

UTILIZING THE HEALTH BELIEF MODEL TO EXPLORE FACTORS
INFLUENCING INTENTION TO SEEK MENTAL HEALTH SERVICES IN
CHALDEAN ADULTS

by

DALI MAJEED

A dissertation submitted in partial fulfillment of the
requirements for the degree of

DOCTOR OF PHILOSOPHY IN NURSING

2026

Oakland University
Rochester, Michigan

Doctoral Advisory Committee:

Dr. Julie Kruse, Ph.D., RN, FAAN, Chair
Dr. Suha Kridli, Ph.D., RN
Dr. Andrea Kozak, Ph.D., LP, FSBM

© Copyright by Dali Majeed, 2026
All rights reserved

To my beloved husband Salam: Your partnership, unwavering love, and constant support have been my foundation. For this, I am forever grateful. To my beautiful children Novena and Novaun: You are my heart and soul. May I always make you proud and serve as a role model you can look up to with confidence and love. To my loving parents Nazar and Basima: Thank you for your endless support and sacrifices. We are the flowers of the seeds you so faithfully planted. To my dear sister Dima, my nephew Elian, and niece Isla: Your presence in my life continues to inspire me to strive for excellence. To my amazing in-laws Nabeel, Shirooq, Wisam, and Nawa: Thank you for your endless support and love. Above all, I give thanks to God for granting me the strength, guidance, and perseverance to reach this milestone.

ACKNOWLEDGMENTS

I would like to express my deepest gratitude to my dissertation chair, Dr. Julie Kruse, for her unwavering support, dedication, guidance, and encouragement throughout this journey. Her thoughtful mentorship, patience, and commitment to my growth as a scholar were instrumental in the completion of this dissertation. I am especially grateful for the time, insight, and care she invested in my work, and for continuously supporting me both professionally and personally.

I would also like to thank my dissertation committee members, Dr. Suha Kridli and Dr. Andrea Kozak, faculty mentors, colleagues, and all those who supported and guided me throughout my doctoral journey. Their expertise, encouragement, and thoughtful feedback helped shape this work and strengthened my development as a researcher and professional.

I am sincerely grateful for the financial support I received from the Jonas Scholar Program, Sigma Theta Tau, and the Blue Cross Blue Shield of Michigan Foundation. Their support made it possible for me to continue advancing my research, scholarship, and professional growth.

Finally, I would like to thank my family and loved ones for their patience, encouragement, and unwavering belief in me. Their love and support sustained me through the challenges and milestones of this journey, and I am deeply thankful.

Dali Majeed

ABSTRACT

UTILIZING THE HEALTH BELIEF MODEL TO EXPLORE FACTORS INFLUENCING INTENTION TO SEEK MENTAL HEALTH SERVICES IN CHALDEAN ADULTS

by

Dali Majeed

Adviser: Julie Kruse, Ph.D., RN, FAAN

Since the United States' invasion of Iraq in 2003, three-fourths of the Chaldean population fled the country, seeking refuge from persecution by militant groups. This resulted in a Chaldean diaspora, with hundreds of thousands relocating from their homeland and remaining dispersed outside Iraq (Miri, 2020). Michigan is home to approximately 160,000 Chaldean people and has the highest concentration of Chaldean refugees living within the U.S. Depression, anxiety, and post-traumatic stress disorder (PTSD) are a growing concern for vulnerable populations, including Chaldean immigrants and the general Chaldean community. While 13.3% of Chaldeans in Michigan self-reported depression, it is speculated this number is higher due to community stigmas and cultural beliefs leading to underreporting of symptoms. As a result, psychological distress can lead to unhealthy coping behavior and delayed mental health treatment. While evidence supports a high incidence of mental health illnesses, including depression and PTSD, among the Arab population, literature assessing the Chaldean population remains understudied. This quantitative, cross-sectional, correlational/inferential research study examined barriers and factors influencing the

intention to seek mental health treatment among the adult Chaldean population of southeastern Michigan using the Health Belief Model (HBM) as the guiding theoretical framework. Participants (n=138) completed an 87-item survey containing five reliable and valid questionnaires: Strength of Cultural Affiliation Scale, Mental Health Knowledge Schedule, Health Beliefs about Mental Illness Instrument, Social Support Scale, and General Help-Seeking Questionnaire. These instruments measured key HBM concepts, including modifying factors, individual beliefs, and cues to action. Quantitative analysis included descriptive statistics (counts and percentages) for demographic variables and correlation and regression analyses to address the study research questions and aims. Given the limited mental health research on Chaldeans, this project adds to the scientific base for nursing practice by examining different predictors and barriers of accessing mental health services in this population. The results of this study allow healthcare providers to target educational interventions for the Chaldean population that facilitate positive mental health outcomes through improved help-seeking behavior and treatment. Moreover, healthcare professionals can tailor culturally competent care to improve recognition of mental health illness and treatment access in this population.

TABLE OF CONTENTS

ACKNOWLEDGMENTS	iv
ABSTRACT	v
LIST OF TABLES	xi
LIST OF FIGURES	xiii
CHAPTER ONE	
INTRODUCTION	1
Problem Statement	1
Background	3
CHAPTER TWO	
LITERATURE REVIEW AND THEORETICAL FRAMEWORK	6
Depression	6
Anxiety Disorder	7
Posttraumatic Stress Disorder	8
Overview of Refugee and Immigrant Mental Health in the U.S.	8
Historical and Cultural Background of the Chaldean Population	9
Mental Health Trends and Prevalence in Iraqi Refugees and Middle Eastern Immigrant Communities	11
Mental Health Trends and Prevalence in the Chaldean Community	13
Minority Mental Health Stigma	14
Chaldean Cultural Values and Their Impact on Mental Health	15
Factors that Affect Mental Health Behavior	17
Age and Mental Health	17
Gender Differences and Mental Health	19
Cultural Affiliation, Ethnicity, and Ethnic Identity	20
Mental Health Knowledge	22
Social Support and Mental Health	22
Theoretical and Conceptual Framework for the Study	26
Explanation of Variables	29
Relationship Between Intention and Behavior	30
Significance	31
Purpose, Aims, and Research Questions	33
Study Aims	33

TABLE OF CONTENTS—Continued

Research Questions	34
CHAPTER THREE METHODS	35
Design	35
Sampling	36
Power Analysis	36
Recruitment	37
Measurements	38
Demographics	38
Ethnicity – Strength of Cultural Affiliation Scale	39
Mental Health Knowledge - Mental Health Knowledge	39
Schedule	39
Individual Beliefs - Health Beliefs about Mental Illness	40
Instrument	40
Cues to Action - Social Support Scale	41
Intention - General Help-Seeking Questionnaire	42
Data Collection	43
Data Management	44
Data Analysis	44
CHAPTER FOUR RESULTS	48
Demographic Characteristics	48
Age, Gender, Birthplace, Education, Relationship Status, and Household Size	48
Zip Code	50
Language	51
Socioeconomic Characteristics	51
Employment and Household Income	51
Citizenship, Immigration, and Veteran Status	51
Mental Health Characteristics	53
Prevalence Rates: Mental Health History	53
Intention to Seek Mental Health Based on Demographic Factors:	54
<i>t</i> -Test and ANOVA	54
Education	54
Employment	56
Income	56
Relationship Status	56
Citizen and Immigration Status	57
Past Diagnosis of Mental Health Discovered by Healthcare	57

TABLE OF CONTENTS—Continued

Provider	57
Believe of Having a Mental Health Condition	57
Summary Table of Intention to Seek Help	58
Modifying Factors: Age, Gender, Ethnicity and Mental Health Knowledge	59
Age	59
Gender	59
Ethnicity: Cultural Affiliation	60
Mental Health Knowledge	60
Cue to Action: Social Support	60
Intention to Seek Mental Health Services: Formal vs. Informal Sources	61
Correlations Among Independent Variables	64
Regression Analysis	65
Primary Multiple Regression Model	65
Subscale-Level Predictors Multiple Regression Model	67
Gender-Specific Multiple Regression Model	69
Low vs. High Cultural Affiliation Multiple Regression Model	71
Differences Across Intention to Seek Help Groups	73
Ethnicity: Cultural Affiliation (SCAS)	74
Mental Health Knowledge (MAKS)	74
Individual Beliefs About Mental Illness (HBMI)	75
Social Support Scale (SSS)	75
 CHAPTER FIVE	
DISCUSSION	77
 Demographic and Mental Health Characteristics	
Considerations	77
Education	78
Language	78
Mental Health History and Belief of Having a Mental Illness	79
Modifying Factors: Age, Gender, Ethnicity, Mental Health Knowledge	80
Individual Beliefs about Mental Illness	80
Cues to Action: Social Support	81
Intention to Seek Mental Help: Sources of Help	82
Limitations	83
Implications and Future Research	84
Conclusion	85

TABLE OF CONTENTS—Continued

APPENDICES

A. Initial IRB Approval	86
B. IRB Modification	87
C. IRB Incident Report	89
D. IRB Incident Report - Modifications	90
E. Information Sheet for Exempt Survey Research	92
F. Recruitment Flyer	95
G. Chaldean Diocese of St. Thomas The Apostle U.S.A Letter of Support	96
H. Chaldean Community Foundation Letter of Support	97
I. Facebook Group Metro Detroit Chaldeans Letter of Support	98
J. Mental Health Knowledge Schedule (MAKS) Instrument	99
K. Health Beliefs about Mental Illness (HBMI) Instrument	100
L. Social Support Scale (SSS) Instrument	102
M. General Help Seeking Questionnaire (GHSQ) Instrument	103

REFERENCES	104
------------	-----

LIST OF TABLES

Table 1	Demographic Characteristics of Participants (N=138)	49
Table 2	Socioeconomic Characteristics of Participants (N=138)	52
Table 3	Mental Health Characteristics Identified by Study Participants (N = 138)	53
Table 4	Participant-Reported Mental Health Conditions	54
Table 5	One-Way Analysis of Variance for Intention to Seek Help by Education Level	55
Table 6	Results of Independent-Samples <i>t</i> -tests Examining Differences in Intention to Seek Help Based on Demographic Factors	58
Table 7	Results of Independent-Samples <i>t</i> -tests Examining Differences in Intention to Seek Help Based on Modifying Factors and Cue to Action	61
Table 8	Likelihood of Seeking Help from Various Sources (N = 138)	63
Table 9	Descriptive Statistics and Spearman's Rank-Order Correlations for Study Variables (N = 138)	65
Table 10	Multiple Regression Analysis Predicting Intentions to Seek Help (Primary Model)	66
Table 11	Subscale-Level Multiple Regression Predicting Intention to Seek Help (N = 138)	67
Table 12	Multiple Regression Analysis Predicting Intentions to Seek Help Among Male Participants (n = 53)	69
Table 13	Multiple Regression Analysis Predicting Intentions to Seek Help Among Female Participants (n = 84)	70
Table 14	Multiple Regression Analysis Predicting Intention to Seek Help for Low Cultural Affiliation (n = 69)	72
Table 15	Multiple Regression Analysis Predicting Intention to Seek Help for High Cultural Affiliation (n = 68)	73

LIST OF TABLES—Continued

Table 16	One-Way ANOVA Results for HBM Constructs Across Different Intention to Seek Help Groups	74
----------	--	----

LIST OF FIGURES

Figure 1	House's Social Support Framework	23
Figure 2	Relationship between Stigma and Mental Health Seeking Barriers	24
Figure 3	Rosenstock Original HBM Components	26
Figure 4	Modified HBM for Study	28

CHAPTER ONE

INTRODUCTION

Mental health illnesses are a growing concern for vulnerable populations, including Chaldean immigrants and the general community. Jamil & Arnetz (2017) reported that Chaldean adults in Michigan experience the following mental health conditions at the following rates: 10.5% depression, 4.6% anxiety disorder and 0.7% PTSD. In fact, it is speculated that these prevalence rates are underreported due to cultural beliefs and stigmas surrounding mental health. Untreated mental health illnesses can lead to maladaptive coping skills and poor quality of life. While evidence indicates mental health illness rates among the Chaldean population is in alignment with the general population, there is a gap in the literature about factors that influence a person's intention to seek mental health services. This study aims to examine how the effect of modifying factors, individual beliefs, and cues to action influence the intention to seek mental health services among the adult Chaldean population of Southeastern Michigan. By identifying the most influential factors and barriers, healthcare professionals can better promote positive and culturally appropriate mental health outcomes for this population.

Problem Statement

Mental health illnesses, including depression, anxiety, and post-traumatic stress disorder (PTSD), represent a growing and underrecognized public health concern among vulnerable minority populations, particularly Chaldean immigrants and the broader Chaldean community. Existing studies document measurable rates of depression, anxiety, and PTSD among Chaldeans; however, these figures are widely believed to

underestimate the true prevalence due to cultural stigma, strong community norms emphasizing privacy and resilience, and beliefs that discourage open discussion of mental health concerns or engagement with professional services. Many Chaldean individuals have also experienced generational and migration-related trauma stemming from persecution, displacement from Iraq, and the challenges of resettlement, further increasing vulnerability to mental health disorders. When left untreated, these conditions may contribute to maladaptive coping behaviors, leading to poor health outcomes and quality of life.

Despite evidence of mental health need, there remains a critical gap in the literature regarding the factors that influence intention to seek mental health services among adult Chaldeans. In particular, limited research has examined how modifying factors, individual beliefs, and cues to action, as conceptualized by the Health Belief Model, shape help-seeking intentions within this culturally distinct and underserved population. This knowledge gap constrains the development of effective, culturally responsive interventions and limits healthcare professionals' ability to engage Chaldean patients in meaningful mental health care. Current public health efforts targeting the Chaldean community have largely focused on physical and infectious diseases, despite ongoing disparities in chronic conditions such as heart disease, diabetes, and hypertension, as well as the significant, but often overlooked, burden of mental health issues (Arabo, 2024).

Furthermore, barriers such as language discordance, lack of culturally competent care, and mistrust of the healthcare system continue to impede utilization of mental health services (Melhem & Chemali, 2014). The absence of culturally tailored education

exacerbates these challenges; however, religious and cultural institutions, including Chaldean Catholic churches and community centers, represent critical yet underutilized platforms for culturally sensitive mental health education, stigma reduction, and engagement in health promotion practices for this population (Khatib et al., 2023; Melhem & Chemali, 2014). Without a clearer understanding of how cultural beliefs, perceived barriers, and cues to action influence help-seeking intentions, healthcare disparities in mental health outcomes within the Chaldean community are likely to persist.

Addressing mental health outcomes in the Chaldean population requires research that informs culturally grounded, community-engaged strategies capable of integrating mental health education alongside physical health promotion. By identifying predictors and barriers to mental health service utilization, the study seeks to generate evidence that can guide targeted educational interventions, enhance provider cultural competence, and support the delivery of culturally appropriate care. Ultimately, such efforts are essential to improving help-seeking behavior, increasing access to mental health services, and promoting holistic wellness within the Chaldean community.

Therefore, factors influencing Chaldean adults' intention to seek mental health services will be explored using the Health Belief Model as a framework in order to understand mental health facilitators and barriers to promote positive culturally tailored interventions, mitigate barriers, and improve access to care.

Background

The Chaldean community is a vulnerable minority population that has experienced traumatic historical conflict and immigration-related challenges which

increases this community's risk of developing mental health symptoms and illnesses. In general, Chaldeans exhibit hesitancy toward healthcare systems that stem from historical and cultural influences (Arabo, 2024). Due to stigmatizing cultural beliefs, matters related to mental health (i.e., diagnosis, treatment) are often underreported to healthcare providers and services are often underutilized. Additionally, there is a lack of sufficient mental health services for the increasing population of Chaldeans resettling in the United States after fleeing persecution in Iraq (Hakim-Larson et al., 2007). Currently, with the exception of the variable of cultural stigma, researchers have little understanding as to the multiple variables that impact mental health seeking behaviors (or lack thereof) in this population.

Mental health conditions such as depression, anxiety, and PTSD present significant challenges for vulnerable minority populations, including Chaldean immigrants in Southeastern Michigan. Research by Jamil and Arnetz (2017) reveals concerning prevalence rates among Chaldeans—10.5% for depression, 4.6% for anxiety, and 0.7% for PTSD—though these figures may be underreported due to cultural stigmas surrounding mental health.

While studies suggest the prevalence of mental health issues among Chaldeans aligns with that of the general population, there is limited research on the factors influencing Chaldean individuals' intentions to seek mental health services. This gap in the literature hinders healthcare professionals' ability to promote mental health care that respects cultural values and addresses specific barriers. This study aims to examine the roles of modifying factors, personal beliefs, and cues to action, guided by the HBM, in shaping the intention to seek mental health services within the adult Chaldean community

of Southeastern Michigan, with the goal of informing culturally sensitive interventions to improve mental health outcomes for this population.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Mental health is a growing concern in the United States (U.S.). There are approximately 50 million U.S. adults with mental illness related conditions (Mental Health America, n.d.), with 8.3% of adults having experienced depression (National Institute of Mental Health, 2023) and 19.1% of people who live with anxiety (National Alliance on Mental Illness [NAMI], 2017). It is also estimated that 3.6% of adults have experienced post-traumatic stress disorder (PTSD) (National Institute of Mental Health, n.d.) Additionally, it is reported that 54.7% of people who report poor mental health do not receive treatment (Mental Health America, n.d.).

Diverse underrepresented populations such as racial/ethnic minorities, sexual minorities, and refugees, face significant challenges and often experience poorer mental health compared to majority populations (Mongelli et al., 2020). Among refugee populations, an estimated 25.9 million refugees worldwide, one in three refugees report experiencing depression and PTSD (Turrini et al., 2017, as cited in American Psychiatric Association, n.d.). A recent systematic review further indicates that refugees and asylum seekers experience high rates of mental health issues including 31.5% depression, 11% anxiety, 31% PTSD, and 1.5% psychosis (Blackmore et al., 2020).

Depression

Depression can occur at any time during the lifespan and affects 29% of individuals at some point in their life with women impacted more than men and younger adults more than older adults (American Psychiatric Association, 2024). Major depressive disorder can cause negative feelings of disinterest in previously enjoyable

activities and sadness that lasts two weeks or longer (American Psychiatric Association, 2024). It can impact daily life function and physical and psychological health such as impaired appetite, sleep, energy levels, and feelings of worthlessness or guilt (American Psychiatric Association, 2024). Risk factors for depression include biochemistry, genetics, pessimistic personality, and unhealthy environmental factors such as violence or abuse (American Psychiatric Association, 2024). Depression is a treatable mental disorder and 80-90% of individuals with depression respond to treatments which include antidepressant medications, psychotherapy, electroconvulsive therapy (ECT), self-help, and other self-help/coping mechanisms such as healthy eating habits, avoiding alcohol, and incorporating regular exercise into weekly routines (American Psychiatric Association, 2024).

Anxiety Disorders

Anxiety disorders are characterized by intense, persistent fear about situations. Some anxiety disorders can involve panic attacks. The overwhelming feelings of excessive worrying involved with anxiety disorders can lead to disproportionate actual danger which interferes with daily activities (Mayo Clinic, 2018). There are different types of anxiety disorders such as general anxiety disorders, anxiety disorder due to a medical condition, panic disorder, and social anxiety disorders to name a few (Mayo Clinic, 2018). Symptoms include feeling nervous, sense of impending danger, increased heart rate, sweating, and trouble concentrating (Mayo Clinic, 2018). Risk factors include trauma, genetics, stress build-up, personality, and other mental health disorders (Mayo Clinic, 2018). Treatment options can include psychotherapy and medications, along with lifestyle changes (Mayo Clinic, 2018).

Posttraumatic Stress Disorder

Posttraumatic stress disorder (PTSD) can affect anyone at any age and can impact any ethnic, religious, and cultural group (American Psychiatry Association, 2022). It is prevalent among one in 11 persons in their lifetime and women are twice as likely when compared to men to experience PTSD (American Psychiatry Association, 2022). PTSD occurs in individuals who have encountered or witnessed traumatic physical, emotional, or psychological experiences (American Psychiatry Association, 2022). Examples of traumatic experiences include rape, terrorist acts, war, historical trauma, and natural disasters (American Psychiatry Association, 2022). The four main categorical symptoms of PTSD include intrusion, avoidance, alterations in cognition and mood, and alterations in arousal and reactivity (American Psychiatry Association, 2022). These symptoms may last more than a month and can impair an individual's daily function of living and often occurs with other health conditions such as depression and substance misuse (American Psychiatry Association, 2022). Treatment includes cognitive behavior therapy, medications, and complementary therapies such as animal-assisted therapy and yoga (American Psychiatry Association, 2022).

Overview of Refugee and Immigrant Mental Health in the U.S.

Refugees and immigrants who have experienced pre-migration trauma such as persecution, life-threatening environments from war, and other forms of trauma are at risk for developing psychological distress and mental health disorders such as depressive disorders and psychological distress (Sangalang et al., 2018). Furthermore, after these individuals migrate, they also face post-migration stressors including acculturation factors which are also linked to poorer mental health (Sangalang et al., 2018). Sangalang

et al. (2018), examined the association of pre-migration and post-migration stressors and the mental health among Asian and Latino refugees. The study revealed that pre-migration stressors and post-migration trauma were risks for mental distress including depressive and anxiety disorders (Sangalang et al., 2018).

While it is known that immigrants in the U.S. are at risk for mental health disorders, examining their utilization of mental health services would provide insight regarding their health behavior. Immigrants in the U.S., compared to U.S. born non-immigrants, utilize mental health services at significantly lower rates (Fan & Piret, 2025). Der (2015) conducted a systematic review of mental health service use among immigrants in the U.S. and found that immigrants compared to nonimmigrants access mental health services at decreased rates. This review identified cultural factors such as stigma, norms and attitudes or structural factors including cost, transportation, lack of insurance and language as barriers to seeking mental health services (Der, 2015). Demographic factors such as age, gender, education level, also played a role in service utilization (Der, 2015). Among men, younger individuals, undocumented immigrants and those who lack insurance were found to be least likely to access mental health services (Der, 2015). In contrast, factors associated with mental health service utilization included individuals' self-perceived need for mental health care and the role of social support (Der, 2015). Specifically, "For immigrants who did use services, informal channels such as family, friends, and religious communities played an important role in problem recognition and treatment initiation" (Der, 2015, p. 270).

