

Capstone for Impact Submission | GY2021

Project Title: Role of Culture in Medication Adherence of Antidepressants among Latinx with Depression

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If this project can be continued by another UMMS student, please include your contact information or any other details you would like to share here:

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Summary (~250-500 words):

Over 40% of Latinxs discontinue antidepressant therapy within 30 days and less than 30% continue for more than 90 days. Latinxs are half as likely to seek treatment for depression, but when they do, they are twice as likely to seek help in a primary care setting rather than specialty mental health care than Whites. I am studying what cultural factors influence medication adherence then developing an intervention to increase antidepressant adherence in Ypsilanti Health Clinic and CHASS in Detroit. First part of the project is a systematic review (almost complete), next we are doing focus groups at both locations, lastly, we are implementing an intervention at both locations. We have a steering committee made up of a variety of providers at both locations to help give us insight into the unique patient populations.

The major question for my project is “what is the role of culture in medication adherence and perceptions of depression among Latinx patients with depression?” – answered with the systematic review as well as the ongoing focus groups we have going on. The next big question is: “what interventions at the Ypsilanti Health Clinic and at CHASS in Detroit might help improve medication adherence among Latinx with depression in these clinics?”— answered through focus groups and input from our steering committee of providers.

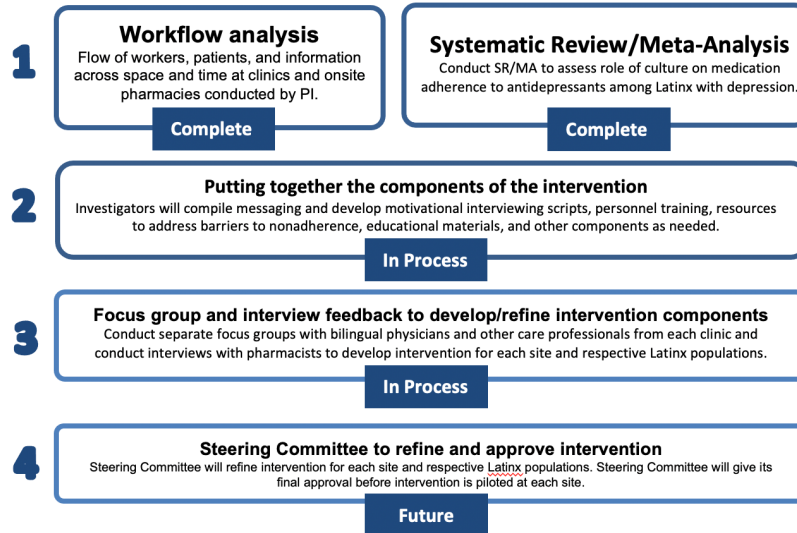
The goal of this project is to identify the unique role that culture plays in the treatment of depression in Latinx patients and be able to better equip providers to address the disparities in care of these patients. I want to work with Latinx populations and hope this project will help me develop a better way to serve this community in my future Family Medicine practice. Through all the stages of this project, it is clear that culture plays a significant role in how Latinx adults with depression engage with mental health resources. With this in mind, I hope that the interventions we implement at our project sites improve the engagement with antidepressant adherence and that these interventions are sustainable long after I graduate.

Methodology:

