behavioral Activation (BAT), and 3) Interpersonal Therapy (IPT), while pharmacotherapy generally include antidepressants like selective serotonin reuptake inhibitors (SSRI), serotonin and norepinephrine reuptake inhibitors (SNRI) and norepinephrine and dopamine reuptake inhibitors (NDRIs), which increase the levels of their respective monoamines in the brain (Park & Zarate, 2019; Stahl, 2021). Psychotherapeutic approaches are generally reserved for mild to moderate depression, while pharmacological steps control moderate to severe depression (Park & Zarate, 2019). Different forms of psychotherapy mentioned above try to approach the problem from different angles. For instance, one of the most well-studied psychotherapies, i.e., CBT, involves a therapist attempting to challenge and modify the dysfunctional beliefs of clients that affect their emotions and behavior (Cuijpers et al., 2019; Park & Zarate, 2019). On the other hand, BAT

involves encouraging clients to schedule pleasant activities and increase positive interactions in their lives. At the same time, IPT takes a very structured approach to address interpersonal issues experienced by depressed clients. Among all interventions, CBT is the dominant form of psychotherapy (Cuijpers et al., 2019; Park & Zarate, 2019). While psychotherapy or pharmacotherapy can be effective independently, combination therapy with both modalities is more effective (Kamenov et al., 2017; Rust et al., 2004; Stahl, 2021). Apart from the treatments administered by trained mental health professionals, the stigma associated with mental health disorders drives clients with mild cases of depression towards alternative therapeutic approaches that can be tried without professional help. These approaches can include simple strategies like regular exercise, diet control, and mindfulness meditation (Knapen et al., 2015).

Factors Associated with Underutilization of Depression Treatment in Asian Americans

Managing depression in AAs presents challenges that are unique to this population. For example, the preference of Asian communities to rely on self-help or help from friends and family over formal psychiatric treatment drives them away from antidepressants – an essential tool in managing depression (Chen et al., 2015; Kim & Im, 2015). This avoidance of antidepressants in AAs has been observed in studies trying to measure this effect differently. According to the Centers for Disease Control and Prevention (CDC), a study conducted in the U.S. from 2015 to 2018 found that the prevalence rate of antidepressant use in Asians meeting the criteria for depressive disorder was 2.8% versus 16.6% for the non-Hispanic white population (Brody, 2020). Haro et al. (2015) found that even for Asian clients taking antidepressants, the rate of discontinuation of the drug in less than three months was high at 56.3% as against discontinuation rates of 22-42% measured in Western populations (Haro et al.,

2015). Furthermore, Asian clients are more likely to self-adjust the dose of their medication due to the shared nature of this practice in Asian countries, and mental health prescribers needs to emphasize to them the importance of not making these decisions on their own (Chen et al., 2015).

The difference in cultural norms and language used by various AA groups compared to their mental health prescribers adds another layer of complexity to the inherently complicated nature of depression management (Kalibatseva & Leong, 2011). The language barrier between clients and the provider can reduce the effectiveness unless the option to receive therapy in their native language is available (Kalibatseva & Leong, 2011). According to Chu and Sue (2011) and Tanap (2019), therapy may not be effective for Asian Americans due to the lack of cultural sensitivity to traditional Western approaches (Chu & Sue, 2011; Tanap, 2019). Acknowledging the impact of cultural differences and incorporating changes in standard therapeutic techniques provides an avenue for improving the retention rate of depressed AAs in treatment and, potentially, even for improving treatment efficacy (Cuijpers et al., 2019; Kim et al., 2015).

Role of Healthcare Providers in Medication Adherence

Healthcare providers must ensure that clients adhere to their prescribed medication regimen (Jimmy & Jose, 2011). Since clients get instructions for medication from their providers, their interactions with and trust in providers can be critical in determining whether they will follow through on these instructions. Simple mistakes in these interactions, such as ignoring or dismissing clients' concerns and making them feel left out of the treatment plan development process, can severely erode trust and reduce the chances of clients following instructions regarding medication (Brown & Bussell, 2011). Besides these interactions, clients

may face various barriers to medication adherence due to their circumstances or the community's common beliefs (Brown & Bussell, 2011). If the healthcare providers understand these barriers well, they can incorporate that information into developing a treatment plan their clients are more likely to adhere to (Jimmy & Jose, 2011). Furthermore, being well acquainted with healthcare facilities and sources of help available to clients in need, they are uniquely empowered to help clients who may not be able to adhere to their prescribed medication regimen due to limited financial resources (Brown & Bussell, 2011). Having a good understanding of challenges to medication adherence can help providers develop treatment plans with a higher likelihood of adherence and hence, a better outcome for their clients.