Historical and Cultural Background of the Chaldean Population

There is variability among the Arab American community, with 22 different countries of origin and regional variations such as “concentrations of Chaldeans in Michigan and Somalis in Minnesota” (Green et al., 2023, p. 292). Therefore, it should be acknowledged there is a “need for further community and regional studies, as well as for reporting of separate ethnic and national origin groups” (Green et al., 2023, p. 292). Although there is literature surrounding mental health utilization among Muslim Arab Americans (Al-Krenawi & Graham, 2000), it is important to consider that Chaldeans distinguish themselves differently from the Arab community and preserve a strong cultural identity (Zora et al., 2020). Chaldean Americans are mistaken for other ethnic groups, specifically Arab Americans (Sengstock, n.d.). While both Arab and Chaldean people share similarities in origin and certain traditions, they represent ethnic distinctions (Sengstock, n.d.). The distinction of the Chaldean population mainly lies from religious differences and other factors such as the Aramaic language, monogamy, gender differences such as women having a social role, no diet restrictions such as consuming alcohol (Sengstock, n.d.). Therefore, it is recommended that “Moving forward, research needs to clearly indicate information related to race, ethnicity, and national origin. Otherwise, Chaldean Americans will continue to be classified as Iraqis, Iraqis as Arabs, and Arabs as Whites, leading to confusion, overgeneralization, and oversimplification, increasing the risk of harm to clients from those cultures” (Zora et al., 2020, p. 99).

The Chaldean population marks their roots to ancient Babylon, presently known as Iraq and speak the Aramaic language (Chaldean Community Foundation [CCF], n.d.). Most Chaldean Americans also speak Arabic which is the primary language of Iraq (Sengstock, n.d.). Since the United States’ invasion of Iraq in 2003, three-fourths of the

Chaldean population fled the country, seeking refuge from persecution by militant groups. Chaldean diaspora resulted where hundreds of thousands of Chaldean people have relocated from their homeland and still remain dispersed outside of Iraq (Chaldean American Chamber of Commerce, n.d.; Miri, 2020). The state of Michigan is home to approximately 160,000 Chaldean people and has the highest population of Chaldean refugees living within the U.S. (Chaldean American Chamber of Commerce, n.d.). Although Chaldeans identify as Eastern Rite Catholics and have their unique hierarchy of Bishops and Patriarchs, they are recognized and unified by the Roman Catholic Church (CCF, n.d.). Many Chaldean people in the U.S. remain closely connected and devoted to their own cultural community network. This community network has strong familial and faithful ties to their cultural heritage and faithful Catholic background (CCF, n.d.; Sharrak et al., 2021).

Mental Health Trends and Prevalence in Iraqi Refugees and Middle Eastern Immigrant Communities

While research regarding the incidence and prevalence rates of mental health conditions for the Chaldean population in the U.S. is scant, some mental health data can be derived from an examination of data from studies involving Iraqi refugees and immigrants and other Arab groups since Chaldeans are identified as Arab in studies. Among Arab Americans, the prevalence of mental health disorders are nearly unknown (Abuelezam et al., 2018). The same can be said about mental health outcomes (Pampati et al., 2018). The mental state of many Arab Americans is challenged due to heightened exposure to traumatic tragedies (Abuelezam et al., 2018). In a scoping review among Middle Eastern immigrants living in the U.S., Almutairi et al. (2022) reported a 91.6%

prevalence of mental health disorders including depression, anxiety, PTSD, and severe psychological distress. Additionally, Almutairi et al. (2022) reported that mental health disorders among Middle Eastern immigrants were associated with gender, sociodemographics, migration context, and health status; women generally showed higher distress than men, while associations with age, education/employment, duration in the U.S., and healthcare utilization varied across studies.

According to the International Rescue Committee (IRC) (2009), “Iraqi refugees arrive in the United States with more emotional and mental health issues than many other refugee groups, and the IRC has documented a high prevalence of depression, anxiety, and post-traumatic stress disorder (PTSD) among recently arrived Iraqis”. This can be attributed to repeated exposure to war-related trauma, repeated displacement, and significant post-migration stressors (International Rescue Committee, 2009). Additionally, Taylor et al. (2014) reported that Iraqi refugees resettled in the U.S. (8–36 months post-arrival) had a high prevalence of emotional distress, anxiety, and depression (about 50%) and a high proportion were at risk for PTSD (31%). This is supported by Jamil et al. (2002) who compared the mental health of Iraqi refugees resettled in the U.S. compared to other Arab American immigrants and found that Iraqi-born individuals had a higher chance of having overall health problems and a diagnosis of PTSD. Specifically, among Iraqi-born individuals, 55.8% were diagnosed with depressive disorder, 10.3% with anxiety disorder, and 16.7% PTSD (Jamil et al., 2002).

Taylor et al., (2014) investigated the physical and mental health of Iraqi refugees in the U.S. and found that 50% of participants had depression, anxiety, and emotional distress, and 31% were at risk for PTSD. It was reported that more time in the U.S., self-

reported chronic diagnosis and physical health status were associated with reported depression. Despite the fact that 75% of refugees in their study reported having health insurance coverage, 43% of these respondents reported needing medical care and delayed or did not seek overall healthcare services within the past 12 months (Taylor et al., 2014).

Al-Hawdrawi (2017) examined the mental health of Middle Eastern immigrants in the U.S. and revealed 43.4% were diagnosed with depression, 47.8% were symptomatic for anxiety, and 44.2% for emotional distress. Additionally, a positive correlation between social discrimination and health disparities and mental well-being were reported (Al-Hawdrawi, 2017).

Mental Health Trends and Prevalence in the Chaldean Community

The literature shows prevalence of depression, anxiety, and PTSD among vulnerable minority populations, including the general Chaldean community. Jamil et al. (2008) reported that 13.3% of Chaldean people in the U.S. self-reported having symptoms of depression. Jamil & Arnetz (2017) also reported the overall prevalence of Chaldean mental health disorders as follows: depression 10.5%; anxiety disorder 4.6%; and PTSD 0.7%. Arab Americans, including Chaldeans, reported significantly more poor physical health days ($M = 5.41$, $SD = 9.69$) and poor mental health days ($M = 5.36$, $SD = 9.78$) in the past 30 days compared with White Americans ($M = 4.23$, $SD = 8.72$; $M = 3.38$, $SD = 7.58$) (Samari et al., 2019). The atrocities of war including witnessed and actual physical torture may be identified as a culprit for mental health illnesses such as depression and PTSD causing trauma and stress among Arab Americans (Jamil et al., 2002). This data is also supported by Arfken et al. (2018) who revealed greater psychological distress among Arab refugees, yet Chaldean refugees in the U.S.

experienced a high prevalence of reported PTSD symptoms as well as depressive symptoms. The study showed that 33.3%, 27.8%, 11.1% of Chaldeans had a possible diagnosis of depression, anxiety, and PTSD disorder, respectively (Arfken et al., 2018).

Hakim-Larson et al. (2007) reported that “acculturation issues and traumatic histories related to immigration, current world events, and political unrest in the Middle East” (p. 303) are also contributing factors among the collectivist culture of Arab and Chaldean Americans. The psychological distress that refugees experience can lead to unhealthy coping and behavior mechanisms. Jamil and Arnetz (2017) reported that 45% of Chaldean individuals who suffered from mental illness used a combination of substances including alcohol and illicit drugs to cope.

Pampati et al. (2018) reported higher rates of depression and anxiety symptoms among Arab refugees compared to U.S. born Arab Americans. High levels of depression and anxiety were found among individuals who reported political violence and religious persecution as the reason they immigrated (Pampati et al., 2018). Individuals who reported immigrating for educational or economic opportunities had the lowest rates of depression and anxiety (Pampati et al., 2018). It was also reported that individuals with higher levels of education reported lower rates of depression and anxiety (Pampati et al., 2018).

Minority Mental Health Stigma

Stigma plays a significant role in minority mental health since it often creates obstacles to accessing and receiving mental health care. Stigma influences mental health for the following reasons: reduced access to care, mistrust and cultural barriers, cultural perceptions, poor health outcomes, and social and economic factors. In particular,

cultural beliefs influence how mental health is perceived and experienced (NAMI, n.d.). Therefore, understanding and incorporating individualized cultural needs can improve outcomes, support interventions, and enhance coping mechanisms (NAMI, n.d.). Thus, reducing stigma in minority mental health is crucial for advancing health equity.

Consistent with Zora et al. (2020), improving mental health care for Chaldean Americans requires culturally grounded approaches that integrate spiritual beliefs, family-centered values, and community engagement into clinical practice. This can be achieved by increasing awareness, developing culturally sensitive mental health resources, and fostering inclusive practices in mental health care that honor the values and needs of diverse communities.

Ethnic minority groups experience unique cultural dimensions of mental illness stigma, often at higher levels than racial majority groups (i.e., White Americans) (Eylem et al., 2020; Misra et al., 2021). These cultural dimensions include barriers to accessing services, family dynamics, knowledge and beliefs about mental health, and emotional responses (Misra et al., 2021). Therefore, to address stigma effectively, interventions should incorporate these cultural elements to reduce service barriers and target stigma within each group (Eylem et al., 2020; Misra et al., 2021).

Chaldean Cultural Values and Their Impact on Mental Health

Cultural traditions and beliefs influence health behavior. Importantly, “Western views of mental illness may not align with Chaldean American perspectives” such as Chaldeans “... may view their diagnosis as a label or a permanent stamp that something is “wrong” with them or that they are “crazy.” (Zora et al., 2020, p. 95). Among the Arab heritage, mental health illnesses and people with disability are frequently stigmatized and

“...often kept from public view” (Purnell & Fenkl, 2019, p. 83). Furthermore, psychiatric symptoms or feelings among Arab Americans may often be unacknowledged and refuted by the individual (Abi Doumit et al., 2019; Purnell & Fenkl, 2019). Individuals suffering from mental health disorders who seek treatment may present with vague, somatic symptoms such as abdominal pain or shortness of breath (Purnell & Fenkl, 2019). Additionally, within the Arab American population in the U.S., mental health illnesses are often seen as a consequence of wrongdoing and many individuals seek religious beliefs or divine intervention for healing (Aloud & Rathur, 2009; Zora et al., 2020).

“Despite the higher rates of mental illness among Middle Eastern immigrants in the U.S, their utilization of mental health services is low” (Almutairi et al., 2022, p. 3100). This may be a result of various barriers including personal, cultural, and social influences. Furthermore, seeking mental health services are influenced by negative cultural and traditional perceptions and perceived stigma (Aloud & Rathur, 2009; Al-Krenawi & Graham, 2000). Among Arab individuals there is a “negative view of mental health services and [they] may tend to mistrust and underuse them” (Al-Krenawi & Graham, 2000, p. 15). Additionally, “There is a fear that acknowledging psychological problems as requiring professional intervention will violate family boundaries and harm the reputation and honor of the family” (Hamdan, 2009, p. 603). These cultural norms regarding mental health among Arab Americans can cause individuals to encounter barriers such as the underreporting of their symptoms and illness causation misconceptions (Yosef, 2008; Purnell & Fenkl, 2019). These cultural considerations are also congruent among Chaldean cultural beliefs. Zora et al. (2020) reports Chaldean Americans conceptualize mental health concerns within collectivistic, family-centered,

and spiritual frameworks, often prioritizing support from family and religious communities and expressing distress in relational or somatic terms.

Although there is extensive literature on mental health in the general population or with Arab Americans, Chaldean Americans remain an understudied community. Much of the existing research tends to group Chaldean Americans within the broader category of Arab Americans, which can obscure important cultural, linguistic, and historical distinctions. Zora et al. (2020) states research related to Arab Americans and Chaldean's "needs to clearly indicate information related to race, ethnicity, and national origin" (p. 99) to inform greater understanding. Without such specificity, the unique mental health experiences and needs of Chaldean Americans risk being overlooked within generalized regional or ethnic classifications.

Factors that Affect Mental Health Behavior

Mental health is a multidimensional construct that includes primary prevention, daily functioning, and quality of life. It also incorporates the occurrence and complications of mental illness, processes of diagnosis, types of treatments, engagement, and adherence to treatment recommendations. When examining an individual's intention to seek mental health services, multiple factors must be considered including emotional and psychological health, environmental and biological factors, life and cultural experiences, and social influences. This study will examine how demographics (age and gender), cultural influences (ethnicity), mental health knowledge, individual beliefs, and social support influence a person's intention to seek mental health services.

Age and Mental Health

Age as a variable, plays various roles when assessing mental health, seeking treatment and associated age-related stigma. Bradbury (2020) examined mental health stigma and the impact of age and gender on attitudes for generalized anxiety disorder and schizophrenia. The results from this study indicate that there are stigma differences between age groups. Older adults (>40 years) reported decreased levels of stigmatized attitudes towards mental health compared to younger adults (16-18 years old). Although younger individuals utilize social media platforms and are taught about mental health within their school curriculum, societal pressures increase stigmatized outlooks. In a study by the Young Men's Christian Association (YMCA) (2016), 75% of young individuals felt that people with mental health problems are treated negatively due to associated stigma, which led 56% of these young respondents to report that they would be less likely to seek professional help.

Although researchers report that older adults report decreased stigma towards mental health, cultural considerations with respect to age should be examined as it may offer a different insight. Ethnic minorities, when compared to majorities, face higher mental health stigma (Eylem et al., 2020). According to Bradbury (2020), when considering age and mental health among the general Chaldean community, older individuals are more likely to hold to cultural norms in comparison to young adults. Resnicow et al. (2020) reported older Arab and Chaldean adults who are non-U.S. born have higher ethnic identity, which translates to higher retained cultural traditions. Knill et al. (2024) reported that older (>29 years old), Christian, Arab Americans reported significantly higher levels of stigma toward mental illness with a reduced biological explanation for their mental illnesses. These findings suggest that age may function not

merely as a demographic variable but as a culturally embedded generational factor influencing acceptance of mental health diagnoses and engagement with formal services.

Gender Differences and Mental Health

Gender in mental health should be considered since it “... provides guidance to the identification of appropriate responses from the mental healthcare system ...” (Afifi, 2007, p. 386). Gender differences stem from biomedical, psychosocial, and epidemiological perspectives (Afifi, 2007). Women compared to men are more likely diagnosed with depression, anxiety, and PTSD (American Psychiatric Association, 2017). This is true among Arab Americans as female gender is a risk factor for depression and PTSD (Wrobel & Paterson, 2014). Jamil et al. (2017) reported female participants were more likely to exhibit combined mental health disorder outcomes when compared to their male counterparts, suggesting gender as an important risk factor for mental illnesses. Men are more likely to suffer from substance abuse disorder and impulse control disorder (American Psychiatric Association, 2017).

Research indicates that gender differences influence how individuals seek and receive mental health services. Women are more likely to disclose and seek help from their primary healthcare provider; whereas, men are more likely to seek a mental health specialist (American Psychiatric Association, 2017). When accounting for identical symptoms, healthcare providers are more likely to diagnose women versus men for depression (American Psychiatric Association, 2017). Additionally, females compared to males tend to have less of a stigmatizing attitude towards mental illness when compared to males (Bradbury, 2020). These differences should be considered when understanding

mental health behavior based on gender. There is limited data on gender differences and mental health behaviors among the Arab or Chaldean populations.

Cultural Affiliation, Ethnicity, and Ethnic Identity

It is important to consider a patient's culture and cultural affiliation in order to better understand their respective healthcare practices including mental health practices. Culture has been defined as "the learned, shared, and transmitted values, beliefs, norms, and life practices of a particular group that guides thinking, decisions, and actions in patterned ways" (Leininger, 1988, p. 156). Cultural affiliation is described as "the extent to which individuals attribute their behaviors, attitudes, and values of their daily lives to the traditions and involvement with their self-identified cultural group" (Yu et al., 2005, p. 110). Cultural affiliation, along with a specific cultural belief, can influence patients as they access healthcare.

In addition to cultural affiliation, it is also important to differentiate between culture and ethnicity. Ethnicity is a social categorization that refers to a group of individuals who identify with a particular cultural group (American Psychological Association [APA], n.d.). It is not by examining ethnicity that one can reliably infer beliefs and attitudes (Hunt, 2005), rather, when examining health behavior change, culture and cultural affiliation play a critical role in understanding cultural health beliefs such as individual response, intention of seeking treatment, conventional or nonconventional treatment options, and adherence.

The Strength of Cultural Affiliation Scale (SCAS) was created to investigate the role of culture including lifestyle, language and cultural-specific holidays, relationships and cultural health practices to identify specific cultural considerations and interventions

(Kruse et al., 2017). Yu et al. (2005) used the SCAS and found it to be a reliable and valid tool when they examined mammogram screening behavior in immigrant Chinese women. The research suggested Chinese women's sociodemographic characteristics (e.g., age, education, and acculturation) are strongly linked to their self-identified cultural beliefs and cultural affiliation “predicts limitations in the women’s access to health services” (Yu et al., 2005, p. 113). Those with a stronger Chinese cultural affiliation were more likely to live in the U.S. for less amount of time and lack access to mammography screening, leading to decreased screening. Although, strength of cultural affiliation had no direct association with mammography screening, an indirect impact is seen through variables involving access (Yu et al., 2005). While cultural affiliation has not been examined among the Chaldean population, the concept of ethnic identity has been explored among the Middle Eastern population (i.e., Arab and Chaldeans).

Similar to cultural affiliation, ethnic identity has been examined in relation to health practices. Resnicow et al., (2020) developed an instrument to measure ethnic identity among Middle Eastern and North African Identity Measure (MENA-IM) people living in the U.S. The MENA-IM, a new measure of MENA ethnic identity, explores MENA cultural affiliation. This instrument was administered to Arab and Chaldean individuals and indicated that Arab people had higher ethnic identity scores versus Chaldean respondents. This difference may be attributed to acculturation or non-inclusive item wording such as “Arab identity” rather than “Arab or Chaldean identity”.

Participants who were older and non-U.S. born had higher ethnic identity scores and suggests that ethnic identity may decrease among successive generations. Higher MENA-IM scores demonstrated as “generally protective” such as better mental health status and

lower usage of alcohol, marijuana, and prescription pain medication (Resnicow et al., 2020, p. 1076). This study supports the importance of recognizing cultural identity and affiliation in relation to health behavior actions.

Mental Health Knowledge

Mental health knowledge contributes to positive health outcomes. Through improving mental health literacy, one may be able to identify mental health symptoms and encourage early help-seeking services (Kelly et al., 2007). Among Arab Americans, cultural and linguistic insufficiency may hinder understanding of enhancing health (Abuelezam et al., 2018). Abi Doumit et al. (2019) examined knowledge, attitude, and behaviors towards Lebanese patients with mental illness and found higher knowledge of mental illness was found associated with having a university level of education, being female, aged between 18-24 years and knowing someone with mental illness. In another study, Zora et al. (2020) reports that Chaldean Americans lack of mental health knowledge and services make them undervalue therapy. Therefore, it is crucial to provide education and information on therapy process and purpose (Zora et al., 2020).

Social Support and Mental Health

According to House et al. (1985), social support is a type of social relationship that can be defined conceptually as the existence or quantity of social relationships, operationally defined as the type of relationship such as friendship or marriage, structure of a person's relationship or functional content of the relationship, as shown in Figure 1. Most commonly, the functional content of social relationships is used to conceptualize and measure social support (House et al., 1985). There are four different types of social support (1) emotional support, (2) appraisal, (3) informational and (4) instrumental

(House et al., 1985). Emotional support includes listening, concern, and trust (House et al., 1985). Appraisal support includes affirmation and feedback (House et al., 1985). Information support encompasses giving advice and suggestions (House et al., 1985). Lastly, instrumental support includes financial assistance, time and modifying the environment (House et al., 1985). Specifically, emotional support is associated with health (House et al., 1985).

Figure 1

House's Social Support Framework

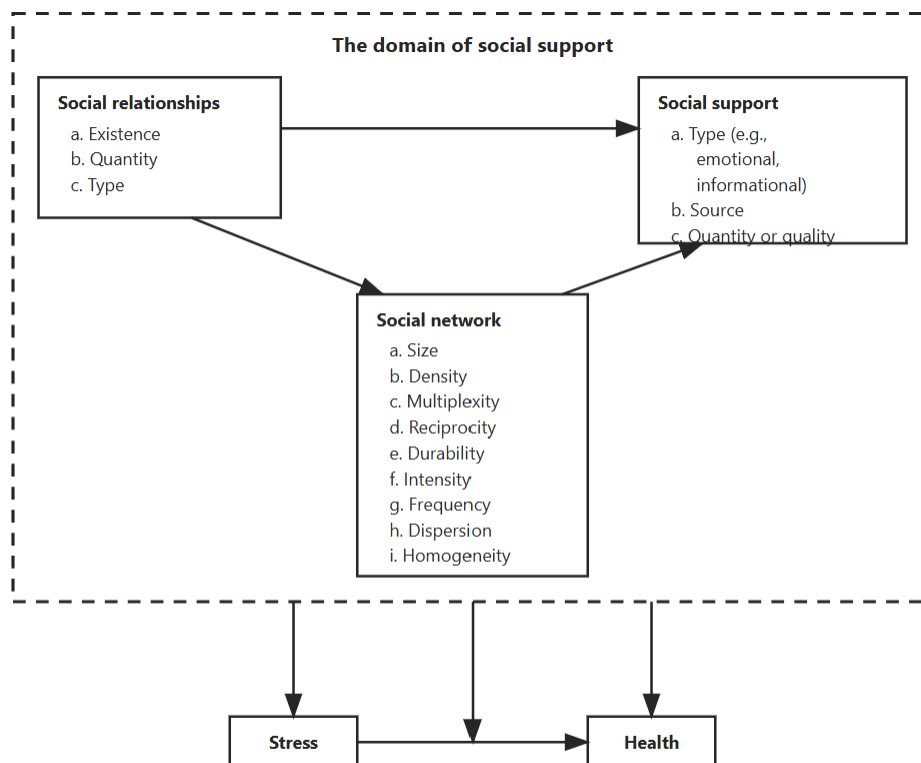


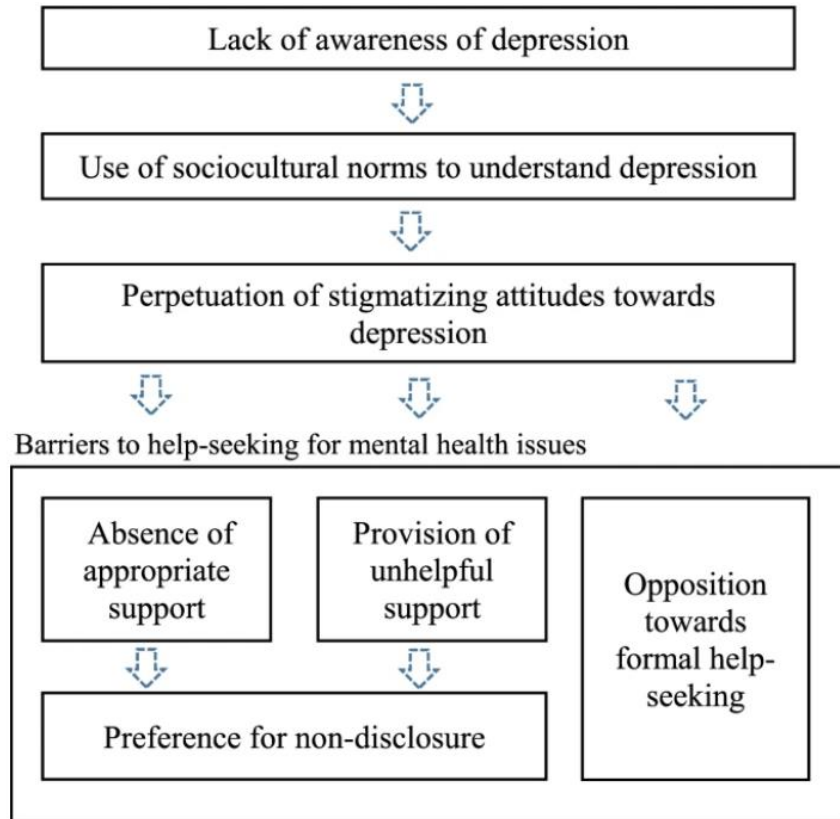
Figure 5.1. Theoretical framework for assessing the quality of measures of social support.

Note. (House et al., 1985, p. 86).

Due to the complexities of mental health, a strong social support network assists individuals with help-seeking behaviors. Samari et al. (2022) examined perceived mental illness stigma among family and friends of young adults with depression and its impact in help-seeking, summarized in Figure 2. The authors found that there is an absence of support driven by illness misconceptions, ignoring cries for help and making dismissive remarks (Samari et al., 2022). Also, provision of unhelpful support was present through inappropriate comparison with others' experiences, providing unsolicited advice, and blaming one's character for their depression (Samari et al., 2022). Some participants reported their support system had stigmatizing beliefs leading them to non-disclose their illness (Samari et al., 2022). Participants also reported their support system opposed to formal help-seeking sources due to inability to accept the illness and distrust of psychiatric treatment (Samari et al., 2022). In order to facilitate timely, adequate mental health treatment and positive outcomes, promoting support from family and friends enables help-seeking behavior, especially from formal sources (Samari et al., 2022). Shim et al. (2012) also supported the importance of the relationship between social support and depression and that there was a three-fold increase in risk of depression for individuals reporting not being close to their family compared to those who reported closeness.

Figure 2

Relationship between Stigma and Mental Health Seeking Barriers



Conceptual model underlying relationship between stigma and barriers to help seeking for mental health issues

Note. (Samari et al., 2022, p. 13).

Among Chaldeans, the role of the family plays an influential role and is a central component of collective identity within the community (Sengstock, n.d.). Chaldean families often extend beyond the nuclear family to include siblings, aunts/uncles, cousins, and grandparents, forming tightly connected family networks. Among Arab individuals, “When a family member is sick, the restoration of health is of concern to all other members” and it is an expectation for families to be involved and provide consultation as a whole (Al-Krenawi & Graham, 2000, p. 14). This is congruent among Chaldean families as well. Importantly, “Chaldean Americans rely on their social networks, and

they may obtain a referral or recommendation for therapy from a Middle Eastern doctor, a priest, a family member, or a friend. A personal referral is likely to increase the client's chances of seeking mental health services (Zora et al., 2020, p. 94).

Theoretical and Conceptual Framework for the Study

The Health Belief Model (HBM) “attempts to explain, predict, and influence health-related behavior...” (Rosenstock et al., 1988, p. 182). The theory explains engagement in health-related behavior and involves several factors including modifying factors, individual beliefs, and cues to action, as shown in Figure 3. Modifying factors include demographic (age, gender, race, and ethnicity), sociopsychological (personality and social class), and structural variables (knowledge of the disease or prior contact with disease) (Rosenstock, 1974). These modifying factors influence individual perceptions of susceptibility to and severity of a health condition (Rosenstock, 1974).

Figure 3

Rosenstock Original HBM Components

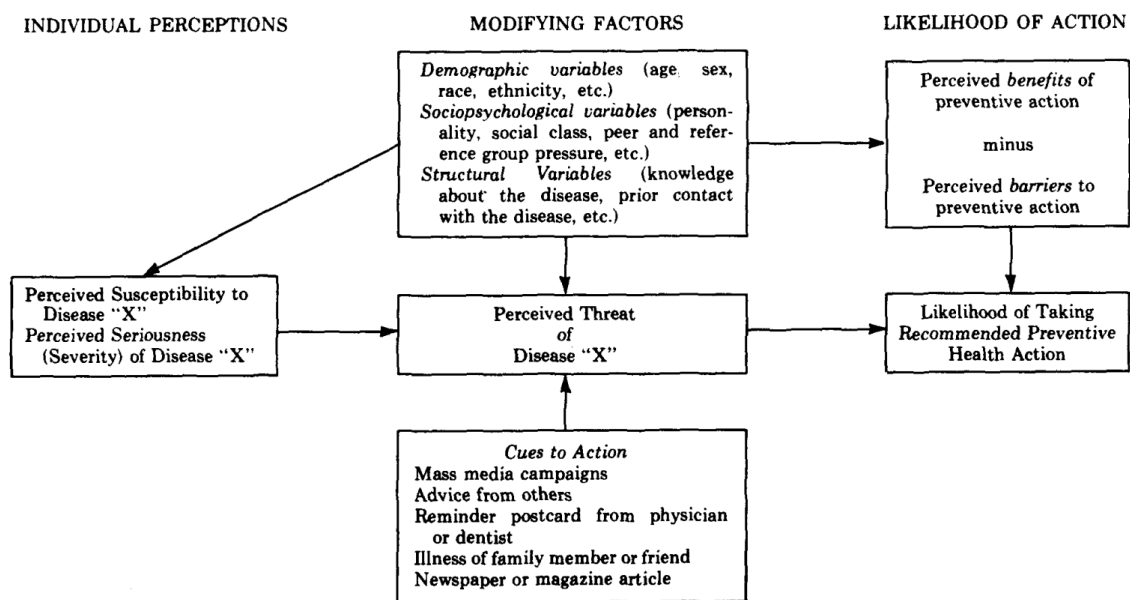


Figure 1: The “Health Belief Model” as predictor of preventive health behavior (after Becker et al.⁹).

Note. (Rosenstock, 1974, p. 334).

Additionally, individual beliefs include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy (Rosenstock, 1974). For an individual to prevent or avoid a disease, several actions must take place. The individual must first understand they are prone to illness (perceived susceptibility) or the “subjective risks of contracting a condition” can cause medical consequences (perceived severity) (Rosenstock, 1974, p. 330). Next, the individual needs to believe there are benefits to reducing illness (perceived benefits), but also considers the “negative aspects of health action” such as inconvenience, finances, and physiological impacts (perceived barriers) (Rosenstock, 1974, p. 331). Cues to action, an additional model variable, is “...a trigger to appropriate action...” (Rosenstock, 1974, p. 331). Self-efficacy, a dimension added later in the HBM, describes as “the conviction that one can successfully execute the behavior re-quired to produce the outcomes” (Rosenstock et al., 1988, p. 178).

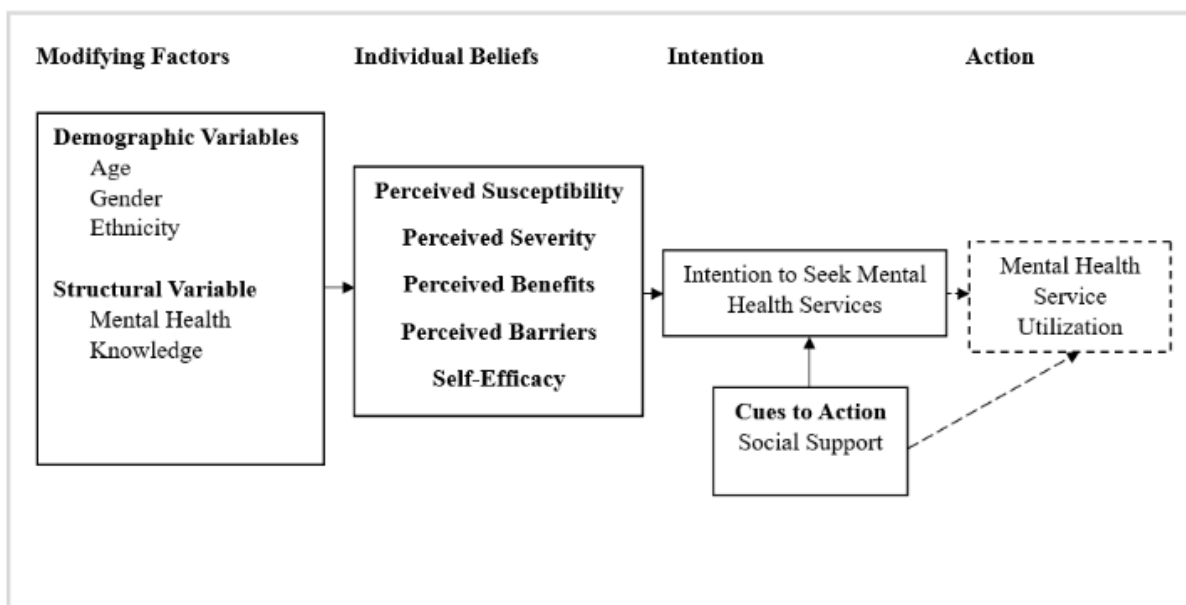
The HBM framework has been widely used in health behavior research. There have been numerous studies that specifically apply the HBM and mental health among college students (Nobiling & Maykrantz, 2017), young individuals (O’Connor et al., 2014), help-seeking intentions among Asian Americans (Kim & Zane, 2016), student athletes mental help-seeking (Bird et al., 2018), conceptualizing mental health care utilization (Henshaw & Freedman-Doan, 2009), and predicting help-seeking intentions for anxiety disorders (Langley et al., 2018). A strength of the HBM includes recognizing “attitudes that may inhibit appropriate help seeking, psychologists can then use research findings to develop interventions for addressing maladaptive attitudes or inaccurate

beliefs about mental health and its treatment” (Henshaw & Freedman-Doan, 2009, p. 423).

In this study, the HBM was used to examine the intention to utilize mental health care among Chaldean adults, as depicted in Figure 4. Specifically, the HBM was utilized to assess modifying factors including age, gender, ethnicity, and knowledge; individual beliefs including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy; and cues to action such as social support to explore intention to seek mental health services among Chaldean adults.

Figure 4

Modified HBM for Study



Explanation of Variables

The HBM, which includes modifying factors, individual beliefs, and cues to action, was applied as the guiding theoretical framework for the study. Aprahamian et al.

(2011) noted the importance of examining influential factors that impact mental health among Arab Americans including Chaldeans such as age, gender, income, education, age at migration, length of time in the U.S., religion, and discrimination experiences.

Informed by this evidence and the HBM framework, this study focused on age, gender, ethnicity, and mental health knowledge as key modifying factors. Individual beliefs were assessed using constructs aligned with the HBM to examine perceptions related to mental illness and treatment. Cues to action were operationalized through four functions of social support—emotional, appraisal, informational, and instrumental support—and examined in relation to intention to seek mental health services. These forms of social support were evaluated as potential activating influences on help-seeking intentions.

Relationship Between Intention and Behavior

It is important to note that the HBM does not include the concept of intention as one of its components; however, it does contain the concept of "likelihood of action". In the HBM, "likelihood of action" reflects an individual's tendency to engage in a recommended health behavior. This is based on the person's evaluation of the perceived benefits, perceived barriers, and internal or external cues. Conceptually, this aligns with the construct of intention to seek help, which represents an individual's readiness to pursue assistance when experiencing a health concern. Both constructs capture the individual's anticipated engagement in a health-related behavior; therefore, the HBM's "likelihood of action" can be considered functionally comparable to an individual's intention to seek help. Therefore, the model was modified in this study to align with the research goal assessing the intention to seek mental health services. Various researchers have utilized the HBM and examined intention to seek a cognitive status examination

(Werner, 2003), intention to seek psychological help for anxiety disorder (Langley et al., 2018), predicting the likelihood of future help-seeking for depressive disorder (Langley et al., 2021) and help-seeking intentions among Asian and White American students in psychological distress (Kim & Zane, 2016). These findings support the relevance of intention as a predictor of behavior, reinforcing its inclusion in the modified HBM used in the present study.

Intention was intentionally incorporated into the modified Health Belief Model (HBM) because it serves as a key determinant to health behavior action.

Intention precedes health behavior action. Many models such as the Theory of Planned Behavior (TPB) and the Transtheoretical Model of Health Behavior Change incorporate this relationship. The TPB outlines that “Actions, then, are controlled by intentions...” and the importance of the intention-behavior link which describes how beliefs through attitudes and intentions, lead to actual behavior” (Ajzen, 1985, p. 11). Specifically, this theory explains that an individual's “intention to perform (or not to perform) a behavior is the immediate determinant of that action” and their action aligns with their intentions (Ajzen, 1985, p. 12). Therefore, intention was intentionally incorporated into the modified HBM because it serves as a key determinant to health behavior action.

Significance

Healthcare providers should recognize religious and cultural factors among Arabs to promote culturally competent health promotion services (Yosef, 2008). By exploring individual beliefs of Chaldean adults, healthcare professionals can tailor interventions to

promote mental health utilization among Chaldean adults. Groen et al. (2018) recommends exploring the cultural identity of patients to provide a more holistic mental health care approach to treatment. Cultural affiliation and cultural mental health behaviors may lead Chaldean individuals to have a decreased intention to seek services for mental health which causes delayed treatment and may lead individuals to seek non-conventional self-treatment such as illicit drugs or alcohol use, among Chaldean individuals (Jamil & Arnetz, 2017). Healthcare professionals can reduce the cultural gap by informing themselves on the individual's perspective on their religion, culture, national background, views of medicine and health, and mental health practices to create a better understanding and plan of care (Al-Krenawi & Graham, 2000).

It is critical to “examine the intersection of acculturation, religion, ethnic identity, and country of origin in explaining the prevalence of key health behaviors in this community in order to more fully understand the health and well-being of Arab Americans” (Green et al., 2023, p. 292). Specifically, the role of culture and ethnicity play a strong role among immigrant and refugee populations' health behaviors. In fact, “the stronger an individual's affiliation with a self-identified cultural group, the more likely the individual is to encounter conflicts in values, beliefs, and behaviors when interacting with institutions of the majority culture, such as the health care system” (Mood et al., 2003, p. 9).

The Chaldean community is a vulnerable, minority population that has experienced traumatic historical conflict and immigration-related challenges which increases this community's risk of developing mental health symptoms and illnesses. Due to stigmatizing cultural beliefs, matters related to mental health (i.e., diagnosis, treatment)

are often underreported to healthcare providers and services are often underutilized (Browning et al., 2026). Currently, with the exception of the variable of cultural stigma, researchers have little understanding as to the multiple variables that impact mental health seeking behaviors (or lack thereof) in this population.

There is a gap in the literature related to Chaldean mental health overall including intention to seek mental health services, mental health practices, and other cultural considerations. Therefore, the significance of this research is that practitioners will gain a better understanding of the variables that impact a patient's intention to seek mental health services. This study contributes to the literature on culturally tailored mental health behavior and has the potential to inform culturally sensitive interventions and outreach. By exploring both the facilitators and barriers to mental health utilization, this study will provide practitioners with a deeper understanding of cultural-specific practices of the Chaldean population, enabling them to tailor interventions and promote positive mental health outcomes.

While there is some evidence that demonstrates that mental health illnesses such as depression, anxiety and PTSD are a problem among Chaldean individuals, there is no current literature that describes the factors that influence the intention of Chaldean people to seek mental health services. Therefore, this study supports decreasing the gap in minority mental health research and health promotion education.

Purpose, Aims, and Research Questions

The purpose of this study is to examine the relationship between modifying factors, individual beliefs, and cues to action and the intention to seek mental health

services among Chaldean American adults. Additionally, the following are the major aims of the study.

Study Aims

Aim #1: To determine the prevalence of mental health issues within the Chaldean population living in the Metro Detroit area.

Aim # 2: To assess the relationship between modifying factors (age, gender, ethnicity, mental health knowledge) and the intention to seek mental health services among Chaldean American adults.

Aim # 3: To assess the relationship between individual beliefs (perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy) and the intention to seek mental health services among Chaldean American adults.

Aim # 4: To assess the relationship between cues to action (social support) and the intention to seek mental health services among Chaldean American adults.

Research Questions

1. What is the prevalence rate of mental health issues among Chaldean adults in Metro Detroit, and how does this rate compare to that of the general population?
2. What is the effect of the independent variables (modifying factors [age, gender, ethnicity, mental health knowledge], individual beliefs [perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy], and cues to action [social support]) on the intention to seek mental health services?
3. What type of relationship do these independent variables have on the intention to seek mental health services?

4. Which independent variable is the strongest predictor of an individual's intention to seek mental health services?

CHAPTER THREE

METHODS

Design

This study used a quantitative, cross-sectional, correlational/inferential research design guided by a modified Health Belief Model to examine relationships among modifying factors, individual beliefs, cues to action, and intention to seek mental health services among Chaldean American adults. This design was selected to identify relationships between mental health behaviors and influencing factors within the Chaldean adult population.

The independent variables included modifying factors (age, gender, ethnicity, and mental health knowledge), individual beliefs related to mental health (perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy), and cues to action (social support). The dependent variable was the intention to seek mental health services.

Data was collected using a self-administered 87-item questionnaire composed of established, valid, and reliable instruments. Surveys were distributed both online and in paper format through online survey platforms, Chaldean churches, and community organizations primarily located in Southeastern Michigan. All data were collected at a single point in time, consistent with a cross-sectional design. Participation was voluntary, responses were anonymous, and no experimental manipulation occurred. Participants were provided with information on available mental health resources, including the Chaldean Community Foundation, local church resources, and crisis hotline information at several timepoints throughout the survey.

Ethical considerations were maintained throughout the study. All members of the research team completed certification through the Collaborative Institutional Training Initiative (CITI Program) prior to commencing their roles, ensuring training in research ethics, human subjects protection, and compliance with ethical standards (CITI Program, n.d.). Informed consent was obtained from all participants prior to participation, and participation was voluntary. The study was reviewed and approved by the Oakland University Institutional Review Board (IRB) (IRB-FY2024-79).

Sampling

The sample consisted of 138 adult Chaldean individuals. Non-Chaldean individuals were excluded from the study as the purpose of the study was to examine mental health behavior influences specific to the Chaldean population. To be included in the study participants had to meet the following inclusion criteria: (1) adults 18 years and older, (2) of Chaldean ethnicity, (3) can read and understand English, and (4) reside in Michigan. Sampling included convenience and snowballing methods through Chaldean Churches in Southeastern Michigan and the Chaldean Community Foundation (CCF) of Sterling Heights, Michigan.

Power Analysis

An a priori power analysis was conducted by a statistician to determine the required sample size for the study. With a power level of 0.80, an alpha level of .05, and a medium effect size consistent with Cohen's conventions, the analysis indicated that a minimum sample size of approximately $N = 129$ participants was required to detect a statistically significant effect in multiple regression models with the selected predictors.

The final sample exceeded this requirement, indicating the study was adequately powered.

Recruitment

The researcher accessed the target population by partnering with the CCF and three local Chaldean churches. The CCF, founded in 2006, is a non-profit organization which serves as a community resource to develop the community, advocate, and promote cultural preservation (CCF, 2026). This organization offers various programs to alleviate and assist people who seek assistance with access to health care, behavioral health, new American acculturation programs, affordable housing, and education programming and assists more than 52,000 individuals (CCF, 2026). Letters of support granting permission to conduct the research were obtained from both the CCF and the Chaldean Diocese.

Participants were recruited using a combination of community-based and online strategies to ensure culturally appropriate outreach within the adult Chaldean population of southeastern Michigan. Recruitment was conducted through the distribution of advertisement flyers at local Chaldean Catholic churches and the CCF, as well as through private online postings on Chaldean-focused social media platforms, including the *Metro Detroit Chaldeans* Facebook group.

Additionally, recruitment flyers were provided and posted by Church leaders at participating churches and the Chaldean Community Foundation. These flyers included a brief description of the study, eligibility criteria, and a quick response (QR) code that linked potential participants directly to the online survey. The flyers also provided contact information allowing interested individuals to voluntarily initiate contact with the

principal investigator (PI). Email addresses and contact information were collected only from individuals who expressed interest in participating in the research study.

Additionally, the PI conducted in-person recruitment by distributing flyers and providing brief explanations of the study during church-related events and activities, with permission from the Chaldean Diocese. A formal letter of support from the Chaldean Diocese authorized recruitment activities within church settings.

A digital version of the recruitment flyer was also disseminated through a private, Chaldean-focused Facebook group to increase accessibility and outreach. Interested individuals accessed the survey directly via the QR code or embedded link or contacted the PI for additional information prior to participation. Once participants contacted the PI, they were directed to the survey link and any questions they had were addressed. Next, they anonymously completed the survey. Participation was voluntary, and no identifying information was collected.