Theoretical Framework

This research project aims to investigate barriers to medication adherence from the perspective of mental health care professionals. At least a part of these barriers is likely to be tied to the quality of mental health care received by the AA population of interest for this study. The Donabedian framework provides a systematic approach to evaluate the quality of care at a medical institution, hence the quality of care-related barriers to medication adherence. In addition, the Donabedian framework breaks down measures used to assess the quality of care into three categories: structure, process, and outcome-related measures (Donabedian, 1988; Hickey & Giardino, 2022).

The framework's structural component evaluates the healthcare organization's characteristics (Donabedian, 1988). In the context of this project, the structure can include factors such as available mental health services, Asian language educational materials, client assistance, appointment reminders, follow-up procedures, accommodations for non-native

English speakers, and interpreter availability. Assessing the structural component of mental health care received by AA clients will help identify structural facilitators or barriers to medication adherence. Due to the limited duration of this project, this assessment will be done indirectly by analyzing responses of mental health professionals rather than direct measurements at the parent mental health institution of these professionals.

The process component of the framework evaluates the nature of provider-client interactions (Donabedian, 1988). In the context of this project, the process component includes communication dynamics, cultural understanding, client education, and support mechanisms addressing medication adherence barriers.

Finally, the outcomes component of the framework evaluates the impact of health care clients receive on their health status, including factors like behavior, satisfaction, and quality of life (Donabedian, 1988). Since this project's scope is limited to interviewing healthcare professionals, any impact of the quality of healthcare received by AAs with depression on their mental health status can only be evaluated indirectly by analyzing information provided by the healthcare professional participants in this study. Nevertheless, the information provided by mental health professionals regarding the strategies they employ to improve medication adherence and the success of these strategies, in their experience, in improving medication adherence (and thus, the status of depression) can be helpful directions of inquiry for future research meant to study different strategies to improve outcomes for AAs with depression.

Methods

Setting

This study was conducted at an outpatient mental health clinic serving diverse populations. This institution in the Seattle area is dedicated to the health and well-being of AAs and other underserved communities. This institution offers a comprehensive set of mental health services. It seeks to promote overall health by addressing its clients' physical, mental, and social well-being from these underserved communities. In addition, this clinic employs mental health prescribers and behavioral health counselors to provide services like case management, individual and family therapy, psychiatric evaluation, and medication management. These mental health professionals have extensive experience with clients that are AAs and suffering from depression, making them ideal candidates for participation in this study.

Participants

The principal investigator invited mental health prescribers and behavioral health counselors at the clinic to participate in the study. Both providers and behavioral health counselors were included in the study to obtain perspectives of mental health professionals in different roles and with different types of interactions with AAs suffering from depression. Providers, who are medically trained, typically meet with clients for 90 minute initial evaluation and 30-minute follow-ups depending on the client’s needs. Due to their medical training in diagnosing and treating psychiatric disorders, they primarily design a treatment plan, prescribe medications, manage symptoms, and monitor their treatment plan's effectiveness and side effects. On the other hand, behavioral health counselors work more closely with clients to address their emotional well-being, behavioral modification, and psychological factors. In addition, they provide non-medication interventions such as counseling and case management to help address the mental health concerns of their clients. Due to their work and contact with

clients, clients tend to place more trust in behavioral health counselors with non-medication-related issues affecting them. As a result, providers and behavioral health counselors form a collaborative team that can identify and address causes responsible for medication nonadherence in clients from different but complementary points of view.

Procedures

To recruit participants, the principal investigator reached out to all prospective participants and provided a summary of the study topic and general theme of questions that will be asked during the study and the potential impact of their inputs on client outcomes in the future. To recruit behavioral health counselors, the principal investigator scheduled meetings with supervisors from various teams to present the project topic. Then, the principal investigator presented the topic during their team meetings and was able to recruit eight behavioral health counselors who expressed interest in the project. Since the providers are a minor team, they were emailed individually to invite them to participate in the study. Five providers expressed interest in participating in the study and were recruited. All prospective participants worked at the clinic, with AAs being the institution's primary clientele; they all had extensive experience in working with AAs suffering from depression and were considered suitable for participation in the study. Prospective participants who agreed to participate in the study were provided with a consent form that informed them that their participation was entirely voluntary and that they were free to choose not to answer any or all questions. The consent form used for the study is provided in Appendix A. Overall, 13 prospective participants consented to participate. This group consisted of 5 mental health prescribers and eight behavioral health counselors. Three out of 13 interviews were conducted in person at an office in the clinic.

In contrast, the rest were conducted over a Microsoft Teams video call due to the preferences and availability of individual participants. During the interviews, probing techniques were attempted to collect as much information as possible regarding the research objectives. Furthermore, open-ended questions were also used during the interviews to encourage participants to freely express their opinions about medication adherence and strategies that overcome barriers in their experience. Finally, all interviews were audiotaped with the consent of the participants to retain detailed records of their responses.

Data Analysis

In this qualitative study, we conducted semi-structured interviews with research participants using an interview guide. Sample questions that were a part of the interview guide are included in Appendix B. The information collected from the semi-structured interviews in the form of audio recordings was transcribed into written transcripts by the principal investigator to facilitate further detailed analysis. A qualitative approach was used to explore care providers' perspectives about barriers to medication adherence among AA suffering from depression. A thematic inductive approach was used to analyze the data (Braun & Clarke, 2012). The reliability and validity of the analysis were examined using the criteria suggested by Lincoln and Guba. Lincoln and Guba (1985) evaluated trustworthiness on four broad standards: credibility, transferability, dependability, and confirmability (Nowell et al., 2017).

In this project, long-term interaction with the data and frequent readings of the transcripts were methods employed to support trustworthiness. Team members discussed the themes and subthemes. A thorough description of the participants, procedure, and context also improved transferability.

Initially, the research team thoroughly reviewed the interview transcripts to familiarize themselves with the thoughts expressed by various participants. The interview transcripts were then uploaded to a qualitative data analysis tool, Delve, available on www.delvetool.com, to facilitate coding. The interview data was disaggregated into two groups based on the role of each participant (provider or behavioral health counselor) in the study. To start the coding process, the research team did multiple passes through the interview transcripts to familiarize themselves with the patterns apparent in the dataset. The initial set of codes was generated manually to represent the meanings and patterns in the dataset. A Delve tool was then used to tag excerpts from the interview transcripts with codes supported by these excerpts. After identifying a set of codes strongly supported by interviewee responses, the research team categorized them into themes using another Delve tool suitable for the organization.

Results

A summary of the themes, sub-themes, and codes identified during the qualitative analysis process described above is presented below in Tables.

Table 1: Theme and Sub-Theme

Theme	Sub-Theme
1- Personal Barriers	Language barriers
	Busy life
	Memory issues
	Putting other life issues before medication adherence

	Logistical issues and limited ability to obtain medication
	Expecting quick recovery
	Fear of and increased susceptibility to side effects
	Fear of addiction to medicine
2- Financial Burden	Limited financial resources
	Forced to prioritize basic needs such as food and shelter over medication
	Access to no or poor coverage medical insurance
3- The family's dual role as a facilitator or a hindrance	Limited support from family members in medication adherence
	Family influence on healthcare decisions
	Importance of family encouragement in medication adherence
4- Cultural and personal beliefs	Distrust towards Western medicine
	Stigma associated with mental health medication
	Cultural beliefs inducing fear about medication causing harm
5- The role of healthcare system and strategies to overcome barriers to medication adherence	Involving clients in personalized treatment plan development
	Frequent check-ins and reminders
	Easy to follow dosage

	Collaboration between counselors and providers
	Provide support to address financial and logistical challenges
	Make family members a part of treatment plan development
	Providing appropriate education that is culturally safe and sensitive
	Building trust through communication

Table 2: Theme, Sub-Theme, and Codes

Theme	**Sub-theme**	**Codes (highlighted in quotes from interview transcripts)**
Personal Barriers	Language barriers	- Some barriers that I have seen include language barriers because they have difficulty communicating with maybe the pharmacist, they have difficulty reading the instructions on the label. - Clients may have trouble communicating with pharmacists about their medication, especially if they have trouble reading and writing or if they face a language barrier.
	Busy life	- Clients may have busy lives, lack of a set schedule, work obligations, and family responsibilities can also be barriers to medication adherence - Some clients may not have a consistent routine for taking their medication