Measurements

Participants completed an 87-item questionnaire consisting of demographic questions and five valid and reliable instruments used to measure the concepts within the modified Health Belief Model. The following assessment tools were used in the study:

Demographics

The demographic questionnaire was researcher-developed and used to describe the sample across multiple demographic variables. The survey assessed basic demographic information, including age, gender, race, zip code, highest level of education, marital status, household size, and income. Cultural factors were also examined, including primary language spoken and current primary and secondary

languages. Participants reported their country of birth, immigration status (immigrant vs. non-immigrant), length of residence in the United States, and self-reported English proficiency. In addition, participants indicated their veteran status and whether they had a prior history of mental health concerns.

Ethnicity - Strength of Cultural Affiliation Scale

The *Strength of Cultural Affiliation Scale* (SCAS) assesses ethnicity in the HBM. The SCAS is a 26-item scale that determines the relationship of an individual's association with one or more cultural or ethnic groups (Mood, 1996, as cited in Kruse et al., 2017). It assesses four subscales (lifestyle, language and cultural specific holidays, relationships and cultural health practices) that are scored on a Likert scale (zero = not at all to four = very much) (Kruse et al., 2017). The SCAS showed high reliability with a Cronbach's alpha of 0.88 and test-retest reliability 0.80 (Kruse et al., 2017). Yu et al. (2005) examined mammogram screening behavior in Chinese women and found that cultural affiliation and beliefs impacted screening behavior. Overall, the SCAS is a useful tool which can provide cultural information to provide cultural considerate care (Kruse et al., 2017). The Cronbach's alpha for this study was 0.768.

Mental Health Knowledge - Mental Health Knowledge Schedule

The Mental Health Knowledge Schedule (MAKS) assesses mental health knowledge in the HBM. MAKS is a 12-item instrument that assesses stigma-related mental health knowledge (Evans-Lacko et al., 2010). It consists of six stigma-related mental health knowledge domains (help-seeking, recognition, support, employment, treatment and recovery) and six items about knowledge of mental illness conditions (Evans-Lacko et al., 2010). Items are scored on an ordinal scale from zero (don't know)

to five (strongly agree). Cronbach's alpha was 0.71 (Evans-Lacko et al., 2010). The reliability includes an overall test-retest value of 0.71 and item retest reliability ranging from 0.57 to 0.87 (Evans-Lacko et al., 2010). Overall, the MAKES is an “instrument that can be used in conjunction with attitude and behaviour measures to better understand how improvements in knowledge might translate into changes in attitudes or behaviour” (Evans-Lacko et al., 2010, p. 445). MAKES has been utilized successfully among the Arab populations including among the Lebanese population (Abi Doumit et al., 2019), Tunisian students (Fekih-Romdhane et al., 2021) and Jordanian healthcare providers (Dalky et al., 2020). The Cronbach’s alpha for this study was 0.555.

Individual Beliefs - Health Beliefs about Mental Illness Instrument

The Health Beliefs about Mental Illness (HBMI) instrument was developed based on the HBM constructs (perceived susceptibility, perceived severity, perceived benefit, perceived barriers and health motivation) and measures health beliefs about mental illness (Saleebey, 2000). Saleebey (2000) noted that mental illness was “operationally defined as (a) emotional or nervous problems and (b) drug or alcohol problems” (p. 85). Furthermore, the author used the phrase “emotional or nervous problem as layman's term to “... having a “nervous condition” or experiencing a “nervous breakdown” when in reality they are suffering from a mental illness” (Saleebey, 2000, p. 85). The scale includes 49-items with a 5-point Likert scale (1 “strongly disagree” and 5 “strongly agree”). This study utilized 27-items from the instrument that focused on “emotional and nervous problems” and eliminated five subscales (21-items) that are geared towards drug or alcohol problems. Although maladaptive behaviors such as substance use are relevant to mental health assessment, these variables were excluded to maintain focus on mental

health illness and to account for cultural sensitivity and evolving legal considerations surrounding substance use. The HBMI demonstrated subscale internal consistency coefficients ranging from 0.69 - 0.95 in the instrument development study (Saleeb, 2000). The internal reliability of the nine subscales showed evidence of content, construct, and predictive validity (Saleeb, 2000). The internal consistency was 0.95 (Langley et al., 2018) for the entire survey. Overall, the HBMI aims to recognize “...the sociodemographic factors related to health beliefs about mental illness” and allocates further instruction for targeted mental health interventions (Saleeb, 2000, p. 94). The Cronbach’s alpha for this study was 0.841.

Cues to Action - Social Support Scale

Social support was measured using the Social Support Scale (SSS) and assesses the extent of social support functioning as a cue to action in the HBM. The SSS was originally developed to measure three dimensions of social support (intimate support, instrumental support, and rewarding companionship) (Peeters et al., 1995). In the original study, it demonstrated Cronbach's alpha ranging from 0.76 - 0.80 (Peeters et al., 1995). More recent psychometric evaluation suggested a two-factor structure consisting of emotional/intimate support and instrumental support (Santiago et al., 2023). The SSS is a brief four item instrument consisting of the four social support functions (instrumental, informational, emotional, and appraisal) (Santiago et al., 2023). Items are scored on a 5-point Likert scale (0 “strongly disagree” to 4 “strongly agree”) with total scores ranging from zero to 16 (Santiago et al., 2023). The higher scores correspond to higher social support (Santiago et al., 2023). The two subscales of the instrument are emotional support

and instrumental support. The instrument has good reliability (0.82 and 0.84) (Santiago et al., 2023). The Cronbach's alpha for this study was 0.708.

Intention - General Help-Seeking Questionnaire

The General Help-Seeking Questionnaire (GHSQ) was used to measure intention to seek mental health help in the HBM. The GHSQ was developed to assess individuals' intentions to seek help from various sources for different personal or emotional problems and is a matrix format that can be adjusted to meet research purpose and sample characteristics by modifying help sources (including formal and informal sources) and problem-types (Wilson et al., 2005). The matrix format allows participants to rate their likelihood of seeking help from multiple potential sources using the same Likert-scale response options, allowing for consistent comparison across formal and informal help sources. Formal sources of general help-seeking assessed in this questionnaire may include help-line services, mental health professionals, and doctors (Wilson et al., 2005). Informal health-seeking sources include partner, parent, friend and other relative, religious leader (Wilson et al., 2005). Additionally, help-seeking intentions are assessed using a 7-point Likert scale indicating how unlikely (1= "extremely unlikely") or likely (7= "extremely likely") an individual is to utilize the aforementioned sources of help. Higher scores indicate a higher intention to seek help (Wilson et al., 2005). The scale demonstrated good internal consistency in the original validation study with Cronbach's alpha coefficients ranging from 0.70 to 0.85 across help-seeking sources, and strong test-retest reliability ranging from 0.86 to 0.92 (Wilson et al., 2005). Wilson et al. (2005) also examined help-seeking intention and prospective help-seeking behavior and found a positive significant association for individuals with both personal-emotional and suicidal

problems. There was a moderate correlation for several informal sources such as intimate partner and non-parent family (Wilson et al., 2005).

Data Collection

Data collection occurred following informed consent. Individuals who met the inclusion criteria had the option to complete a paper-version or online-version of the survey. Participants received an informational email that included the survey link and instructions for requesting a paper version of the survey. Participants with access to a smartphone or computer completed the survey electronically via Qualtrics. For participants without access to a technological device, a paper survey and a blank envelope were provided as an option. These participants were instructed to place their completed surveys in a designated locked collection box located at each of the study locations.

To address the sensitive nature of the research topic, participants were informed that survey participation was anonymous and confidential. The consent form further indicated that study findings in aggregate (group) form would be disseminated to Chaldean community organizations, including the Chaldean Cultural Foundation (CCF), the Chaldean-American Association for Health Professionals, and church leaders, to promote mental health awareness within the Chaldean community.

Participants who completed all items on the survey had the option to receive an electronic \$15 gift card funded by the Blue Cross Blue Shield of Michigan Foundation Student Award Program. If participants chose to receive the gift card incentive, they were asked for an e-mail address to send their gift card. The collected e-mail address list was not linked to participant data in any way. For participants completing a paper version of

the survey, those who opted to receive the gift card were instructed to provide their email address on a separate slip placed in an envelope labeled “Gift Card Email Address” and deposited into a locked collection box located at participating Chaldean churches. Gift cards were distributed to participants who agreed to receive a gift card following Oakland University policies and procedures.

Data Management

The researcher maintained participant privacy and ensured secure storage of all raw data, including online and paper survey responses. All data were stored in password-protected electronic files accessible only to the researcher and faculty advisor. Completed paper surveys were collected in locked boxes at local churches and subsequently stored in a secure, locked location under the control of the principal investigator. Paper survey data were manually entered, and all data were screened for completeness and missing values by the primary researcher. The finalized dataset was imported into the IBM Statistical Package for the Social Sciences (SPSS) 31 for statistical analysis.

Data Analysis

In November 2024, the PI initiated online data collection through the university-supported Qualtrics online platform. As background, the online survey through Qualtrics contained two parts. Part one was used for study data collection, while part two was a separate Qualtrics survey utilized for gift card distribution. The first survey used four validated instruments to measure ethnicity (cultural affiliation), mental health knowledge, individual beliefs, social support, and intention to seek help. At the end of the first survey, participants were asked if they were interested in receiving a \$15 gift card as an incentive. If participants answered “yes”, they were guided to a second survey in which

they provided their e-mail address for the gift card. Importantly, these two surveys were not linked and participants remained anonymous. Within two days of opening the online incentivized survey, it appeared that over 200 responses were completed for the questionnaire survey and over 500 responses for the gift card survey. By the end of day one, there were 25 responses. By the conclusion of day two, the main survey had over 200 responses, and the gift card survey had almost 500. This mismatch in number of completed surveys and large number of surveys completed within a two-day timeframe led to high suspicion for a suspected automated bot intrusion. Data collection through Qualtrics was immediately stopped to prevent further bot intrusion. The IRB was notified on November 19, 2024, of the incident and they provided respective recommendations regarding protection against automated bot intrusion. Qualtrics was also notified of the suspected incident. Further details about this procedure may be found in the manuscript that was written on the systematic approach used to filter and detect fraudulent responses.

After the data was cleaned, prepped, and coded, the researcher consulted with an experienced statistician to commence data analyses. All statistical analyses were conducted using IBM SPSS Statistics (Version 31). All the variables were checked for normality. Appropriate descriptive statistics, including means, standard deviations, medians, interquartile ranges, frequencies, and percentages, were calculated to summarize participant demographic characteristics. The primary outcome variable was intention to seek help, measured on a continuous scale using the total score of the General Help-Seeking Questionnaire (GHSQ). Independent-samples *t*-tests were used to examine group differences for dichotomous variables (age groups, gender categories, employment, income, past mental health diagnosis, and belief of having a mental health condition), and

one-way analyses of variance (ANOVA) were conducted for variables with more than two categories (educational categories, relationship status categories, citizenship and immigration status, and intention to seek help). Effect sizes were reported using Cohen's d for t -tests and eta-squared (η^2) for ANOVA analyses, with Tukey's HSD post hoc tests performed.

Prior to conducting multiple regression analyses, Spearman's rank-order correlations were performed to examine bivariate associations among the independent variables cultural affiliation (SCAS), mental health knowledge (MAKS), individual beliefs (HBMI), social support (SSS) and the outcome variable intention to seek help (GHSQ), in order to assess the strength and direction of relationships and determine whether the assumptions for subsequent regression analyses were met.

To address the study aims and research questions, multiple regression analyses were conducted to examine whether modifying factors (age, gender, ethnicity (cultural affiliation) [SCAS], mental health knowledge [MAKS]), individual beliefs about mental illness [HBMI], and cues to action (social support [SSS]) predicted intention to seek help.

Model assumptions were evaluated prior to analysis. Linearity was assessed using residual plots and partial regression plots. All predictors were entered simultaneously using the enter method. Age was dichotomized into two groups (18–29 years and 30 years and older) to enhance interpretability and ensure sufficient sample sizes. Additional subgroup analyses were conducted to examine gender-specific and cultural-affiliation-specific patterns using weighted least squares regression. A subscale-level regression analysis was also performed to assess the unique contributions of individual components

of cultural affiliation, mental health knowledge, individual beliefs, and social support. Finally, participants were categorized into low, moderate, and high intention to seek help groups based on percentile splits of the GHSQ and one-way ANOVAs were conducted to examine differences in Health Belief Model constructs across these groups. Model fit was assessed using the coefficient of determination (R^2 and adjusted R^2). Regression coefficients (β), 95% confidence intervals (CI), and p-values are reported. Statistical significance was set at a two-sided α level of 0.05

CHAPTER FOUR

RESULTS

The following analyses are presented in a progressive manner, from least to most complex, and are guided by the modified HBM theoretical framework to address the following research questions:

1. What is the prevalence rate of mental health issues among Chaldean adults in Metro Detroit, and how does this rate compare to that of the general population?
2. What is the effect of the independent variables (modifying factors [age, gender, ethnicity, mental health knowledge], individual beliefs [perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy], and cues to action [social support]) on the intention to seek mental health services?
3. What type of relationship do these independent variables have on the intention to seek mental health services?
4. Which independent variable is the strongest predictor of an individual's intention to seek mental health services?

Demographic Characteristics

Age, Gender, Birthplace, Education, Relationship Status, and Household Size

A total of 138 adult participants completed the survey in its entirety. A full summary of participant demographics is presented in Table 1. Participant ages ranged from 18 to 72 years ($M = 32.78$, $SD = 9.87$). The median age of participants was 30 years ($IQR = 9$). The sample included 53 males (38.4%), 84 females (60.9%), and one respondent (0.7%) who identified as “other.” The majority of participants were born in the United States (55.8%), followed by Iraq (40.6%), and a small proportion reporting

other or unspecified birthplaces (3.6%). Most respondents were highly educated: 41.3% held a bachelor's degree, 18.1% a master's degree, and 10.1% a doctoral degree. Regarding relationship status, 56.5% of participants were married, 31.2% were single, and 10.1% reported being in a non-legal relationship. Household size ranged from one to eight members ($M = 4.0$).

Table 1

Demographic Characteristics of Participants (N=138)

	<i>n</i>	%	<i>M</i>	<i>SD</i>	Range
Age (years)	138	—	32.78	9.87	18–72
Gender					
Female	84	60.9	—	—	—
Male	53	38.4	—	—	—
Other	1	0.7	—	—	—
Birthplace ^a					
United States	77	55.8	—	—	—
Iraq	56	40.6	—	—	—
Other / unspecified	5	3.6	—	—	—
Education level					
Less than high school diploma	1	0.7	—	—	—
High school diploma / GED	7	5.1	—	—	—
Some college, no degree	19	13.8	—	—	—
Associate degree	15	10.9	—	—	—
Bachelor's degree	57	41.3	—	—	—
Master's degree	25	18.1	—	—	—
Doctorate	14	10.1	—	—	—
Relationship status					
Single	43	31.2	—	—	—
In a relationship (nonlegal)	14	10.1	—	—	—
Married	78	56.5	—	—	—
Divorced	1	0.7	—	—	—
Widowed	2	1.4	—	—	—
Household members	138	—	3.68	1.44	1–8
Geographic location (ZIP Code) ^b					
48310 (Sterling Heights)	14	11.6	—	—	—
48038 (Clinton Township)	6	5.0	—	—	—
48322 (West Bloomfield)	6	5.0	—	—	—
48044 (Macomb Township)	4	3.3	—	—	—
48313 (Sterling Heights)	4	3.3	—	—	—

	<i>n</i>	%	<i>M</i>	<i>SD</i>	Range
48314 (Sterling Heights)	4	3.3	—	—	—
48036 (Clinton Township)	3	2.5	—	—	—
48224 (Detroit)	3	2.5	—	—	—
48309 (Rochester Hills)	3	2.5	—	—	—
48312 (Sterling Heights)	3	2.5	—	—	—
Other ZIP codes	83	68.6	—	—	—
Missing / did not provide	17	12.3	—	—	—
Primary language ^c					
English	120	87.0	—	—	—
Chaldean	81	58.7	—	—	—
Arabic	33	23.9	—	—	—
Another language	2	1.4	—	—	—
English comprehension					
Extremely well	101	73.2	—	—	—
Very well	26	18.8	—	—	—
Moderately well	8	5.8	—	—	—
Slightly well	3	2.2	—	—	—

Note. *N* = 138. Dash (—) indicates the statistic is not applicable for that variable type.

^a Birthplace categories were collapsed due to variability in open-ended responses.

^b Percentages for ZIP codes are based on valid responses (*n* = 121). ZIP codes with small frequencies were grouped under “Other ZIP codes” for clarity.

^c Percentages sum to > 100% as participants could select more than one primary language.

Zip Code

Participants primarily resided in Southeastern Michigan, consistent with the study’s focus on the regional Chaldean community. A total of 121 valid zip codes were reported, with 87.7% of participants providing responses and 12.3% opting not to answer. Among those who responded (*n* = 121), the most frequently represented zip codes included:

- 48310 (Sterling Heights) – 11.6%
- 48038 (Clinton Township) – 5.0%
- 48322 (West Bloomfield) – 5.0%
- 48044 (Macomb Township) – 3.3%

- 48313 (Sterling Heights) – 3.3%
- 48314 (Sterling Heights) – 3.3%
- 48036 (Clinton Township) – 2.5%
- 48224 (Detroit) – 2.5%
- 48309 (Rochester Hills) – 2.5%
- 48312 (Sterling Heights) – 2.5%

Language

Participants were asked what they considered to be their primary language(s) and had the ability to select all options that applied; therefore, percentages exceeded 100%. The majority of study participants indicated English (87.0%) as a primary language, followed by Chaldean (58.7%) and Arabic (23.9%), with 1.4% listing another language. Most respondents reported understanding English extremely well (73.2%) or very well (18.8%), while smaller proportions selected moderately well (5.8%) or slightly well (2.2%).

Socioeconomic Characteristics

Employment and Household Income

The majority of participants' employment status was the following: 68.1% reported being employed full-time, 15.2% part-time, 14.5% were students, 6.5% as homemakers. Annual household income varied: 39.1% earned between \$50,000 and \$100,000, 21.0% between \$100,000 and \$200,000, 18.8% reported \$50,000 or less, and 12.3% between \$200,000 and \$500,000. To note, 8.0% of participants preferred not to report their income.

Citizenship, Immigration, and Veteran Status

In terms of citizenship and immigration status, 58.7% of participants were U.S. citizens by birth, 21.7% were naturalized citizens, 18.1% were permanent residents, and 1.4% were refugees or asylum seekers. In regard to veteran status, 6.5% reported having served in the military. All participants' socioeconomic characteristics are presented in Table 2.

Table 2

Socioeconomic Characteristics of Participants (N=138)

	<i>n</i>	%
Employment status ^a		
Employed full-time	94	68.1
Employed part-time	21	15.2
Student	20	14.5
Homemaker	9	6.5
Unemployed	5	3.6
Unable to work	1	0.7
Other	1	0.7
Prefer not to answer	1	0.7
Household income		
No income	3	2.2
< \$25,000	6	4.3
\$25,000–\$50,000	17	12.3
\$50,000–\$100,000	54	39.1
\$100,000–\$200,000	29	21.0
\$200,000–\$500,000	17	12.3
> \$500,000	1	0.7
Prefer not to answer	11	8.0
Citizenship / immigration		
U.S. citizen by birth	81	58.7
Naturalized citizen	30	21.7
Permanent resident	25	18.1
Refugee / asylum seeker	2	1.4
Veteran status		
Yes	9	6.5
No	129	93.5

Note. *N* = 138.

^a Percentages sum to > 100% as participants could select more than one employment status.

Mental Health Characteristics

Prevalence Rates: Mental Health History

Participants self-reported that 25.4% had previously received a mental health diagnosis from a healthcare provider, 69.6% reported no diagnosis, and 5.1% preferred not to answer. Similarly, 25.4% believed they currently have a mental health condition, 65.9% did not, and 8.7% preferred not to answer. A summary of the mental health characteristics are presented in Table 3.

Table 3

Mental Health Characteristics Identified by Study Participants (N = 138)

Category	<i>n</i>	%
Mental health history (diagnosed by provider)		
Yes	35	25.4
No	96	69.6
Prefer not to answer	7	5.1
Current mental health condition (self-perceived)		
Yes	35	25.4
No	91	65.9
Prefer not to answer	12	8.7

Participants who answered “Yes” to either having any past mental health history discovered by a healthcare provider or self-reporting a mental health condition were asked to “please specify” in the textbox. Due to some participants reporting multiple diagnoses, percentages exceed 100%. Participants who reported a prior mental health diagnosis ($n = 35$), anxiety was the most frequently reported condition (60.0%), followed by depression (54.3%), and PTSD (22.9%). Smaller proportions reported attention-deficit/hyperactivity disorder (ADHD) (11.4%), stress (2.9%), and insomnia (2.9%). Participants who self-reported a mental health condition and specified a diagnosis ($n =$

35) included anxiety-related conditions as the most frequently reported (54.3%), followed by depression (31.4%) and PTSD (22.9%). The full reported list is detailed in Table 4.

Table 4

Participant-Reported Mental Health Conditions (N = 35)

Mental Health Condition	Diagnosed by Healthcare Provider (n = 35)	Self-Reported Condition (n = 35)
Anxiety	21 (60.0%)	19 (54.3%)
Depression	19 (54.3%)	11 (31.4%)
Post-traumatic stress disorder (PTSD)	8 (22.9%)	8 (22.9%)
Attention-deficit/hyperactivity disorder (ADHD)	4 (11.4%)	4 (11.4%)
Obsessive-compulsive disorder (OCD)	—	3 (8.6%)
Borderline personality disorder	—	1 (2.9%)
Stress	1 (2.9%)	—
Insomnia	1 (2.9%)	1 (2.9%)

Note. N = 35. Percentages represent the proportion of the total sample size. Empty cells indicate no reported occurrences for that specific category and assessment type.