	Memory issues	- Can also be a factor, as well as age-related memory issues - What I'm hearing from clients is that the biggest barriers to medication adherence are poor memory
	Putting other life issues before medication adherence	- When clients face crises, they may have to focus on those issues and prioritize them over taking medication or attending counseling sessions - Those who have the most issue with medication adherence are the ones who are maybe always in crisis, have a lot of other things happening in their lives
	Logistical issues and limited ability to obtain medication	- Difficulty in picking up medication from the pharmacy, missing doses - Transportation issues may prevent some clients from obtaining their medication
	Expecting quick recovery	- Or may not see an immediate improvement in their symptoms, which can lead to frustration and non-adherence - Clients think antidepressant working like antibiotics
	Fear of and increased susceptibility to side effects	- Some client may experience unsure side effects cause from antidepressant, such as headache, dizziness drowsiness, which can make it difficult to adhere to their medication regimen - Client have psychological fear of medication produce body discomforts

		- Some clients reports having a very sensitive body that reacts negatively to many medications such as body heat, body hot temperature. - Sometimes, clients may reduce their medication dose themselves due to belief thinking medication is too strong, or taking too many medications from other primary care provider
	Fear of addiction to medicine and fear of medication	- Some clients are afraid of addiction or becoming dependent on medication and prefer to stop or cut their dosage - Some clients fear being perceived as crazy or becoming addicted to medication - Clients think medication will cure one disease, but cause other harms
Financial Burden	Limited financial resources	- Poverty can be a significant barrier to medication adherence. It is too expensive to be poor. - Financial constraints or transportation issues may prevent some clients from obtaining their medication. - Clients have limited financial resources, making it difficult to afford medication
	Forced to prioritize basic needs such as food and shelter over medication	- In some cases, clients may have to choose between paying for medication and other basic needs, such as food or rent

	Access to no or poor coverage medical insurance	- If they have an insurance plan that's not very good and their copay is really high or they have a high deductible or something, then that can be a barrier to taking meds - Clients may have an insurance plan that does not cover much, or they may not qualified to insurance
The family's dual role as a facilitator or a hindrance	Limited support from family members in medication adherence	- Clients have also mentioned that they find it difficult to manage their medication at home and have limited support from family members
	Family influence on healthcare decisions	- I also think in some Asian American cultures, family members play an important role in healthcare decisions, especially when families think medication is not good, client will not take it. - Family support can be very important for medication adherence, especially in Asian culture where family is highly valued
	Importance of family encouragement in medication adherence	- I provide psychoeducation and work collaboratively with the client and their family to find a solution that works for them - By involving family members in the treatment process and educating them about the medication, they can encourage client to regular medication

Cultural and personal beliefs	Distrust towards Western medicine	- I would imagine some of them definitely trust traditional herbal medicine more than Western medicine, or need to take both to better effects - Belief in Western medicine can also be a barrier if clients do not trust that it will work
	Stigma associated with mental health medication	- Some clients may have concerns about taking medication due to a stigma around mental health or a belief in traditional medicine - Clients have belief that taking medication is a sign of weakness or moral failure - This cultural barrier can be a significant challenge to overcome, as clients may feel embarrassed or ashamed to take medication for depression
	Cultural beliefs inducing fear about medication causing harm	- In China, we have this saying that all medication has some poison and brings harm to your body, so especially the older generation really believes in that statement. They might say, “Well, medication bring some sort of harm to your body, so when I feel better, I don’t take it anymore” - Clients, particularly elderly Chinese clients, have a perception that all mediation is harmful
The role of healthcare system and strategies to overcome barriers to medication adherence	Involving clients in personalized treatment plan development	- Engaging clients in the decision-making process, involving them in their treatment plan and promoting self-care and empowerment can enhance adherence - After discussing the benefits of treatment and addressing her concerns, we were able to work together to create a plan that she felt comfortable with

	Frequent check ins and reminders	- Providers should check in with client at each visit to confirm medication use and encourage care coordination with other healthcare providers - Can also use system such as alarms, phone calls or text messages, to remind clients to take their medication
	Easy to follow dosage	- Also simplifying the medication regimen. Clients may be more likely to adhere to their medication regimen if it is simple and easy to follow - I also take extra steps to ensure that they understand their medication regimen, including using visual aids or translated material
	Collaboration between counselors and providers	- To increase medication adherence among Asian America clients with depression, I recommend working collaboratively with their family, providing psychoeducation, and working with case manager to address any issue - I would like to emphasize the importance of staying on the same team with providers
	Provide support to address financial and logistical challenges	- So I think we should understand the challenge of poverty and life crises that client may face. - If cost is a barrier, I will let providers know so they can help reduce the financial burden - If transportation is an issue, I help client identify alternative options such as mail-order pharmacies or schedule same day to pick up medication and their appointment, and transportation service

	Make family members a part of treatment plan development	- I also think in some Asian American cultures, family members play an important role in healthcare decisions. Involving family members in their treatment plan medication regimen can help improve medication adherence and increase support for the client - Sometimes, family members will tell us if client is not taking medication
	Providing appropriate education that is culturally safe and sensitive	- Addressing misconceptions about medication providing psychoeducation on how medication works and its benefits can also be provided to motivate clients to adhere to their medication - Promoting a positive attitude towards medication - Educating clients about medication benefits and side effects. This can be done through providing education and information about benefit of medication. - We educate them on the side effects of not taking it and the pros and cons of taking or not taking it - I also focus on educating the client and their family about the importance of adherence and the potential benefit of medication
	Building trust through communication	- Making an effort to know clients and their families. Providers should establish a personal connection with clients by getting to know their families or cultural backgrounds - If it's a new client, we usually follow up regularly to build trust and connection and get to know them and their family better - Take time to make conversation, not symptoms checks

		- Need to show respect to clients. Cutting clients off or dismissing their concerns due to time constraint, or their own bias, can be seen as disrespectful and lead to distrust between clients and medical staff

Discussion

The interviews conducted with providers and behavioral health counselors under this project generated unique insights into the causes behind the lack of medication adherence in AAs suffering from depression and the strategies employed by individual healthcare professionals to overcome these causes. Some of these findings support conclusions drawn by research articles in the literature. In contrast, others, especially those related to the client's personal situations, are somewhat surprising and highlight the importance of personalizing the treatment plan to individual clients.

The information contained in the interviews from this study can be categorized into five overall themes as follows:

1. *Personal Barriers:* A diverse set of personal circumstances can sometimes create a substantial barrier to medication adherence in AAs with depression. Some clients may have limited language proficiency and understanding of Western medication, making them fearful of the impact of medication on their bodies. Some clients may suffer from age-related memory issues preventing them from following a medication routine. Some clients may have a chaotic life with many personal crises preventing them from paying proper attention to their depression medication. Some clients may be particularly susceptible to side effects from medication or may

be afraid of getting addicted to medication. For instance, a difference in response to medication and, thus, associated side effects have been observed in Asian clients suggesting that clients might need modification in their medication dosages when prescribed (Chen et al., 2015). In some cases, the barrier to medication adherence could be a simple logistical issue, such as the limited ability to obtain medication due to a lack of transportation options and no support from family in this regard.

2. *Financial Burden:* A pivotal barrier to medication adherence amongst AAs with depression is the financial burden associated with the continuation of treatment. Virtually all interviewees highlighted this as one of the primary factors in the lack of medication adherence. This barrier of financial burden can present itself in a variety of ways. In some instances, due to limited financial resources, AAs with depression may not be able to afford the cost of medication. In some cases, extreme poverty may force clients to prioritize basic needs such as food and shelter over medication. Some clients may not have access to a good health insurance plan through their employer and may not be able to afford excess copay associated with medication or premiums for a good health insurance plan to purchase themselves. Since a significant fraction of AAs are immigrants, with a considerable proportion of refugees, people with limited language skills and limited resources, they are more likely to be affected by this barrier to medication adherence. Non-adherence to medication in low-income and uninsured clients has been observed in other studies (Fernandez-Lazaro et al., 2019; Grenard et al., 2011), indicating that the importance of this barrier to medication adherence is well supported by existing literature.