Intention to Seek Mental Health Based on Demographic Factors: *t*-Test and ANOVA

Education

An independent-samples *t*-test was conducted to compare intention to seek help scores between less educated (less than a high school diploma, high school degree or equivalent, and some college, no degree) and highly educated (associate, bachelors, masters, and doctorate degree) participants. The results showed a statistically significant difference, $t(136) = -3.09, p = .002, 95\% \text{ CI } [-8.65, -1.89]$. Highly educated participants ($M = 43.60, SD = 7.62$) reported greater intention to seek help than less-educated

participants ($M = 38.33$, $SD = 9.28$). The effect size was moderate, Cohen's $d = 0.66$, suggesting that educational attainment is meaningfully associated with intention to seek help behavior.

A one-way analysis of variance (ANOVA) was conducted to examine differences in intention to seek help (GHSQ) scores across education levels, as summarized in Table 5. Education was categorized into three groups: Group 1 (less than high school, high school diploma/equivalent, or some college with no degree; $n = 27$), Group 2 (associate degree; $n = 15$), and Group 3 (bachelor's, master's, or doctoral degree; $n = 96$). Results indicated a significant effect of education on GHSQ scores, $F(2, 135) = 4.74$, $p = .010$, $\eta^2 = .07$. Post hoc comparisons using Tukey's HSD test revealed that participants in Group 1 ($M = 38.33$, $SD = 9.28$) reported significantly lower intention to seek help than those in Group 3 ($M = 43.55$, $SD = 7.89$), with a mean difference of -5.22 , $p = .009$, 95% CI $[-9.34, -1.09]$. No significant differences were observed between Groups 1 and 2 ($M = 43.93$, $SD = 5.80$), $p = .079$, 95% CI $[-11.70, 0.50]$, or between Groups 2 and 3, $p = .984$, 95% CI $[-4.88, 5.64]$.

Table 5

One-Way Analysis of Variance for Intention to Seek Help by Education Level

Measure	Education Group 1		Education Group 2		Education Group 3		$F(2, 135)$	η^2
	M	SD	M	SD	M	SD		
Intention to seek help	38.33	9.28	43.93	5.80	43.55	7.89	4.74*	.07

Note. Education Group 1 (less than high school, high school diploma/equivalent, or some college with no degree); Education Group 2 (associate degree); Education Group 3 (bachelor's, master's, or doctoral degree).

* $p < .05$.

Employment

An independent-samples t -test was conducted to examine whether intention to seek help differed based on employment status (employed vs. not employed). There was no significant difference in general health seeking scores between employed participants ($M = 42.76$, $SD = 7.24$) and unemployed participants ($M = 41.45$, $SD = 12.34$), $t(135) = 0.68$, $p = .499$, 95% CI $[-2.49, 5.10]$. The effect size was small (Cohen's $d = 0.16$), suggesting that employment status had little to no effect on intentions to seek mental health services.

Income

An independent-samples t -test was conducted to compare intention to seek help (GHSQ scores) between lower- ($> \$100,000$) and higher-income ($\$100,000 - > \$500,000$) participants. There was no significant difference in GHSQ scores for the lower-income group ($M = 42.28$, $SD = 8.86$) and the higher-income group ($M = 42.34$, $SD = 7.05$); $t(125) = -0.04$, $p = .966$, 95% CI $[-3.06, 2.93]$. The effect size was negligible, Cohen's $d = 0.008$, suggesting that income level does not appear to influence intentions to seek help for mental health concerns.

Relationship Status

A one-way ANOVA was conducted to determine whether intention to seek help differed by relationship status. The results were not statistically significant, $F(4,133) = 1.04$, $p = .388$, indicating no meaningful differences in GHSQ scores among single,

married, divorced, separated, and widowed participants. The effect size was small, $\eta^2 = .03$, suggesting that relationship status accounted for approximately 3% of the variance in intention to seek help.

Citizen and Immigration Status

A one-way ANOVA was conducted to assess whether intention to seek help differed by citizenship and immigration status. The analysis revealed no significant differences among the four groups, $F(3,134) = 1.68, p = .174$. The effect size was small ($\eta^2 = .036$), indicating that immigration status accounted for only 3.6% of the variance in intention to seek help. Important to note, the samples size across the groups (U.S. citizen by birth, U.S. citizen by naturalization, permanent resident, refugee or asylum seeker) varied (ranging from $n = 2$ for refugees or asylum seekers to $n = 81$ for U.S. citizens by birth), which limits the statistical power to detect differences among these specific subgroups.

Past Diagnosis of Mental Health Discovered by Healthcare Provider

An independent-samples t -test was conducted to examine differences in intention to seek help (GHSQ) scores between participants with and without a past mental health history discovered by a healthcare provider. Participants with a past mental health history ($M = 44.34, SD = 6.15$) reported higher GHSQ scores than those without such a history ($M = 41.83, SD = 8.86$); however, this difference was not statistically significant, $t(129) = 1.54, p = .125$ (two-tailed), 95% CI $[-0.71, 5.73]$. The effect size was small, Cohen's $d = .31$.

Believe of Having a Mental Health Condition

An independent-samples *t*-test was conducted to examine differences in intention to seek help (GHSQ) scores between participants who believed they had a mental health condition and those who did not. Results indicated no significant difference in GHSQ scores between participants who believed they had a mental health condition ($M = 42.29$, $SD = 8.21$) and those who did not ($M = 42.71$, $SD = 8.42$), $t(124) = -0.26$, $p = .80$ (two-tailed), 95% CI $[-3.72, 2.86]$. The effect size was negligible, Cohen's $d = -.05$.

Summary Table of Intention to Seek Help

The *t*-tests are summarized in Table 6. The table is a summary of results of independent-samples *t*-tests examining differences in intention to seek help based on demographic factors.

Table 6

Results of Independent-Samples t-tests Examining Differences in Intention to Seek Help Based on Demographic Factors

Variable (Group 1 vs. Group 2)	Group 1		Group 2		<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Education (Less educated vs. Highly educated)	38.33	9.28	43.60	7.62	-3.09	136	.002	0.660
Employment Status (Employed vs. Not employed)	42.76	7.24	41.45	12.34	0.68	135	.499	0.160
Income Level (Lower-income vs. Higher-income)	42.28	8.86	42.34	7.05	-0.04	125	.966	0.008
Past Mental Health History (Yes vs. No)	44.34	6.15	41.83	8.86	1.54	129	.125	0.310

Variable (Group 1 vs. Group 2)	Group 1		Group 2		<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Self-Perceived Mental Health Condition (Yes vs. No)	42.29	8.21	42.71	8.42	-0.26	124	.800	-0.050

Note. GHSQ = General Help-Seeking Questionnaire. *M* and *SD* represent mean and standard deviation, respectively. For the education variable, less educated includes participants with less than a high school diploma up to some college (no degree); highly educated includes those with an associate degree or higher. For income, lower-income is designated as >\$100,000 and higher-income as \$100,000 – >\$500,000. Past mental health history refers to history discovered by a healthcare provider.

Modifying Factors: Age, Gender, Ethnicity and Mental Health Knowledge

Age

An independent-samples *t*-test was conducted to examine differences in intention to seek help scores between age groups. Participants aged 18–29 years ($n = 65$, $M = 43.60$, $SD = 6.42$) reported slightly higher general health seeking (GHSQ) scores than participants aged 30 years and older ($n = 73$, $M = 41.66$, $SD = 9.47$); however, this difference was not statistically significant, $t(136) = 1.39$, $p = .17$ (two-tailed), 95% CI $[-0.82, 4.70]$. The effect size was small, Cohen's $d = .24$.

Gender

An independent-samples *t*-test was conducted to examine gender differences in intention to seek help. Results showed no statistically significant difference between males ($M = 42.38$, $SD = 7.55$) and females ($M = 42.68$, $SD = 8.68$), $t(135) = -0.21$, $p = .836$, 95% CI $[-3.17, 2.57]$. The effect size was trivial (Cohen's $d = -0.04$), indicating that gender was not associated with intention to seek help.

Ethnicity: Cultural Affiliation

An independent-samples *t*-test was conducted to examine differences in intention to seek help scores based on cultural affiliation. A median split was performed on the continuous SCAS scores to create two distinct groups: lower cultural affiliation (scores 1–78; *n* = 69) and higher cultural affiliation (scores 79 and above; *n* = 69). Participants with higher cultural affiliation (*M* = 44.22, *SD* = 5.28) reported significantly higher GHSQ scores than those with lower cultural affiliation (*M* = 40.93, *SD* = 10.12), $t(102.46) = -2.40, p = .018$ (two-tailed), 95% CI [-6.01, -0.57]. The effect size was small to moderate, Cohen's *d* = -.41.

Mental Health Knowledge

An independent-samples *t*-test was conducted to examine the impact of mental health knowledge (MAKS) on intentions to seek help. Participants were divided into two groups based on a median split of their MAKS scores. The results indicated a statistically significant difference, $t(136) = -3.16, p = .002$, 95% CI [-6.95, -1.60]. Specifically, participants with higher mental health knowledge (*M* = 44.71, *SD* = 6.88) reported significantly greater intentions to seek help than those with lower knowledge (*M* = 40.43, *SD* = 8.89). The effect size was moderate (Cohen's *d* = 0.54), suggesting that mental health literacy is a meaningful factor in intentions to seek mental health help.

Cue to Action: Social Support

An independent-samples *t*-test was conducted to examine differences in intention to seek help scores based on social support level. Participants with higher social support (*M* = 43.48, *SD* = 8.02) reported slightly higher GHSQ scores than those with lower social support (*M* = 41.77, *SD* = 8.34); however, this difference was not statistically

significant, $t(136) = -1.22$, $p = .22$ (two-tailed), 95% CI $[-4.47, 1.05]$. The effect size was small, Cohen's $d = -.21$.

A summary of the results of the modifying factors and cue to action in intention to seek help is displayed in Table 7.

Table 7

Results of Independent-Samples t -tests Examining Differences in Intention to Seek Help Based on Modifying Factors and Cue to Action

Variable (Group 1 vs. Group 2)	Group 1		Group 2		t	df	p	Cohen's d
	M	SD	M	SD				
Age (18–29 years vs. 30+ years)	43.60	6.42	41.66	9.47	1.39	136	.170	0.240
Gender (Males vs. Females)	42.38	7.55	42.68	8.68	$\bar{0.21}$	135	.836	-0.040
Cultural Affiliation (Lower vs. Higher)	40.93	10.12	44.22	5.28	$\bar{2.40}$	102.46	.018	-0.410
Mental Health Knowledge (Lower vs. Higher)	40.43	8.89	44.71	6.88	$\bar{3.16}$	136	.002	0.540
Social Support (Lower vs. Higher)	41.77	8.34	43.48	8.02	$\bar{1.22}$	136	.220	-0.210

Note. GHSQ = General Help-Seeking Questionnaire. M and SD represent mean and standard deviation, respectively. Cultural affiliation was categorized into lower (scores 1–78) and higher (scores 79 and above) based on SCAS scores. Mental health knowledge (MAKS) and social support were categorized into lower and higher groups based on median splits.

Intention to Seek Mental Health Services: Formal vs. Informal Sources

Participants were asked to rate their likelihood of seeking help or advice when experiencing mental health problems or concerns from various potential sources including both formal and informal sources of help. Responses were measured on a Likert scale ranging from 1 (*extremely unlikely*) to 7 (*extremely likely*).

Participants indicated the highest likelihood of seeking help from a spouse or partner, with 72.5% indicating they were *moderately likely* (26.1%) or *extremely likely* (46.4%) to seek support from them. Friends (excluding family) were also a key support helper, with 60.1% of participants reporting being *moderately* (23.9%) or *extremely likely* (36.2%) to seek help from a friend. Similarly, parents were a prominent source of support, with 52.9% reporting they were *moderately* (21.7%) or *extremely likely* (31.2%) to approach a parent for help.

By contrast, formal sources of support were less frequently endorsed: 35.5% of participants reported being *moderately* or *extremely likely* to seek help from a school counselor, social worker, psychologist, or psychiatrist, and 17.3% indicated they would contact a helpline such as a national mental health line. Among faith-based and medical professionals, 55.1% reported being *moderately* or *extremely likely* to seek assistance from a religious leader, while 53.6% expressed a similar level of likelihood toward a general practitioner (primary care physician or family doctor). In contrast, 21.7% indicated that they would be *moderately* or *extremely likely* to reach out to a teacher, and 27.5% reported being *moderately* or *extremely likely* to seek help from someone not listed.

Notably, a proportion of participants (14.5%) indicated they would *not* seek help from anyone, with 9.4% *moderately likely* and 5.1% reporting they were *extremely likely* and to avoid seeking help entirely.

These findings demonstrate a clear preference among participants for informal support networks, especially spouses, friends, and parents, over professional or institutional sources of mental health care. This aligns with prior research suggesting that individuals from collectivist or family-centered cultural backgrounds often prioritize trusted personal relationships when managing psychological distress (Khatib et al., 2023). Table 8 outlines a full summary of these results.

Table 8

Likelihood of Seeking Help from Various Sources (N = 138)

Help Source	Prefer not to answer %	Extremely unlikely %	Moderately unlikely %	Slightly unlikely %	Neither %	Slightly likely %	Moderately likely %	Extremely likely %
Spouse or partner	7.2	—	2.2	2.2	8.0	8.0	26.1	46.4
Friend (excluding family member)	1.4	3.6	5.8	3.6	5.8	19.6	23.9	36.2
Parent	1.4	9.4	4.3	5.8	5.8	20.3	21.7	31.2
Helpline	1.4	32.6	13.0	7.2	11.6	16.7	13.0	4.3
School counselor, social worker, psychologist, or psychiatrist	2.9	10.9	5.8	9.4	11.6	23.9	16.7	18.8
Teacher	1.4	23.9	12.3	12.3	18.1	10.1	18.1	3.6

Help Source	Prefer not to answer %	Extremely unlikely %	Moderately unlikely %	Slightly unlikely %	Neither %	Slightly likely %	Moderately likely %	Extremely likely %
Religious leader	0.7	11.6	3.6	6.5	5.1	17.4	21.0	34.1
General practitioner	0.7	4.3	2.9	8.7	8.0	21.7	29.0	24.6
Someone not listed above	53.6	4.3	0.7	—	8.0	5.8	13.0	14.5
I would not seek help from anyone	1.4	33.3	17.4	15.2	5.1	13.0	9.4	5.1

Note. Values represent percentages of valid responses. Boldface highlights the highest likelihood categories for each source.

Correlations Among Independent Variables

Spearman's rank-order correlations were conducted to examine associations among cultural affiliation (SCAS), mental health knowledge (MAKS), individual beliefs about mental illness (HBMI), social support (SSS), and intention to seek help (GHSQ). As shown in Table 9, intention to seek help was positively and significantly correlated with cultural affiliation, $r_s = .23$, $p = .006$, and mental health knowledge, $r_s = .28$, $p < .001$. These findings indicate that stronger cultural affiliation and greater mental health knowledge were associated with higher intention to seek help. Conversely, intention to seek help was not significantly correlated with individual beliefs about mental illness, $r_s = .13$, $p = .136$, or social support, $r_s = .13$, $p = .126$.

Among the independent variables, several significant intercorrelations were observed. Cultural affiliation was positively associated with individual beliefs, $r_s = .27$, $p = .002$, and negatively associated with social support, $r_s = -.19$, $p = .024$.

Mental health knowledge showed moderate positive associations with individual beliefs, $r_s = .27$, $p = .001$, and social support, $r_s = .34$, $p < .001$. Individual beliefs were negatively correlated with social support, $r_s = -.21$, $p = .016$. Overall, correlation coefficients were small to moderate in magnitude, indicating related but distinct constructs, supporting their inclusion as separate predictors in subsequent regression analyses.

Table 9

Descriptive Statistics and Spearman's Rank-Order Correlations for Study

Variables (N = 138)

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. SCAS Total	138	76.45	11.84	—				
2. MAKS Total	138	55.87	7.48	-.13	—			
3. HBMI Total	138	93.69	16.53	.27**	.27**	—		
4. SSS Total	138	17.43	3.02	-.19*	.34**	-.21*	—	
5. GHSQ Total	138	42.57	8.21	.23**	.28**	.13	.13	—

Note. Spearman's rho correlation coefficients are reported.

* $p < .05$. ** $p < .01$ (2-tailed).

Regression Analysis

Primary Multiple Regression Model

A multiple regression analysis was conducted to examine whether modifying factors (age, gender, ethnicity [operationalized through cultural affiliation], mental health knowledge), individual beliefs about mental health, and social support predicted intention to seek help, as measured by the General Help-Seeking Questionnaire (GHSQ) total score. Age was dichotomized into two categories (18–29 years and 30 years and older) to

facilitate interpretability and ensure sufficient sample size within each group for reliable statistical comparisons. This strategy was guided by the observed age distribution in the sample and the study's focus on age as a modifying factor rather than a primary continuous predictor. All predictors were entered simultaneously into the model.

The overall regression model was statistically significant, $F(6, 130) = 10.87, p < .001$, and accounted for approximately 33.4% of the variance in intention to seek help ($R^2 = .33$, adjusted $R^2 = .30$), indicating a strong model fit. Mental health knowledge emerged as the strongest independent predictor of intention to seek help ($\beta = .37, p < .001$), such that higher levels of mental health knowledge were associated with greater intention to seek mental health care. Ethnicity, operationalized through cultural affiliation, was also a significant positive predictor ($\beta = .29, p < .001$), indicating that stronger cultural identification was associated with higher intention to seek help. Perceived social support demonstrated a marginal association with intention to seek help ($\beta = .16, p = .056$), suggesting a trend toward greater intention to seek help among individuals reporting higher levels of social support, although this effect did not reach conventional levels of statistical significance. In contrast, individual beliefs on mental illness ($\beta = .07, p = .434$) were not a significant predictor once the other variables were taken into account. Neither age ($\beta = .01, p = .863$) or gender ($\beta = -.002, p = .982$) significantly predicted intention to seek help in the full model. The findings are summarized in Table 10.

Table 10

Multiple Regression Analysis Predicting Intentions to Seek Help (Primary Model)

(N = 138)

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	-6.75	7.24	-21.08	7.58	.353
Age	0.21	1.21	-2.18	2.60	.863
Gender	-0.03	1.23	-2.47	2.41	.982
Cultural affiliation (SCAS)	0.20	0.05	0.10	0.31	< .001
Mental health knowledge (MAKS)	0.41	0.11	0.20	0.62	< .001
Individual beliefs (HBMI)	0.03	0.04	-0.05	0.12	.434
Social support (SSS)	0.45	0.23	-0.01	0.91	.056

Note. $N = 138$. Dependent variable = General Help-Seeking Questionnaire (GHSQ) total score. Model Summary: $R = .58$, $R^2 = .33$, Adjusted $R^2 = .30$, $F(6, 130) = 10.87$, $p < .001$. Estimate = unstandardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

Subscale-Level Predictors Multiple Regression Model

A multiple regression analysis was conducted to examine which specific subscales of cultural affiliation (SCAS), mental health knowledge (MAKS), individual beliefs (HBMI), and social support (SSS) predicted intention to seek help. The overall model was statistically significant, $F(13, 124) = 8.49$, $p < .001$, and accounted for 47.1% of the variance in intention to seek help (GHSQ) scores ($R^2 = .47$, adjusted $R^2 = .42$), indicating that the set of subscale predictors explained variance in intention to seek help (GHSQ) scores. The results are summarized in Table 11.

Table 11

Subscale-Level Multiple Regression Predicting Intention to Seek Help ($N = 138$)

Predictor	Estimate	SE	95% CI		p
			LL	UL	

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	-5.22	6.45	-17.97	7.54	.420
SCAS Lifestyle	0.24	0.16	-0.07	0.56	.121
SCAS Language and Holidays	-0.10	0.20	-0.49	0.29	.612
SCAS Relationships	0.56	0.17	0.22	0.89	.001
SCAS Cultural Health Practices	0.22	0.18	-0.15	0.58	.245
MAKS Stigma-Related Knowledge	0.64	0.17	0.31	0.98	< .001
MAKS Knowledge of Mental Illness	-0.03	0.14	-0.31	0.26	.859
HBMI Susceptibility	-0.08	0.14	-0.34	0.19	.566
HBMI Severity	0.01	0.11	-0.21	0.23	.923
HBMI Benefits	0.53	0.17	0.18	0.87	.003
HBMI Barriers	-0.25	0.14	-0.52	0.02	.069
HBMI Health Motivation	0.49	0.19	0.11	0.87	.012
SSS Emotional Support	-0.62	0.50	-1.61	0.38	.220
SSS Instrumental Support	0.54	0.40	-0.25	1.33	.175

Note. $N = 138$. Dependent variable = General Help-Seeking Questionnaire (GHSQ) total score. Model Summary: $R = .69$, $R^2 = .47$, Adjusted $R^2 = .42$, $F(13, 124) = 8.49$, $p < .001$. Estimate = unstandardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

Among the cultural affiliation subscales, only the relationships subscale showed as a significant positive predictor of intention to seek help ($\beta = .28$, $p = .001$), whereas lifestyle ($\beta = .13$, $p = .121$), language and holidays ($\beta = -.04$, $p = .612$), and cultural health practices ($\beta = .10$, $p = .245$) were not significant predictors. Among the mental health knowledge subscales, stigma-related mental health knowledge was a strong

positive predictor of intention to seek help ($\beta = .32, p < .001$), while general knowledge about mental illness ($\beta = -.02, p = .859$) did not show significance.

Several subscales of the individual belief variable were significant predictors of intention to seek help. Perceived benefits ($\beta = .25, p = .003$) and health motivation ($\beta = .24, p = .012$) were positively associated with intention to seek help, while perceived barriers demonstrated a trend toward a negative association ($\beta = -.16, p = .069$). Perceived susceptibility ($\beta = -.05, p = .566$) and severity ($\beta = .01, p = .923$) did not emerge as significant predictors.

In respect to the social support subscales, neither emotional ($\beta = -.12, p = .220$) nor instrumental social support ($\beta = .12, p = .175$) significantly predicted intention to seek help.

Gender-Specific Multiple Regression Model

To examine whether predictors differed by gender, a multiple regression analysis with selection variable was conducted among male and female participants, respectively. For male participants, the overall model was statistically significant, $F(5, 47) = 6.53, p < .001$, explaining 41.0% of the variance in intention to seek help ($R^2 = .41$, adjusted $R^2 = .35$). Cultural affiliation emerged as the only significant predictor of intention to seek help among men ($\beta = .44, p < .001$). Mental health knowledge ($\beta = .13, p = .361$), individual health beliefs ($\beta = .26, p = .065$), social support ($\beta = -.02, p = .903$), and age group ($\beta = -.03, p = .783$) were not significant predictors. The findings are presented in Table 12.

Table 12

Multiple Regression Analysis Predicting Intentions to Seek Help Among Male

Participants (N = 53)

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	3.77	11.74	-19.84	27.38	.749
Age	-0.49	1.76	-4.03	3.06	.783
Cultural affiliation (SCAS)	0.27	0.08	0.12	0.42	< .001
Mental health knowledge (MAKS)	0.15	0.16	-0.17	0.47	.361
Individual beliefs (HBMI)	0.12	0.06	-0.01	0.24	.065
Social support (SSS)	-0.05	0.38	-0.80	0.71	.903

Note. $N = 53$ (Male Subgroup). Dependent variable = General Help-Seeking Questionnaire (GHSQ) total score. Model Summary: $R = .64$, $R^2 = .41$, Adjusted $R^2 = .35$, $F(5, 47) = 6.53$, $p < .001$. Estimate = unstandardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

Similarly, a multiple regression analysis was conducted among female participants. The model was statistically significant, $F(5, 78) = 9.95$, $p < .001$, and accounted for 38.9% of the variance in intention to seek help ($R^2 = .39$, adjusted $R^2 = .35$). Mental health knowledge ($\beta = .40$, $p = .002$) and social support ($\beta = .28$, $p = .013$) emerged as significant positive predictors of intention to seek help among women. Cultural affiliation was marginal but not statistically significant ($\beta = .16$, $p = .104$), while individual health beliefs ($\beta = -.02$, $p = .837$) and age group ($\beta = -.01$, $p = .946$) were not significant predictors. The findings are presented in Table 13.

Table 13

Multiple Regression Analysis Predicting Intentions to Seek Help Among Female

Participants (N = 84)

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	-3.74	8.84	-21.33	13.85	.674
Age	-0.11	1.57	-3.24	3.02	.946
Cultural affiliation (SCAS)	0.12	0.07	-0.03	0.26	.104
Mental health knowledge (MAKS)	0.44	0.14	0.17	0.72	.002
Individual beliefs (HBMI)	-0.01	0.06	-0.12	0.10	.837
Social support (SSS)	0.77	0.30	0.17	1.37	.013

Note. N = 84 (Female Subgroup). Dependent variable = General Help-Seeking Questionnaire (GHSQ) total score. Model Summary: $R = .62$, $R^2 = .39$, Adjusted $R^2 = .35$, $F(5, 78) = 9.95$, $p < .001$. Estimate = unstandardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

Low vs. High Cultural Affiliation Multiple Regression Model

An additional regression analysis was conducted to examine whether predictors of intention to seek help differed among individuals with different levels of cultural affiliation (low vs. high). Specifically, the sample was divided into high and low cultural affiliation subgroups using a median split of the SCAS total scores. For participants with lower cultural affiliation (SCAS scores 1–78), the overall model was statistically significant, $F(5, 63) = 7.60$, $p < .001$, and accounted for approximately 37.6% of the variance in intention to seek help ($R^2 = .38$, adjusted $R^2 = .33$). Mental health knowledge emerged as a significant positive predictor ($\beta = .39$, $p = .006$), as did perceived social support ($\beta = .31$, $p = .013$).

Gender demonstrated a marginal association with intention to seek help ($\beta = .17, p = .094$), whereas individual beliefs ($\beta = -.10, p = .400$) and age group ($\beta = -.01, p = .948$) were not significant predictors. Table 14 summarizes the results.

Table 14

Multiple Regression Analysis Predicting Intention to Seek Help for Low Cultural Affiliation (N = 69)

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	-3.31	9.03	-21.34	14.73	.715
Age	-0.14	2.08	-4.29	4.02	.948
Gender	3.77	2.22	-0.66	8.19	.094
Mental health knowledge (MAKS)	0.46	0.16	0.14	0.79	.006
Individual beliefs (HBMI)	-0.06	0.07	-0.19	0.08	.400
Social support (SSS)	0.94	0.37	0.21	1.68	.013

Note. $N = 69$. The sample was divided into high and low cultural affiliation subgroups using a median split of SCAS total scores. This table presents the results for the Low Cultural Affiliation subgroup (scores 1–78). Dependent variable = General Help-Seeking Questionnaire (GHSQ) total score. Model Summary: $R = .61, R^2 = .38$, Adjusted $R^2 = .33$, $F(5, 63) = 7.60, p < .001$. Estimate = unstandardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

For individuals with higher cultural affiliation (SCAS scores 79 and above), the overall model was statistically significant, $F(5, 62) = 8.24, p < .001$, and accounted for approximately 39.9% of the variance in intention to seek help ($R^2 = .40$, adjusted $R^2 = .35$). Individual mental health beliefs emerged as the strongest positive predictor of intention to seek help ($\beta = .43, p < .001$), while mental health

knowledge was a marginal predictor ($\beta = .26, p = .050$). Gender also significantly predicted intention to seek help ($\beta = -.23, p = .029$), indicating gender-based differences in intentions among individuals with higher cultural affiliation. Social support ($\beta = .09, p = .469$) and age group ($\beta = .08, p = .452$) were not significant predictors. This is summarized in Table 15.

Table 15

Multiple Regression Analysis Predicting Intention to Seek Help for High Cultural Affiliation (N = 68)

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Intercept	14.80	6.78	1.26	28.35	.033
Age	0.83	1.10	-1.36	3.02	.452
Gender	-2.38	1.07	-4.51	-0.25	.029
Mental health knowledge (MAKS)	0.22	0.11	0.00	0.44	.050
Individual beliefs (HBMI)	0.17	0.05	0.08	0.26	< .001
Social support (SSS)	0.18	0.24	-0.31	0.66	.469

Note. N = 68. The sample was divided into high and low cultural affiliation subgroups using a median split of SCAS total scores. This table presents the results for the High Cultural Affiliation subgroup (scores 79 and above). Dependent variable = General Help-Seeking Questionnaire (GHSQ) total score. Model Summary: $R = .63, R^2 = .40$, Adjusted $R^2 = .35, F(5, 62) = 8.24, p < .001$. Estimate = unstandardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

Differences Across Intention to Seek Help Groups

To assess how constructs of the Modified Health Belief Model differed by intention to seek help, participants were categorized into low, moderate, and high

intention to seek help groups based on percentile splits of the GHSQ total score. A series of one-way ANOVAs were conducted to compare cultural affiliation, mental health knowledge, individual beliefs, and social support across these three groups and are summarized in Table 16.

Table 16

One-Way ANOVA Results for HBM Constructs Across Different Intention to Seek Help Groups

Measure	Intention Group						$F(2, 135)$	η^2
	Low		Moderate		High			
	M	SD	M	SD	M	SD		
Cultural Affiliation (SCAS)	70.66	12.99	79.65	9.43	78.55	11.29	8.70***	.11
Mental Health Knowledge (MAKS)	53.75	9.37	55.17	6.37	58.95	5.41	5.96**	.08
Individual Beliefs (HBMI)	88.86	21.53	94.75	11.85	97.43	14.54	3.15*	.04
Social Support (SSS)	16.95	3.78	17.12	2.77	18.33	2.17	2.78	.04

Note. $N = 138$. Intention groups determined via percentile split of GHSQ scores.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Ethnicity: Cultural Affiliation (SCAS)

To assess how cultural affiliation differed by intention to seek help, participants were categorized into low, moderate, and high intention to seek help groups. A significant effect of intention to seek help level was found for cultural affiliation, $F(2, 135) = 8.70$, $p < .001$, $\eta^2 = .114$, reflecting a moderate effect size. Post hoc analyses indicated that both moderate and high intention to seek help groups reported significantly higher cultural affiliation than the low group ($p < .001$ and $p = .004$, respectively). No significant difference was observed between the moderate and high groups ($p = .883$).

Mental Health Knowledge (MAKS)

To assess how mental health knowledge differed by intention to seek help, participants were categorized into low, moderate, and high intention to seek help groups. For mental health knowledge, the analysis revealed a statistically significant effect of intention to seek help level on mental health knowledge, $F(2, 135) = 5.96$, $p = .003$, $\eta^2 = .081$, indicating a small-to-moderate effect size. Participants in the high intention to seek help group ($M = 58.95$, $SD = 5.41$) reported significantly higher mental health knowledge than those in the low ($M = 53.75$, $SD = 9.37$, $p = .003$) and moderate ($M = 55.17$, $SD = 6.37$, $p = .034$) groups. No significant difference was observed between the low and moderate groups ($p = .602$).

Individual Beliefs About Mental Illness (HBMI)

To assess how individual beliefs about mental illness differed by intention to seek help, participants were categorized into low, moderate, and high intention to seek help groups. Individual mental health beliefs were statistically significant, $F(2, 135) = 3.15$, $p = .046$, $\eta^2 = .045$, indicating a small effect. Participants in the high intention to seek help group ($M = 97.43$, $SD = 14.54$) reported significantly stronger mental health beliefs than those in the low intention to seek help group ($M = 88.86$, $SD = 21.53$, $p = .042$), whereas no significant differences were found between the low and moderate or moderate and high groups.

Social Support (SSS)

To assess how social support differed by intention to seek help, participants were categorized into low, moderate, and high intention to seek help groups. Social support did not reach statistical significance, $F(2, 135) = 2.78$, $p = .066$, $\eta^2 = .040$, although the result approached significance. Post hoc comparisons showed no statistically significant

differences between groups; however, a trend was observed whereby participants in the high intention to seek help group ($M = 18.33$, $SD = 2.17$) reported higher social support than those in the low group ($M = 16.95$, $SD = 3.78$, $p = .085$).

CHAPTER FIVE

DISCUSSION

The purpose of this study was to examine intentions to seek mental help among Chaldean adults residing in Southeastern Michigan and to explore different factors associated with these intentions, guided by a modified HBM. Given the limited research focused on the Chaldean community, this study sought to address a significant gap in the literature by identifying patterns of mental help-seeking behaviors and potential mental health care barriers Chaldeans endure. Overall, the model demonstrated strong explanatory value, with the primary regression accounting for approximately one-third of the variance in intention to seek help. The results highlighted the importance of mental health knowledge and cultural affiliation.

Additionally, there are several key findings to consider. When assessing modifying factors, cultural affiliation and mental health knowledge were significant predictors. Conversely, age and gender were not significant predictors in the full model. However, gender mattered conditionally (e.g., within high cultural affiliation). Specifically, in subgroup analysis by cultural affiliation, gender was a significant predictor among participants with higher cultural affiliation ($\beta = -.23$, $p = .029$), meaning that males reported higher intentions to seek mental health services than females. In regard to individual beliefs, it was not a significant predictor in the full model. Importantly, it did show as a strong predictor among high cultural affiliation. In other words, individual beliefs on mental illness matter, but their impact depends on cultural context.

Demographic and Mental Health Characteristics Considerations

Education

Additionally, the study found that individuals with lower levels of education demonstrated reduced help-seeking intentions compared to those with higher education levels (bachelor's-level education or higher). This is suggestive that higher educational attainment may facilitate mental health literacy or perceived accessibility of mental health services. When incorporating this within the HBM, individuals with higher levels of education may perceive greater benefits of mental health services, experience fewer perceived barriers, and facilitate stronger self-efficacy in navigating their health. Similarly, Samari et al. (2019) found that higher educational attainment among Arab and Chaldean individuals is associated with fewer poor mental health days. Education may function as a cue to action by increasing exposure to mental health information, normalizing discussions about psychological wellness, and enhancing recognition of mental health symptoms that merit professional support. Conversely, individuals with lower education levels may experience greater barriers to information, mental health resources, or be reluctant to engage in seeking mental health services, contributing to lower help-seeking intentions.

Language

Participants reported they spoke 87 % English and 58.7% Chaldean. Previous literature among Arab and Chaldean Americans in Southeastern Michigan has noted that the ability to speak English and greater time in the United States is associated with better health behavior and fewer health problems (Hassoun et al., 2013). However, health promotion and campaigns should be delivered in Arabic and/or Chaldean to ensure accessibility and understanding (Arabo, 2024).

Mental Health History and Belief of Having a Mental Illness

There is limited, current data on Chaldean mental health statistics. This study established incidence and prevalence rates. Twenty-five percent of Chaldean participants self-reported having been formally diagnosed with having a mental health condition in the past; similarly, 25% of individuals reported currently having a mental health illness. Specifically, for those who reported a past mental health diagnosis, mental health conditions included anxiety (60.0%), depression (54.3%), PTSD (22.9%), and ADHD (11.4%). Respectively, for participants who self-reported a current mental health condition, conditions included anxiety (54.3%), depression (31.4%), PTSD (22.9%), ADHD (11.4%), OCD (8.6%), and borderline personality disorder (2.9%). Previously established statistics included 13.3% of Chaldeans self-reported depression (Jamil et al., 2008). The most current prevalence rates for Chaldeans include—10.5% for depression, 4.6% for anxiety, and 0.7% for PTSD (Jamil & Arnetz, 2017). Although not assessed in the current study, 53.6% of Chaldeans reported substance use overall with alcohol (51%) being the most frequently used substance (Jamil et al., 2017). To the researchers' knowledge, there are no other mental health statistics directly reported for Chaldean Americans.

The present study findings indicated that participants with a past mental health history reported higher help-seeking intentions, even though this relationship did not achieve statistical significance. Notably, those participants with a previous mental health history reported slightly higher intentions to seek mental health services in comparison to those without a prior history. This is suggestive that previous exposure to mental health challenges may facilitate familiarity and comfort with accessing help-seeking processes,

regardless of the effect not being strong enough to reach statistical significance. On the contrary, the belief of having a mental health condition did not play a meaningful role in help-seeking intentions which may indicate that self-perception of mental health illness alone is insufficient to encourage help-seeking intention or behavior.

Modifying Factors: Age, Gender, Ethnicity, Mental Health Knowledge

The study found younger participants aged 18-29 reported marginally higher help-seeking intentions compared to those aged 30 and older. Although age-related differences were not statistically significant and small, the literature shows a similar trend when examining mental health behaviors among Arabs (Kanafani et al., 2025).

Ethnicity, operationalized through cultural affiliation, was found to also be a significant positive predictor of intention to seek help. Individuals reporting stronger cultural affiliation demonstrated higher levels of intention to seek help. This finding challenges assumptions that strong cultural identification necessarily acts as a barrier to formal help-seeking. Conversely, cultural affiliation may act as a protective factor when paired with knowledge and supportive belief systems. Subscale analysis further indicated that the relationships component of cultural affiliation was particularly influential, supporting Chaldeans identity of family.

Mental health knowledge emerged as the strongest and most consistent predictor across models. Individuals with higher knowledge scores reported significantly greater intention to seek help. This finding suggests that greater understanding of mental illness and reduced stigma-related misconceptions may facilitate psychological readiness to seek mental health services or care.

Individual Beliefs about Mental Illness

In the primary regression model, which included age, gender, ethnicity [operationalized through cultural affiliation], mental health knowledge, individual beliefs about mental health, and social support, individual beliefs as a whole was not a significant predictor; however, subscale analysis revealed that perceived benefits and health motivation were significant positive predictors of intention to seek help. Participants who believed in the benefit of treatment and demonstrated higher health motivation were more likely to report intention to seek care. These findings are consistent with core HBM propositions, which posit that perceived benefits and readiness to act are central drivers of health behavior (Carpenter, 2010).

Perceived barriers demonstrated a negative trend, though not statistically significant in the full model. This pattern aligns conceptually with HBM theory, suggesting that perceived obstacles may dampen intention even when benefits are recognized. Notably, perceived susceptibility and perceived severity were not significant predictors. This may reflect cultural normalization of distress or stigma-related minimization of vulnerability within the community.

Interestingly, in the high cultural affiliation subgroup, individual beliefs emerged as the strongest predictor of intention to seek help. This suggests that when there is high cultural affiliation, cognitive appraisal processes may become more influential in shaping behavioral intention. The relationship between cultural affiliation and individual beliefs appears multifaceted and warrants further research.

Cue to Action: Social Support

Social support demonstrated a dynamic relationship with intention to seek help. Although social support was not significantly associated with intention to seek help in the

overall primary model, subgroup analyses showed important differences. Social support emerged as a significant predictor among female participants and among individuals with lower cultural affiliation. These findings indicate that higher levels of social support may function as a facilitating mechanism based on gender differences and cultural affiliation. Additionally, the findings suggest that social support does not operate uniformly as a cue to action, but rather interacts with gender and cultural affiliation, underscoring the need for culturally and socially tailored mental health interventions within the Chaldean American community.

Intention to Seek Mental Help: Sources of Help

The results indicated that Chaldeans had a clear preference for informal support networks, especially spouses, parents, and friends, over professional or institutional sources of mental health care. This aligns with prior research suggesting that individuals from collectivist or family-centered cultural backgrounds often prioritize trusted personal relationships when managing psychological distress (Khatib et al., 2023). Reverence of family, which extends beyond the nuclear family, exercises great influence on life decisions including health decision-making determinations (Hakim-Larson et al., 2007; Purnell & Fenkl, 2019). Therefore, in understanding cultural norms of the role of family, the data supports that family should be involved in decision making and engaged in treatment options (Melhem & Chemali, 2014). Overall, accessing help from family or friends may be preferable over a mental health professional (Langley et al., 2018).

Given the strong emphasis on faith and family within the Chaldean community, it is unsurprising that individuals reported seeking support primarily from informal sources, including spouses or partners, parents, friends (non-family), and religious figures. Given

the “... high stigma about mental illness in the Chaldean American community and barriers to accessing mental health services, therapists committed to serving underserved Chaldean Americans need to do so outside the therapy room” (Zora et al., 2020, p. 99). Addressing culturally sensitive topics, such as mental health care, may be facilitated through collaboration and partnerships with Chaldean religious leaders, whose respected positions within the community can help normalize discussions about mental health. By examining the role of religion and church leaders, a collaborative approach between faith institutions and mental health professions may lead to culturally competent outcomes (Abuelezam et al., 2021; Melhem & Chemali, 2014). This may be achieved through workshops and community events hosted at churches and community centers, which provide trusted and familiar environments for engagement (Arabo, 2024).

Limitations

Several limitations should be noted when interpreting the findings of this study. First, all data were collected using self-reported measures, which introduces the possibility of response bias, including social desirability and recall bias, particularly given the cultural sensitivity and stigma surrounding mental health within the Chaldean community. However, the anonymity of the survey likely reduced these concerns by allowing participants to feel more comfortable responding truthfully.

Second, data collection was conducted primarily through an online Qualtrics survey, which may have limited participation among older Chaldean individuals or those with lower comfort with technology. As a result, the sample may underrepresent segments of the population who are less familiar with digital platforms. Relatedly, the requirement that participants be able to read and understand English may have excluded

individuals who are not proficient in English, thereby limiting the representativeness of the sample, especially among recent immigrants or older adults.

Third, the geographic concentration of participants in Southeastern Michigan restricts the generalizability of the findings to Chaldean populations residing in other regions of the United States or internationally. However, it is important to note that the highest concentration of Chaldean people living outside the Middle East live in Metro Detroit. Additionally, this study assessed intention to seek mental health services rather than actual service utilization; therefore, the results may not directly translate into real-world help-seeking behavior, as intentions do not always result in action. Finally, the cross-sectional nature of the study prevents causal inferences, and future longitudinal research would be necessary to establish temporal relationships.

Fourth, the scope of this research was limited to English-speaking Chaldean American adults. Consequently, the findings may not be generalizable to the broader Chaldean community, as individuals with limited English proficiency may hold different cultural beliefs, barriers, and intentions regarding mental health services that were not captured in this study.

Implications and Future Research

Future research could benefit from longitudinal designs to explore how help-seeking intentions change over time and whether they translate into actual use of mental health services. This study assessed intention to seek mental health services, a follow-up study with the participants may bring additional insight to assess if increased intention actually leads to behavior change and seeking mental health resources, whether formal or informal. Further research should include tools that are translated in Arabic to evaluate

those with limited English proficiency and older adults. Additionally, the use of qualitative approaches may enrich and offer deeper insight into the cultural values, stigma-related concerns, and lived experiences that shape help-seeking behaviors within the Chaldean community. Expanding the geographical location to other areas with Chaldean concentrations would bring further informative research. Furthermore, interventional research on assessing the impact of culturally tailored mental health education and outreach programs should be explored.

Conclusion

This study is the first of its kind that contributes to the growing body of literature examining mental health behaviors within Middle Eastern minority populations. The findings highlight mental health knowledge and cultural affiliation as central factors associated with intention to seek help among Chaldean American adults. By integrating culturally grounded modifying factors into the Health Belief Model framework, this research advances understanding of how belief systems and social context shape mental health intentions. Culturally responsive, knowledge-based interventions may play a critical role in promoting equitable access to mental health care within this community.

Appendix A

Initial IRB Approval



Institutional Review Board

Date: April 15, 2024

Study #: IRB-FY2024-79

Study Title: Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults

Submission Type: Initial

IRB Decision: Exempt

Research Team:

Dali Majeed
Julie Kruse
Julie Kruse

Based on applicable federal regulations, the above referenced study has been determined to be Exempt, with the following categories:
Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Notes for Researcher(s):

This submission includes the following approved documents:

- Research Flyer, Recruitment email, Group announcement, Social media posting
- Date-Stamped Information Sheet V 4/15/2024
- Survey Questionnaire

Letter and Consent Document:

This letter along with the IRB approved (date-stamped) consent document can be found in Cayuse in the Submission Details page under Letters and Attachments, respectively. Please make sure to use the most recent IRB approved version of the consent form in consenting participants.

Permission from Research Site(s):

Please note the following:

- This IRB exemption determination letter means that this research has met one or more of the federal criteria for exemption per 45 CFR 46.104- Exempt Research.
- Before the research is initiated, permission to conduct research at a given site must be obtained from all research locations listed in the IRB submission. You must keep copies of all such permission letters for your files.
- It is the responsibility of each researcher to follow all applicable policies and procedures of any outside institution where the research will be conducted.