3. *The family's dual role as a facilitator or a hindrance:* In Asian culture, family members tend to be close to each other, and family can strongly influence decisions related to deeply personal

issues such as mental illness and associated treatment. A profound negative impact of families with common Asian cultural beliefs around mental health issues on mental health-related help-seeking behavior in AAs has been observed in the past (Augsberger et al., 2015). According to the interviewees in this study, some of their AA clients, especially those with a disorganized lifestyle, can find it very hard to adhere to medication without adequate support from their families. Furthermore, prevalent beliefs related to the stigma associated with mental illness and distrust of Western medicine in Asian culture can affect family members, who may discourage AAs with depression from continuing their medication. It is, therefore, critical for mental health professionals to try and involve family members in treatment plan development and address all their concerns in a culturally sensitive and accessible manner to recruit them as an ally in the pursuit of better outcomes for their clients.

4. *Cultural and Personal Beliefs:* Another common barrier to depression medication adherence amongst AAs are cultural and personal beliefs. The culture in Asian countries tends to have a negative connotation associated with mental illness. As a result, AAs are more likely to have a stigma associated with mental illness. The stigma associated with mental illness in Asian cultures has been well-documented in mental health literature (Ng, 1997; WonPat-Borja et al., 2010; Zhang et al., 2019). Due to a lack of cultural acceptance, they may feel embarrassed to admit having a mental illness or taking medication. Furthermore, the upbringing of AAs in Asian culture can also result in personal beliefs that make them distrust Western medicine and fear that this medicine may cause them to harm if they continue taking it.

5. *The role of healthcare system and strategies to overcome barriers to medication adherence:* In addition to their perspectives about barriers to medication adherence in AAs with depression,

mental health professionals interviewed for this study also shared some strategies they employ to try and achieve better outcomes for their clients. According to the interviewees, it is essential to create a personalized treatment plan for individual clients after considering the circumstances in their life. For clients needing to be reminded, it can be helpful to design an easy-to-follow and remember medication dosage and do frequent check-ins or send reminders for medication. Clients may see mental health professionals in different roles for help with their illness (e.g., providers and behavioral health counselors). These professionals must collaborate to keep clients adherent to their medication regimens. Finally, being knowledgeable about various sources of assistance available to clients in need (e.g., financial assistance, transportation assistance, mail-order medication), mental health professionals must make an effort to ensure that clients know these sources and how to access them.

According to the interviewees, a lack of proper understanding of the benefits of continuation of medication can be an important barrier to medication adherence for AAs with depression. Mental health professionals, thus, have a critical duty to ensure that they share their knowledge of depression and the pros/cons of associated treatments with their clients. Mental health professionals can help their clients continue their adherence to depression medication by clearing any treatment-related misconceptions, promoting a positive attitude towards medication, and explaining the benefits of continuing medication while ensuring they understand potential side effects correctly. However, due to the limited language proficiency of a considerable fraction of AAs with depression, it is also essential for mental health professionals to provide all this education in a culturally sensitive and accessible way.

Another critical barrier to medication adherence for AAs with depression can be a lack of trust in their mental health prescribers. Especially AAs with limited language proficiency may feel disrespected and distrustful of their providers if their concerns are dismissed without proper explanation in a way that is easy for them to understand. In addition, mental health care professionals need to build trust with their clients by trying to understand their situation and treating them to ensure medication adherence and a better outcome for their clients.

Limitations

While the barriers to medication adherence in AAs suffering from depression identified through this study are very informative, they are based on data collected from a small sample of mental health prescribers and behavioral health counselors from a single institution in the Seattle area. The study's limited duration prohibited data collection from a larger sample of mental health professionals from several different institutions. With this limited sample size, the information derived from this study is more suitable as evidence supporting the importance of specific barriers in preventing AAs suffering from depression from adhering to their prescribed regimen rather than solid generalizable evidence highlighting the importance of these barriers to medication adherence.

Another limitation of this study is a one-sided perspective. The perspective of mental health professionals regarding barriers to medication adherence based on their extensive experience working with clients suffering from depression is very informative since clients or their families may not be able to identify some barriers that may be self-created. However, limited interactions of mental health professionals with clients can prevent them from identifying barriers to medication adherence that a) are apparent only to family members who spend

extensive time with the clients b) may not be shared by clients with them, perhaps due to fear of being ridiculed for their beliefs and c) are apparent only to community members of clients due to shared beliefs regarding medication commonly held by members of the community.