Modifications:

Any changes to this exempt project must be reviewed by the IRB prior to initiation by submitting a MODIFICATION request. Do not collect data while the changes are being reviewed. Data collected during this time cannot be used in research.

Record Retention:

Exempt projects will be retained by the IRB office for three years after the last action on the project.

You are approved to start the research. Please retain a copy of this notification for your records.

If you have any questions, please contact the IRB office.

Thank you.

The Oakland University IRB

Appendix B

IRB Modification



Institutional Review Board

Date: September 27, 2024

Study #: IRB-FY2024-79

Study Title: Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults

Submission Type: Modification

IRB Decision: Exempt

Research Team:

Dali Majeed
Julie Kruse
Julie Kruse

The IRB has reviewed the Modification submission related to the above referenced study and determined that the changes listed below do not affect the exemption status of the study. The Modification submission is Approved and the study remains Exempt per federal regulations.

The approved modifications are the following:

1. Adding of funding source, Blue Cross Blue Shield of Michigan Foundation (Cayuse Proposal Number 24-0241)
2. Revise the recruitment documents to include a link to the survey
3. Revise the information sheet to include information about the financial sponsor of the study and that the emails of participants who select to receive the research incentive gift card may be shared with the Oakland University account payable office.
4. Participants will be directed to place their completed paper survey in the envelope marked "Completed Survey". Additionally, for those participants interested in the gift card, they will be directed to place their written e-mail address in the envelope marked "Gift Card E-Mail Address". The envelopes will be placed into lock boxes located at local Chaldean Churches.
5. Revise the survey to include the collection of demographic information and to have the first question screens participants to ensure they are Chaldean. This survey will not collect any identifiable information and will not be linked to the second "Gift Card" survey that collects email addresses to be able to grant participants the research incentive.
6. The survey can be completed online via Qualtrics or a hard copy.

7. Data Access individuals updated.

IMPORTANT NOTE:

Since the modified study will collect email addresses in the second survey to be able to grant participants the research incentive, the study is now exempt under category 2(ii) - (2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if the following is met: (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation

This submission includes the following approved documents:

- Revised recruitment flyer documents
- Date-Stamped Revised Information Sheet V 9/27/2024
- Revised survey

The IRB approved (date-stamped) consent document(s) has been published under Attachments in the Submission Details page. Please make sure to use the most recent IRB approved version of the consent form in consenting participants.

You are approved to implement the aforementioned modifications. Please retain a copy of this notification for your records.

This letter can also be found in Cayuse under the Letters tab in the Submission Details page.

If you have any questions, please contact the IRB office.

Thank you.

The Oakland University IRB

Appendix C

IRB Incident Report



Institutional Review Board

Date: November 19, 2024

Study #: IRB-FY2024-79

Study Title: Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults

Submission Type: Incident

IRB Decision: Noted

Research Team:

Dali Majeed
Julie Kruse
Julie Kruse

The INCIDENT submission about the above referenced study has been reviewed by the IRB Administrator. The reported incident has been determined to be the following:

- Not serious or continuing or reportable to the Office of Human Research Protection (OHRP), and
- The corrected action plan indicated in the submission is acceptable.

No further action on this submission is required at this time.

Please retain a copy of this notification for your records.

Thank you.

The Oakland University IRB

Appendix D

IRB Incident Report - Modifications



Institutional Review Board

Date: November 20, 2024

Study #: IRB-FY2024-79

Study Title: Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults

Submission Type: Modification

IRB Decision: Exempt

Research Team:

Dali Majeed

Julie Kruse

Julie Kruse

The IRB has reviewed the Modification submission related to the above referenced study and determined that the changes listed below do not affect the exemption status of the study. The Modification submission is Approved and the study remains Exempt per federal regulations.

The approved modifications are the following:

The following changes are made as a part of the corrective action plan that has been proposed in the previous incident submission to report the hacking of the online research survey:

1. Revise Qualtrics settings to include preventing multiple respondent submissions by selecting "prevent multiple submissions" option on Qualtrics. This change will be applied in both surveys.
2. Revise Qualtrics setting to record respondents' IP address. This change will be applied to both surveys.
3. Revision of advertisement flyer and information sheets to include the collection of IP address.
3. Additional recruitment methods: a) Send e-mail to priests and Chaldean Community Foundation with advertisement flyer and survey link so that they can share it with parishioners and members; and b) Post advertisement flyer and survey link on personal social media accounts.

This submission includes the following approved documents:

- Revised advertisement flyer
- Recruitment email message
- Date-Stamped Information Sheet V 11/20/2024
- Qualtrics Consent Form V 11/20/2024

Important Note:

- The modified research is exempt under category 2(ii) - Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

The IRB approved (date-stamped) consent document(s) has been published under Attachments in the Submission Details page. Please make sure to use the most recent IRB approved version of the consent form in consenting participants.

You are approved to implement the aforementioned modifications. Please retain a copy of this notification for your records.

This letter can also be found in Cayuse under the Letters tab in the Submission Details page.

If you have any questions, please contact the IRB office.

Thank you.

The Oakland University IRB

Appendix E

Information Sheet for Exempt Survey Research

Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults

Introduction

You are being asked to be in a research study that is being done by Dali Majeed BSN, RN, PhD under the direction of Dr. Julie Kruse PhD, RN from Oakland University School of Nursing, the faculty advisor for this project.

Your decision to participate in this study is voluntary. You can choose to stop your participation at any time or skip any part of the study if you are not comfortable. Also, individuals who are currently experiencing suicidal thoughts should not participate in this research study. Your decision will not affect your present or future relationship with Oakland University, the researcher, or the School of Nursing.

What is the purpose of this study?

The purpose of this research study is to understand the effect of modifying factors, individual beliefs, and social support on Chaldean American adults' intention to seek mental health services.

Who can participate in this study?

You are being asked to participate in the study because you are (1) adults 18 years and older, (2) of Chaldean descent or heritage and (3) reside in Michigan to take a paper/pencil or online survey.

What do I have to do?

If you choose to participate in this research study, you will be asked to do the following:

1. Complete a survey that will take you approximately 20-25 minutes to complete
 - If you complete the paper/pencil survey, you will be asked to place your completed survey into a secure lock box located within the church
 - If you complete the secure survey online, you will submit the survey by following the survey directions and clicking "submit" on the last page of the survey

The electronic version of the research survey will take place through a secure online survey platform called Qualtrics. Online consent will be obtained by clicking "I agree" before starting the survey. The paper/pencil copy of the survey will be located at the Chaldean Community Foundation or Chaldean Churches. By taking the paper/pencil survey you acknowledge consent.

Are there any risks to me?

For this study, the potential risks are minimal. No identifiable data (with the exception of IP address) that can directly be linked to you are collected.

Are there any benefits to me?

There may be no direct benefits to you, however, the results of this study may benefit others in the future.

Will I receive anything for participating?

You will receive a \$15 electronic gift card to Amazon.com for completing the survey. Once the survey is completed, you will be linked to a second survey where you can provide an email address to which we may send an electronic gift card. The first survey must be completely answered to be eligible for a gift card. There are questions throughout the survey to make sure you are paying attention to the task. You will not be paid if these questions are not answered correctly, so please be sure to read each question carefully. You can choose to stop the survey at any time, but you will not receive payment if you do not complete the entire survey.

What if I want to stop participating in this study?

For the online survey, if you want to stop participating, close your browser before completing and submitting the survey. If the survey is submitted, it will not be possible to withdraw your data from the study.

For the paper survey, if you want to stop participating, you can keep the blank or partially completed survey or return it unmarked to researchers.

Who is the financial sponsor for this study?

The financial sponsor of this study is Blue Cross Blue Shield of Michigan Foundation.

Who could see my information?

The study will not collect any identifiable personal information, except for an Internet Protocol (IP) address to ensure you are eligible to complete this study. Your research records may be shared and reviewed by the following groups:

- Representatives of the Oakland University Institutional Review Board and/or other regulatory compliance staff, whose job is to protect people who are in research studies.
- Regulatory authorities who oversee research (Office for Human Research Protections, or other federal, state, or international regulatory agencies)
- If you choose to receive a \$15 Amazon.com gift card, only your e-mail address will be shared with the Oakland University Accounts Payable Office for processing reasons. They will not have access to your data.

Who can I contact if I have questions about this study?

If you wish to participate in the study or have any questions about this research, please contact me, Dali Majeed, at dmajeed@oakland.edu or my faculty advisor, Dr. Julie Kruse, at juliekruse@oakland.edu.

For questions regarding your rights as a participant in human subject research, you may contact the Oakland University Institutional Review Board, 248-370-4898.

Appendix F

Recruitment Flyer



CALLING ALL CHALDEANS!

If you are 18 or older, can read and understand English and live in Michigan, you may be eligible to participate in a research study.

FACTORS THAT INFLUENCE INTENTION TO SEEK MENTAL HEALTH SERVICES

Are you interested in being involved in a study to understand how the Chaldean community feels about getting mental health help?

The study explores mental health in the Chaldean community and looks at what influences getting mental health help. The information can bring important insight and improve the health of Chaldean individuals.

Receive a \$15
Amazon.com Gift Card
for Your Participation!

Contact for questions:
Dali Majeed, BSN, RN
dmajeed@oakland.edu
(313) 451-4555

- Survey can be done online or paper format
- Participation will take about 20-25 minutes
- No identifiable personal information will be collected (except IP address - to ensure you are eligible to complete the study)**

Survey Link:
<https://tinyurl.com/surveychaldean>

Or Scan QR Code Below




SCHOOL OF NURSING
OAKLAND UNIVERSITY

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Chaldean Survey Link
<https://tinyurl.com/surveychaldean>

Appendix G

Chaldean Diocese of St. Thomas The Apostle U.S.A Letter of Support



CHALDEAN DIOCESE
OF ST. THOMAS THE APOSTLE U.S.A.

ܡܠܟܐ ܕܝܫܘܥ ܡܫܝܚܐ
ܕܫܡܝܐ ܕܡܪܝܡ

November 6, 2023

Dear Oakland University School of Nursing:

I want to start by introducing myself. I am Most Reverend Francis Y. Kalabat, Bishop of the Chaldean Diocese of St. Thomas the Apostle U.S.A. I am writing this letter to support the research study: *Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults*, conducted by nursing PhD student Dali Majeed B.S.N., R.N.

We understand the purpose of Dali's study is for her to examine influential factors that influence the intention of Chaldean Americans to seek mental health care. We are happy to support Dali in her research efforts in any way we can. It is with great pride to have Dali work on a project like this to rid society of mental health stigma.

For further information or questions regarding our support with this project, please contact us at 248-351-0440

Thank you in advance; I am

Sincerely yours in Christ,

+ *F.Y. Kalabat*

Most Rev. Francis Y. Kalabat
Bishop of St. Thomas the Apostle
Chaldean Catholic Diocese U.S.A

FYK



Appendix H

Chaldean Community Foundation Letter of Support



CHALDEAN COMMUNITY FOUNDATION

EXECUTIVE BOARD SYLVESTER SANDIHA CHAIRMAN

KEVIN JAPPAYA
EXECUTIVE VICE-CHAIRMAN

KEVIN DENHA
VICE-CHAIRMAN

ANTHONY MONA
TREASURER

MATTHEW LOUSSIA
SECRETARY

ANDY GUTMAN
JOSEPH HURSH
HALEY JONNA

DIRECTORS
WASSEM AYAR
JUSTIN HANNA
FRANK JARBOU
JIM MANNA
ANDI NUMAN
RENEE TOMINA
JAYSON ZEBARI

**CHALDEAN COMMUNITY
FOUNDATION DIRECTORS**
NORA HANNA
FRANK JARBOU
JASON NAJOR
PIERRE NONA
MICHAEL SARAFI

MARTIN MANNA
PRESIDENT

AFFILIATES



CHALDEAN NEWS

PAC

November 27, 2023

Dear Oakland University School of Nursing:

The Chaldean Community Foundation (CCF) is pleased to write this letter in support of the research study: *Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults* conducted by nursing PhD student, Dali Majeed BSN, RN.

We understand the purpose of Dali's study is for her to examine influential factors that influence the intention of Chaldean Americans to seek mental health care. We will support Dali in her research efforts in the following ways:

- We will allow Dali to post informational flyers in our lobby to advertise her study.

We are happy to support Dali Majeed in her research efforts as outlined above. For further information or questions regarding our support with this project, please contact us at (586) 722-7253 or email Jackie Raxter at Jacqueline.Raxter@chaldeanfoundation.org.

Jacqueline Raxter

Jacqueline M. Raxter, MA, LMSW, LPC

Behavioral Health Manager
Chaldean Community Foundation

Appendix I

Facebook Group Metro Detroit Chaldeans Letter of Support

Dear Oakland University School of Nursing:

The Facebook Group Metro Detroit Chaldeans is pleased to write this letter in support of the research study: *Utilizing the Health Belief Model to Explore Factors Influencing Intention to Seek Mental Health Services in Chaldean Adults* conducted by nursing PhD Candidate, Dali Majeed BSN, RN.

We understand the purpose of Dali's study is for her to examine influential factors that influence the intention of Chaldean Americans to seek mental health care. We will support Dali in her research efforts in the following ways:

- We will allow Dali to post her advertisement flyer and survey link on our public Facebook Group Metro Detroit Chaldeans

We are happy to support Dali Majeed in her research efforts as outlined above. For further information or questions regarding our support with this project, you may contact me directly at (248) 872-8448 or via email at rannaabro@gmail.com

Sincerely,



Ranna Salem
Group Administrator
Metro Detroit Chaldeans

Appendix J

Mental Health Knowledge Schedule (MAKS) Instrument

Mental health knowledge schedule

MAKS

Instructions: For each of statements 1– 6 below, respond by ticking one box only. Mental health problems here refer, for example, to conditions for which an individual would be seen by healthcare staff.

		Agree strongly	Agree slightly	Neither agree nor disagree	Disagree strongly	Disagree slightly	Don't know
1	Most people with mental health problems want to have paid employment.	☐	☐	☐	☐	☐	☐
2	If a friend had a mental health problem, I know what advice to give them to get professional help.	☐	☐	☐	☐	☐	☐
3	Medication can be an effective treatment for people with mental health problems.	☐	☐	☐	☐	☐	☐
4	Psychotherapy (eg talking therapy or counselling) can be an effective treatment for people with mental health problems.	☐	☐	☐	☐	☐	☐
5	People with severe mental health problems can fully recover.	☐	☐	☐	☐	☐	☐
6	Most people with mental health problems go to a healthcare professional to get help.	☐	☐	☐	☐	☐	☐

Instructions: Say whether you think each condition is a type of mental illness by ticking one box only.

7	Depression	☐	☐	☐	☐	☐	☐
8	Stress	☐	☐	☐	☐	☐	☐
9	Schizophrenia	☐	☐	☐	☐	☐	☐
10	Bipolar disorder (manic-depression)	☐	☐	☐	☐	☐	☐
11	Drug addiction	☐	☐	☐	☐	☐	☐
12	Grief	☐	☐	☐	☐	☐	☐

Appendix K

Health Beliefs about Mental Illness (HBMI) Instrument

Saleebby

TABLE 6
Subscales of the Health Beliefs about Mental Illness Instrument

Health Motivation Scale

Factor 6

- HB2 I feel it is important to carry out activities which improve my emotional health.
- HB3 have regular health check-ups even when I am not sick.
- HB4 I eat well balanced meals.
- HB5 Maintaining good emotional health is extremely important to me.
- HB6 I want to recognize emotional problems early.
- HB8 I search for new information to improve my emotional health.

Emotional/Nervous Susceptibility Scale

Factor 2

- HB7 It is extremely likely that I will have emotional or nervous problems in the future.
- HB9 My chances of having emotional or nervous problems are great.
- HB10 I am more likely than the average person to have emotional or nervous problems.
- HB11 There is a good possibility that I will develop emotional or nervous problems in the next 10 years.
- HB12 I feel I will develop emotional or nervous problems in the future.

Emotional/Nervous Severity Scale

Factor 3

- HB13 Emotional or nervous problems would threaten my relationship with family or friends.
- HB15 Thinking about emotional or nervous problems makes me nervous.
- HB16 The thought of having emotional or nervous problems scares me.
- HB17 If I had emotional or nervous problems, my whole life would change.
- HB18 I am afraid to think about emotional or nervous problems.
- HB20 If I developed emotional or nervous problems, I would not live as long as the average person.

Factor 7

- HB 14 Difficulties I would experience with emotional or nervous problems would last a long time.

Emotional/Nervous Benefits Scale

Factor 5

- HB19 Getting help for emotional or nervous problems would prevent major problems with family and friends.
- HB23 Getting help for emotional or nervous problems would increase my ability to function at home and at work.
- HB25 Getting help for emotional or nervous problems would make me feel better about myself.
- HB27 A burden would be lifted off me if I were to get help for emotional or nervous problems.

Emotional/Nervous Barriers Scale

Factor 1

- HB21 Getting help for emotional/nervous problems is embarrassing.
- HB22 Getting help for emotional/nervous problems would cost too much money.
- HB24 Getting help for emotional/nervous problems would take too much time.
- HB26 Health professionals would not understand someone like me if I went to them for emotional or nervous problems.
- HB29 People would think differently about me if I were to get help for emotional or nervous problems.

Table 6 (continued on next page)

TABLE 6 (continued)
Subscales of the Health Beliefs about Mental Illness Instrument

Alcohol/Drug Susceptibility Scale

Factor 4

- HB28 There is a good possibility that I develop drug or alcohol problems in the next 10 years.
 HB30 I am more likely than the average person to have drug or alcohol problems.
 HB31 My chances of having drug or alcohol problems are great.
 HB33 It is extremely likely that I will have drug or alcohol problems in the future.
 HB36 I feel I will develop drug or alcohol problems in the future.

Alcohol/Drug Severity Scale

Factor 3

- HB38 Thinking about drug or alcohol problems makes me nervous.
 HB39 The thought of having drug or alcohol problems scares me.
 HB41 I am afraid to think about drug or alcohol problems.

Factor 7

- HB32 Difficulties I would experiences with drug or alcohol problems would last a long time.
 HB34 If I had drug or alcohol problems, my whole life would change.
 HB35 Drug or alcohol problems would threaten relationships with my family or friends.
 HB37 If I developed drug or alcohol problems, I would not live as long as the average person.

Alcohol/Drug Benefits Scale

Factor 5

- HB42 A burden would be lifted off me if I were go get help for drug or alcohol problems.
 HB44 Getting help for drug and alcohol problems would make me feel better about myself.
 HB45 Getting help for drug or alcohol problems would increase my ability to function at home and at work.
 HB47 Getting help for drug or alcohol problems would prevent major problems with family and friends.

Alcohol/Drug Barriers Scale

Factor 1

- HB40 Health professionals would not understand someone like me if I went to them for drug or alcohol problems.
 HB43 People would think differently about me if I were to get help for drug or alcohol problems.
 HB46 Getting help for drug or alcohol problems would cost too much money.
 HB48 Getting help for drug or alcohol problems would take too much time.
 HB49 Getting help for drug or alcohol problems is embarrassing.

Item with factor loading <.40

- HB 1 I exercise at least three times per week.

Note. the subscales including alcohol/drug items were excluded from the survey.

Appendix L

Social Support Scale (SSS) Instrument

S1 Table. The SSS items.

Item number	Item content
1	There are people in my life who pay attention to my feelings and problems
2	There are people in my life who appreciate what I do
3	There are people in my life who I can get help from if I need it
4	There are people in my life who I can talk to about how to handle things

Appendix M

General Help Seeking Questionnaire (GHSQ) Instrument

Table A1. General Health Seeking Questionnaire (GHSQ) (21)

Below is a list of people one may seek help or advice from when experiencing personal or emotional problems. Mark how likely it is that you would seek help from each of these persons when experiencing personal or emotional problems during the coming 4 weeks. (1=extremely unlikely to 7=extremely likely)	
1.	Partner (e.g. boyfriend or girlfriend)
2.	Friend (excluding family members)
3.	Parent
4.	Other relative or family member
5.	School counselor, social worker, psychologist, or psychiatrist
6.	Helpline (e.g. the national helpline)
7.	General practitioner (Doctor)
8.	Teacher (mentor, subject teacher)
9.	Someone not listed above
10.	I would not seek help from anyone

Note. Categories were modified to the following: (1) spouse or partner, (2) friend (excluding family members), (3) parent, (4) other relative or family member, (5) school counselor, social worker, psychologist, or psychiatrist, (6) helpline (national hotline), (7) religious leader (priest, nun, clergy), (8) someone not listed (free text box included), (9) I would not seek help from anyone.

REFERENCES

- Abi Doumit, C., Haddad, C., Sacre, H., Salameh, P., Akel, M., Obeid, S., Akiki, M., Mattar, E., Hilal, N., Hallit, S., & Soufia, M. (2019). Knowledge, attitude and behaviors towards patients with mental illness: Results from a national Lebanese study. *PLoS ONE*, 14(9), e0222172. <https://doi.org/10.1371/journal.pone.0222172>
- Abuelezam, N. N., El-Sayed, A. M., & Galea, S. (2018). The health of Arab Americans in the United States: An updated comprehensive literature review. *Frontiers In Public Health*, 6, 262. <https://doi.org/10.3389/fpubh.2018.00262>
- Abuelezam, N. N., & El-Sayed, A. M. (2021). The health of Arab Americans in the United States: An update. *Handbook of Healthcare in the Arab World*, 739-764. https://doi.org/10.1007/978-3-030-36811-1_35
- Afifi, M. (2007). Gender differences in mental health. *Singapore Medical Journal*, 48(5), 385-391.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In Kuhl, J., Beckmann, J. (Eds.), *Action control: From cognition to behavior* (pp. 11-39). SSSP Springer Series in Social Psychology. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-69746-3_2
- Al-Hawdrawi, H. (2017). The effect of immigration on the mental well-being of Middle Eastern immigrants in the United States. *Research Journal of Pharmacy and Technology*, 10(7), 2069-2074. <https://doi.org/10.5958/0974-360X.2017.00361.4>
- Al-Krenawi, & Graham, J. R. (2000). Culturally sensitive social work practice with Arab clients in mental health settings. *Health & Social Work*, 25(1), 9-22. <https://doi.org/10.1093/hsw/25.1.9>

- Almutairi, W., Seven, M., Poudel-Tandukar, K., & VanKim, N. (2022). Mental health disorders among Middle Eastern immigrant women living in the United States: A scoping review. *Perspectives in Psychiatric Care*, 58(4), 3079-3102.
<https://doi.org/10.1111/ppc.13088>
- Aloud, N., & Rathur, A. (2009). Factors affecting attitudes toward seeking and using formal mental health and psychological services among Arab Muslim populations. *Journal of Muslim Mental Health*, 4(2), 79–103.
<https://doi.org/10.1080/15564900802487675>
- American Psychiatric Association. (2024, April). *What is depression?*.
https://www.psychiatry.org/patients-families/depression/what-is-depression#section_0
- American Psychiatric Association. (2022, November). *What is posttraumatic stress disorder (PTSD)?*. <https://www.psychiatry.org/patients-families/ptsd/what-is-ptsd>
- American Psychiatric Association. (2017). *Mental health disparities: Women's mental health*. <https://www.psychiatry.org/File%20Library/Psychiatrists/Cultural-Competency/Mental-Health-Disparities/Mental-Health-Facts-for-Women.pdf>
- American Psychiatric Association. (n.d.). *Mental health facts on refugees, asylum-seekers, & survivors of forced displacement*.
<https://www.psychiatry.org/File%20Library/Psychiatrists/Cultural-Competency/Mental-Health-Disparities/Mental-Health-Facts-for-Refugees.pdf>
- American Psychological Association. (n.d.). *Ethnicity*. <https://dictionary.apa.org/ethnicity>

- Arabo, F. (2024). Bridging cultural barriers: Addressing healthcare hesitancy in the Chaldean community. *Pathways: Stanford Journal of Public Health (SJPH)*, 2(1).
<https://ojs.stanford.edu/ojs/index.php/sjph/article/view/3619>
- Arfken, C. L., Alsaud, M., Mischel, E. F., Haddad, L., Sonderman, S., Lister, J. J., & Javanbakht, A. (2018). Recent Iraqi refugees: Association between ethnic identification and psychological distress. *Journal of Muslim Mental Health*, 12(2).
<https://doi.org/10.3998/jmmh.10381607.0012.201>
- Bird, M. D., Chow, G. M., & Cooper, B. T. (2020). Student-athletes' mental health help-seeking experiences: A mixed methodological approach. *Journal of College Student Psychotherapy*, 34(1), 59-77.
<https://doi.org/10.1080/87568225.2018.1523699>
- Bradbury, A. (2020). Mental health stigma: The impact of age and gender on attitudes. *Community Mental Health Journal*, 56(5), 933-938.
<https://doi.org/10.1007/s10597-020-00559-x>
- Browning, L., Oska, N., Kidess, G. G., Hinchey, L., Saleem, A., Knill, S., Elhage, M., & Javanbakht, A. (2026). Mental health attitudes and perspectives in Arab American communities: Beliefs associated with stigma, treatment, and the origins of pathology. *Transcultural Psychiatry*, 63(1), 46–55.
<https://doi.org/10.1177/13634615251379444>
- Carpenter, C. J. (2010). A meta-analysis of the effectiveness of health belief model variables in predicting behavior. *Health Communication*, 25(8), 661–669.
<https://doi.org/10.1080/10410236.2010.521906>

Chaldean Chamber of Commerce. (n.d.). *About us*.

<https://www.chaldeanchamber.com/about-us#mission>

Chaldean Community Foundation. (n.d.). *Chaldean American history*.

<https://www.chaldeanfoundation.org/chaldean-history/>

Chaldean Community Foundation. (2026). *About us*.

<https://www.chaldeanfoundation.org/about-us/>

Champion, V.L., & Skinner, C.S. (2008). The health belief model. In Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.), *Health behavior and health education: Theory, research, and practice* (4th ed., pp. 45-65). John Wiley & Sons.

Cheng, P., Jasinski, N., Zheng, W., Yadava, A., Wang, L., Li, L., Xu, L., Zhou, Y.,

Zhang, L., & Li, W. (2021). Psychometric properties of the primary care PTSD screen for DSM-5: Findings from family members of Chinese healthcare workers during the outbreak of COVID-19. *Frontiers in Psychiatry, 12*, 695678.

<https://doi.org/10.3389/fpsy.2021.695678>

CITI Program. (n.d.) *Get to know CITI program*. <https://about.citiprogram.org/get-to-know-citi-program/>

Dalky, H. F., Abu-Hassan, H. H., Dalky, A. F., & Al-Delaimy, W. (2020). Assessment of mental health stigma components of mental health knowledge, attitudes and behaviors among Jordanian healthcare providers. *Community Mental Health Journal, 56*, 524-531. <https://doi.org/10.1007/s10597-019-00509-2>

Derr, A. S. (2016). Mental health service use among immigrants in the United States: A systematic review. *Psychiatric Services, 67*(3), 265-274.

<https://doi.org/10.1176/appi.ps.201500004>

- Ettman, C. K., Abdalla, S. M., Cohen, G. H., Sampson, L., Vivier, P. M., & Galea, S. (2020). Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic. *JAMA Network Open*, 3(9), e2019686-e2019686. <https://doi.org/10.1001/jamanetworkopen.2020.19686>
- Eylem, O., De Wit, L., Van Straten, A., Steubl, L., Melissourgaki, Z., Danişman, G. T., De Vries, R., Kerkhof, A. J. F. M., Bhui, K., & Cuijpers, P. (2020). Stigma for common mental disorders in racial minorities and majorities a systematic review and meta-analysis. *BMC Public Health*, 20, 879. <https://doi.org/10.1186/s12889-020-09199-y>
- Evans-Lacko, S., Little, K., Meltzer, H., Rose, D., Rhydderch, D., Henderson, C., & Thornicroft, G. (2010). Development and psychometric properties of the mental health knowledge schedule. *The Canadian Journal of Psychiatry*, 55(7), 440-448. <https://doi.org/10.1177/07067437100550070>
- Fan, S., & Piret, E. M. (2025). Accessing mental health care: A population-level exploration of the impact of immigration duration in the United States 2019-2023. *PLOS Mental Health*, 2(7), e0000339. <https://doi.org/10.1371/journal.pmen.0000339>
- Fekih-Romdhane, F., Chebbi, O., Sassi, H., & Cheour, M. (2021). Knowledge, attitude and behaviours toward mental illness and help-seeking in a large nonclinical Tunisian student sample. *Early Intervention in Psychiatry*, 15(5), 1292-1305. <https://doi.org/10.1111/eip.13080>

- Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. O. (1993). Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress*, 6(4), 459-473. <https://doi.org/10.1002/jts.2490060405>
- Green, M., Tariq, M., & Resnicow, K. (2023). Health behaviors and their risk factors among Arab Americans. In Nassar, S.C., Ajrouch, K.J., Dallo, F.J., & Hakim-Larson, J. (Eds.), *Biopsychosocial perspectives on Arab Americans: Culture, development, and health* (2nd ed., pp. 279-299). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-28360-4_15
- Groen, S. P., Richters, A., Laban, C. J., & Devillé, W. L. (2018). Cultural identity among Afghan and Iraqi traumatized refugees: Towards a conceptual framework for mental health care professionals. *Culture, Medicine, and Psychiatry*, 42, 69-91. <https://doi.org/10.1007/s11013-016-9514-7>
- Hakim-Larson, J., Kamoo, R., Nassar-McMillan, S., & Porcerelli, J. (2007). Counseling Arab and Chaldean American families. *Journal of Mental Health Counseling*, 29(4), 301-321. <https://doi.org/10.17744/mehc.29.4.u5468716955w1023>
- Hamdan, A. (2009). Mental health needs of Arab women. *Health Care for Women International*, 30(7), 593–611. <https://doi.org/10.1080/07399330902928808>
- Hammer, J. H., & Spiker, D. A. (2018). Dimensionality, reliability, and predictive evidence of validity for three help-seeking intention instruments: ISCI, GHSQ, and MHSIS. *Journal of Counseling Psychology*, 65(3), 394–401. <https://doi.org/10.1037/cou0000256>
- Hassoun, R., Hughes, E., Farroukh, M., McNall, M., & Williams, K. P. (2013). *A first look at chronic diseases and lifestyle behaviors among Arab and Chaldean*

- Americans in Southeast Michigan*. In *Proceedings of the Sixth International Conference on Health Issues in Arab Communities* (ACCESS Health Journal). ACCESS Community Health & Research Center.
- Henshaw, E. J., & Freedman-Doan, C. R. (2009). Conceptualizing mental health care utilization using the health belief model. *Clinical Psychology: Science and Practice*, 16(4), 420-439. <https://doi.org/10.1111/j.1468-2850.2009.01181.x>
- Hunt, L. M. (2005). Health research: What's culture got to do with it? *The Lancet*, 366(9486), 617-618. [https://doi.org/10.1016/S0140-6736\(05\)67118-8](https://doi.org/10.1016/S0140-6736(05)67118-8)
- International Rescue Committee (2009). The health of refugees from Iraq. <http://www.rescue.org/iraqi-refugees>.
- Jamil, H. J., & Arnetz, B.B. (2017). Mental disorders and substance use among Iraqis (Chaldean and Arab-Muslim) in Michigan, USA. *Journal of Muslim Mental Health*, 11(1). <https://doi.org/10.3998/jmmh.10381607.0011.106>
- Jamil, H., Grzybowski, M., Hakim-Larson, J., Fakhouri, M., Sahutoglu, J., Khoury, R., & Fakhouri, H. (2008). Factors associated with self-reported depression in Arab, Chaldean, and African Americans. *Ethnicity & Disease*, 18, 464.
- Jamil, H., Hakim-Larson, J., Farrag, M., Kafaji, T., Duqum, I., & Jamil, L. H. (2002). A retrospective study of Arab American mental health clients: Trauma and the Iraqi refugees. *American Journal of Orthopsychiatry*, 72(3), 355-361. <https://doi.org/10.1037/0002-9432.72.3.355>
- Kanafani, T., El Marj, N., Yekani, H. A. K., & Sheen, M. (2025). An exploratory study: Stigma, beliefs, and behaviors towards mental health among Arabs and

- subcontinent Asians. *Journal of Psychology and Neuroscience*, 7(1), 2693-2490.
<https://doi.org/doi.org/10.47485/2693-2490.1103>
- Khatib, H. E., Alyafei, A., & Shaikh, M. (2023). Understanding experiences of mental health help-seeking in Arab populations around the world: A systematic review and narrative synthesis. *BMC Psychiatry*, 23(1), 324.
<https://doi.org/10.1186/s12888-023-04827-4>
- Kelly, C. M., Jorm, A. F., & Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *Medical Journal of Australia*, 187(S7), S26-S30. <https://doi.org/10.5694/j.1326-5377.2007.tb01332.x>
- Khatib, H. E., Alyafei, A., & Shaikh, M. (2023). Understanding experiences of mental health help-seeking in Arab populations around the world: A systematic review and narrative synthesis. *BMC Psychiatry*, 23(1), 324.
<https://doi.org/10.1186/s12888-023-04827-4>
- Kim, J. E., & Zane, N. (2016). Help-seeking intentions among Asian American and White American students in psychological distress: Application of the health belief model. *Cultural Diversity and Ethnic Minority Psychology*, 22(3), 311.
<https://doi.org/10.1037/cdp0000056>
- Knill, S., Browning, L., Osk, N., Kidess, G., Hinchey, L., Saleem, A., ... & Javanbakht, A. (2024). Mental health attitudes and perspectives of Arab Americans: Beliefs associated with stigma, treatment, and the origins of pathology. *Medical Student Research Symposium*. 346. https://digitalcommons.wayne.edu/som_srs/346

- Kruse, J. A., Williams, R. A., & Mood, D. (2017). Exploratory factor analysis of the strength of cultural affiliation scale. *Cancer Nursing*, 40(1), E28-E35.
<https://doi.org/10.1097/NCC.0000000000000346>
- Langley, Wootton, B. M., & Grieve, R. (2018). The utility of the health belief model variables in predicting help-seeking intention for anxiety disorders. *Australian Psychologist*, 53(4), 291–301. <https://doi.org/10.1111/ap.12334>
- Leininger M. M. (1988). Leininger's theory of nursing: Cultural care diversity and universality. *Nursing Science Quarterly*, 1(4), 152–160.
<https://doi.org/10.1177/089431848800100408>
- Löwe, B., Kroenke, K., & Gräfe, K. (2005). Detecting and monitoring depression with a two-item questionnaire (PHQ-2). *Journal of Psychosomatic Research*, 58(2), 163-171.
- Mayo Clinic. (2018, May). *Anxiety disorders*. <https://www.mayoclinic.org/diseases-conditions/anxiety/symptoms-causes/syc-20350961>
- Melhem, I., & Chemali, Z. (2014). Mental health of Arab Americans: Cultural considerations for excellence of care. *The Massachusetts General Hospital textbook on diversity and cultural sensitivity in mental health*, 3-30.
- Miri, A. (2020, March 27). *Chaldeans in Michigan*. The Chaldean News.
<https://www.chaldeannews.com/features-1/2020/3/27/chaldeans-in-michigan>
- Misra, S., Jackson, V. W., Chong, J., Choe, K., Tay, C., Wong, J., & Yang, L. H. (2021). Systematic review of cultural aspects of stigma and mental illness among racial and ethnic minority groups in the United States: Implications for interventions.

American Journal of Community Psychology, 68(3-4), 486-512.

<https://doi.org/10.1002/ajcp.12516>

Mongelli, F., Georgakopoulos, P., & Pato, M. T. (2020). Challenges and opportunities to meet the mental health needs of underserved and disenfranchised populations in the United States. *Focus*, 18(1), 16-24.

<https://doi.org/10.1176/appi.focus.20190028>

Mood, D. W., Magnan, M. A., & Northouse, L. M. (2003). Strength of cultural affiliation scale: Utility of a psychometrically sound measure for oncology nursing. Paper presented at: The 7th Conference on Cancer Nursing Research; February 6-8, 2003; San Diego, CA.

National Alliance on Mental Illness. (n.d.). *Community & culture*.

<https://www.nami.org/community-and-culture/>

National Alliance on Mental Illness. (2017). *Anxiety disorders*.

<https://www.nami.org/About-Mental-Illness/Mental-Health-Conditions/Anxiety-Disorders#:~:text=Anxiety%20disorders%20are%20the%20most,develop%20symptoms%20before%20age%2021>.

Nobiling, B. D., & Maykrantz, S. A. (2017). Exploring perceptions about and behaviors related to mental illness and mental health service utilization among college students using the health belief model (HBM). *American Journal of Health Education*, 48(5), 306-319. <https://doi.org/10.1080/19325037.2017.1335628>

O'Connor, P. J., Martin, B., Weeks, C. S., & Ong, L. (2014). Factors that influence young people's mental health help-seeking behaviour: A study based on the health belief

- model. *Journal of Advanced Nursing*, 70(11), 2577-2587.
<https://doi.org/10.1111/jan.12423>
- Pampati, S., Alattar, Z., Cordoba, E., Tariq, M., & Mendes de Leon, C. (2018). Mental health outcomes among Arab refugees, immigrants, and US born Arab Americans in Southeast Michigan: A cross-sectional study. *BMC Psychiatry*, 18(1), 1-8.
<https://doi.org/10.1186/s12888-018-1948-8>
- Peeters, M. C. W., Buunk, B. P., & Schaufeli, W. B. (1995). Social interactions, stressful events and negative affect at work: A micro-analytic approach. *European Journal of Social Psychology*, 25(4), 391–401. <https://doi.org/10.1002/ejsp.2420250404>
- Portney, L.G. (2020). *Foundations of clinical research: Applications to evidence-based practice*. FA Davis.
- Prins, A., Bovin, M. J., Smolenski, D. J., Marx, B. P., Kimerling, R., Jenkins-Guarnieri, M. A., Kaloupek, D.G., Schnurr, P.P., Pless Kaiser, A., Leyva, Y.E., & Tiet, Q. Q. (2016). The primary care PTSD screen for DSM-5 (PC-PTSD-5): development and evaluation within a veteran primary care sample. *Journal of General Internal Medicine*, 31(10), 1206-1211. <https://doi.org/10.1007/s11606-016-3703-5>
- Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion*, 12(1), 38–48.
<https://doi.org/10.4278/0890-1171-12.1.38>
- Purnell, L.D., Fenkl, E.A. (2019). People of Arab Heritage. In *Handbook for Culturally Competent Care* (pp. 83–95). Springer International Publishing.
https://doi.org/10.1007/978-3-030-21946-8_8

- Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Education Monographs*, 2(4), 328-335. <https://doi.org/10.1177/109019817400200403>
- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the health belief model. *Health Education Quarterly*, 15(2), 175-183. <https://doi.org/10.1177/10901981880150020>
- Resnicow, K., Patel, M. R., Green, M., Smith, A., Bacon, E., Goodell, S., Tariq, M., Alhawli, A., Syed, N., Van Horn, M.L., & Stiffler, M. (2021). Development of an ethnic identity measure for Americans of Middle Eastern and North African descent: Initial psychometric properties, sociodemographic, and health correlates. *Journal of Racial and Ethnic Health Disparities*, 8, 1067-1078. <https://doi.org/10.1007/s40615-020-00863-y>
- Saleebey, J. R. (2000). Health beliefs about mental illness: An instrument development study. *American Journal of Health Behavior*, 24(2), 83-95. <https://doi.org/10.5993/AJHB.24.2.1>
- Sangalang, C. C., Becerra, D., Mitchell, F. M., Lechuga-Peña, S., Lopez, K., & Kim, I. (2019). Trauma, post-migration stress, and mental health: A comparative analysis of refugees and immigrants in the United States. *Journal of Immigrant and Minority Health*, 21(5), 909-919. <https://doi.org/10.1007/s10903-018-0826-2>
- Santiago, P. H. R., Smithers, L. G., Roberts, R., & Jamieson, L. (2023). Psychometric properties of the social support scale (SSS) in two Aboriginal samples. *Plos one*, 18(1). <https://doi.org/10.1371/journal.pone.0279954>
- Samari, G., McNall, M., Lee, K., Perlstadt, H., & Nawyn, S. (2019). Socioeconomic status and the physical and mental health of Arab and Chaldean Americans in

- Michigan. *Journal of Immigrant and Minority Health*, 21(3), 497-507.
<https://doi.org/10.1007/s10903-018-0768-8>
- Sengstock, M.C. (n.d.). *Chaldean Americans*. <https://www.everyculture.com/multi/Bu-Dr/Chaldean-Americans.html>
- Sharrak, A., Yoskowitz, R., Karabon, P., & Lerchenfeldt, S. (2021). Understanding opioid addiction in the Chaldean community: A brief report. *Journal of Immigrant and Minority Health*, 23(2), 405–408. <https://doi.org/10.1007/s10903-020-01109-z>
- Shim, R. S., Ye, J., Baltrus, P., Fry-Johnson, Y., Daniels, E., & Rust, G. (2012). Racial/ethnic disparities, social support, and depression: Examining a social determinant of mental health. *Ethnicity & Disease*, 22(1), 15-20.
- Smith, K., Bhui, K., & Cipriani, A. (2020). COVID-19, mental health and ethnic minorities. *BMJ Mental Health*, 23(3), 89-90. <http://dx.doi.org/10.1136/ebmental-2020-300174>
- Staples, L. G., Dear, B. F., Gandy, M., Fogliati, V., Fogliati, R., Karin, E., Nielssen, V., & Titov, N. (2019). Psychometric properties and clinical utility of brief measures of depression, anxiety, and general distress: The PHQ-2, GAD-2, and K-6. *General Hospital Psychiatry*, 56, 13-18.
<https://doi.org/10.1016/j.genhosppsych.2018.11.003>
- Streubert, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing: Advancing the humanistic imperative* (5th ed.). Philadelphia, PA: Wolters Kluwer I Lippincott Williams & Wilkins.

- Taylor, E. M., Yanni, E. A., Pezzi, C., Guterbock, M., Rothney, E., Harton, E., Montour, J., Elias, C., & Burke, H. (2014). Physical and mental health status of Iraqi refugees resettled in the United States. *Journal of Immigrant and Minority Health*, 16(6), 1130-1137. <https://doi.org/10.1007/s10903-013-9893-6>
- U.S. Department of Veterans Affairs. (n.d.). *PTSD: National center for PTSD*. <https://www.ptsd.va.gov/professional/assessment/screens/pc-ptsd.asp>
- Wilson, C. J., Deane, F. P., Ciarrochi, J., & Rickwood, D. (2005). Measuring help-seeking intentions: Properties of the general help-seeking questionnaire. *Canadian Journal of Counselling*, 39(1), 15-28. <https://www.proquest.com/scholarly-journals/measuring-help-seeking-intentions-properties/docview/195809895/se-2>
- Wrobel, N.H., Paterson, A. (2014). Mental health risks in Arab Americans across the lifespan. In Nassar-McMillan, S., Ajrouch, K., Hakim-Larson, J. (Eds.) *Biopsychosocial Perspectives on Arab Americans*. Springer, Boston, MA. https://doi.org/10.1007/978-1-4614-8238-3_10
- YMCA (2016). *I am whole: A report investigating the stigma faced by young people experiencing mental health difficulties*. <https://www.ymca.org.uk/wp-content/uploads/2016/10/IAMWHOLE-v1.1.pdf>
- Yosef, A. R. (2008). Health beliefs, practice, and priorities for health care of Arab Muslims in the United States: Implications for nursing care. *Journal of Transcultural Nursing*, 19(3), 284-291. <https://doi.org/10.1177/1043659608317450>

Yu, M. Y., Wu, T. Y., & Mood, D. W. (2005). Cultural affiliation and mammography screening of Chinese women in an urban county of Michigan. *Journal of Transcultural Nursing*, 16(2), 107-116.

<https://doi.org/10.1177/1043659605274745>

Zora, A. N., Tisdale, T. C., Bustrum, J. M., Chege, C., & Alaichamy, S. (2020). Beyond Western paradigms: A culturally grounded approach to psychotherapy with Chaldean Americans. *Spirituality in Clinical Practice*, 7(2), 89–102.

<https://doi.org/10.1037/scp0000205>