Suggestions to Improve Practice

The findings from this study and notes from the interviewees regarding their practices while managing their clients highlighted many strategies that can be used in routine practice to improve medication adherence in AAs with depression. One of the first steps is to develop a culture amongst mental health professionals to treat clients respectfully and address their concerns and misconceptions about medication in an easy-to-understand language. Due to the stigma associated with mental health disorders, distrust of Western medication, and fear of harm caused by medication found commonly in Asian culture, it is essential to address misconceptions for clients with an Asian background adequately. Interactive educational materials, utilizing videos, can be used to enhance understanding. Understanding clients' situations with open communication can be vital to building trust with clients, making them more receptive to medication adherence advice. Regular follow-ups and reminder systems such as calls, text messages, alarms, or pill organizers can help improve medication adherence for clients with busy lives and age-related memory issues. For clients struggling to manage their illness, involving their support network, including family, friends, and counselors, in developing a treatment plan and educating them regarding the benefits of medication and the importance of medication adherence can be very helpful in ensuring a better outcome for the clients. For clients with limited financial resources, poor or no medical insurance coverage, and logistical restrictions like

no transportation to the pharmacy, mental health professionals should develop a list of resources that help clients with such needs and make every effort to connect them to them.

Conclusion

In conclusion, depression is a high-prevalence mental disorder for the Asian American population, and the unique characteristics of this population make it challenging to diagnose and effectively treat this disorder in individuals from this community. One of the primary hurdles in effectively addressing the impact of depression on this community is the low adherence to prescribed medication regimens in Asian Americans. This study aimed to determine the primary barriers to medication adherence specific to this community from the perspective of mental health professionals. Thematic analysis of data collected from interviews with providers and behavioral health counselors experienced in treating Asian Americans with depression uncovered many barriers to medication adherence, some more generic. In contrast, others are specific to the Asian American population. The barriers uncovered in this study include financial burden, cultural and personal beliefs, personal barriers, distrust of providers, and poor support from family. Detailed analysis of these barriers and input provided by the interviewees regarding their strategies to overcome barriers to medication adherence were then used to develop a series of suggestions that can be used in practice at mental health institutions to improve adherence to medication in Asian American clients with depression.

Appendices

APPENDIX A: Participant Consent Form

Explore: "The perspective of care providers about barriers to medication adherence among Asian Americans suffering from depression."

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Purpose of the Study:
This study explores the perspective of care providers about barriers to medication adherence among Asian Americans suffering from depression. According to the results of our data analysis, we aim to provide suggestions that can enhance the treatment methods for these patients and better meet their needs.

What the Study Involves:
We anticipate inviting approximately 20 participants (prescribers and behavioral health counselors) to share their experiences and perspective working with Asian American patients with depression. If you decide to participate, you will be asked to engage in a 25-30 minute interview where we will inquire about your experiences and perspectives.

The interview can be in-person, via telephone, or online conferencing. Your responses will be recorded electronically, except your occupation, which will be documented. We assure you that all information gathered in this study will be kept confidential and used only for research purposes. The recorded interviews will be securely deleted 24 months after the completion of the study.

Study Findings:
The information collected from this study will be used to improve compliance, leading to better adherence to medication regimens and resulting in more efficient treatment outcomes.

Your Participation:
Participation in this study is entirely voluntary, and you have the right to withdraw without giving a reason.

Contact Information:
If you have any questions or concerns about the study, please contact Chanraksmey Hok at chok1@seattleu.edu or 206-617-3435. The Principal Investigators' contact information is listed at the top of this form.

Receiving Study Results:
If you would like to receive information about the findings of this study, please let us know, and

we will send the results via email to the address you have been using to communicate with us. Please let us know if you would like the results to be sent to a different email address.

Verbal Consent:
Before starting the interview, If you choose a telephone or online conference, we will review the question below and request your verbal agreement to participate in the research interview.

Do you give your consent to participate in this research interview?

APPENDIX B: Questionnaire

1. Have you ever had the experience of taking care of Asian patients struggling with depression? Would you please talk about your experience and how you assess medication adherence? Provide examples if possible.
2. What is your follow-up process for Asian patients with depression? (e.g., Do you follow specific protocols/guidelines? When do you schedule follow-up appointments? When do you refer to a specialist?) Provide examples if possible.
3. What have you and your patients identified as the biggest barriers to medication adherence for depression treatment among your patients? Provide examples if possible.
4. Any recommendations or insight you think would be helpful towards increasing medication adherence among patients with depression?
5. Please provide any other comments/examples/ideas that might be useful.

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