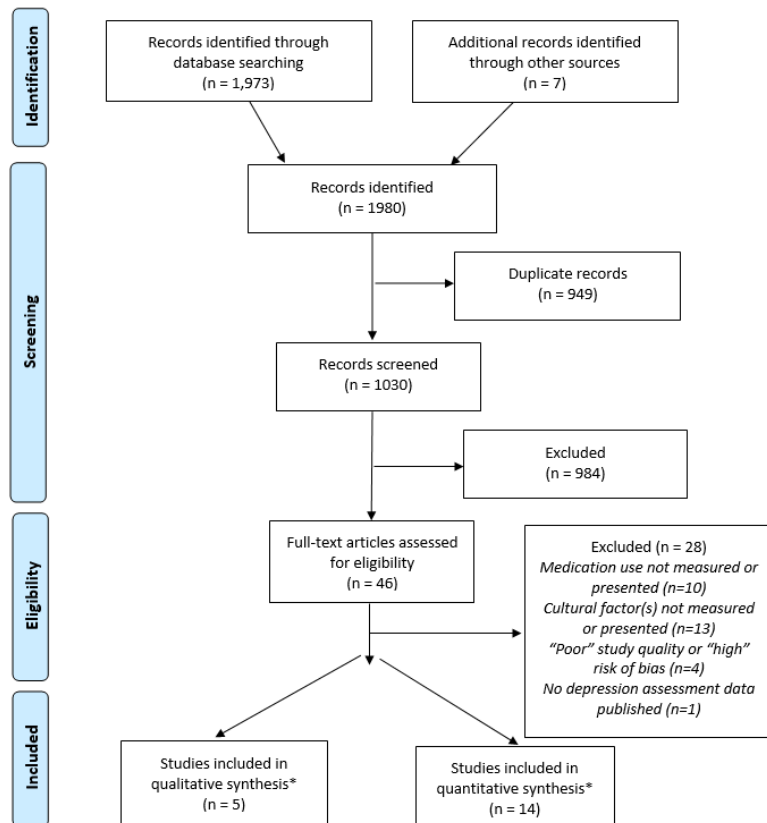
To explore published data on antidepressant adherence and measures of culture and publish a systematic review. To gain a greater understanding of how cultural beliefs influence medication adherence among Latinxs with depression. To develop an intervention tailored to each unique patient population in Ypsilanti and Detroit that will help improve depression perception and antidepressant adherence.

Our basic hypothesis was the Latinx culture uniquely influences antidepressant medication adherence. We used the conceptual framework below to assess every stage of our project (1-4 below). The ultimate goal of

our project is to develop and intervention that can be implemented at the two community sites where we conducted our focus groups.



Systematic Review:



*One mixed method study is included in both the quantitative and qualitative syntheses

Medline (336 results); Embase (488); CINAHL (37); PsycINFO (87) and Web of Science (76). The combined total before de-duplication was 1,973 citations; after de-duplication there are 1,024 using the Bramer Method.

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed.1000097

Results:

My project has several components and we are still finishing up the focus groups and intervention component, as COVID-19 pushed our timeline back. For now, my results are complete for the quantitative and qualitative systematic review:

Qualitative

- Of the 1044 articles identified, 41 studies reviewed were relevant, 24 were excluded (PRISMA flow chart above)
 - 6 qualitative and 12 quantitative studies were included; quantitative data results are discussed
- Most Latinx study participants had low income, no medical insurance, education less than high school, large variability in age; and were in a community or primary care setting and 34%-46% were married
- Prevalence of depression was similar among Latinx and NLW groups (8-11%)
- AD use among Latinx ranged from 19.3%-36.6% compared with 37.3%-41.7% among NLW
 - All but one study found that Latinx have significantly lower use of antidepressants than NLW
 - AD use varied among subpopulations of Cuban, Puerto Rican, Mexican, or other Latinx origin
- Intentional nonadherence among Latinx population ranges from 18.9% to 34.6%
- Not differentiated nonadherence varied greatly among studies (23%-46%; Table 2)
- Measures of acculturation, health beliefs, medication attitudes, stigma, language preference, and perception of side effects were varied and not comparable between studies (Table 3).

Table 1. Study Characteristics and Quality*

Author and Year	Study type	Sample size	Database/ Registry	Control population
Ayalon 2005	CS	101	Registry	Black
Diaz 2005	PC	103	-	NLW
Hodgkin 2007	CS	180	NLAAS	-
González 2009	CS	9,250	CPES	NLW
González 2010	CS	7,565	CPES	NLW
González 2010A	CS	9,524	CPES	NLW
Interian 2011	PC	220	-	-
Garrido 2014	CS	807	CPES	NLW
Ishikawa 2014	PC	90	-	-
Green 2017	CS	28	-	-
Perez 2017	CS	361	NHANES	NLW
Chen 2018	CS	9,630	Add Health	NLW

CS=cross sectional, PC=prospective cohort, CPES=National Institute of Mental Health's Collaborative Psychiatric Epidemiology Surveys, NLAAS=National Latino and Asian American Study, Add Health=National Longitudinal Study of Adolescent to Adult Health

Table 2. Not Differentiated Nonadherence of AD

Author and Year	Not Differentiated n (%)
Diaz 2005	Monolingual 10 (23) vs Bilingual 6 (24) vs NLW 3 (10)
Hodgkin 2007	Latinx 26 (14)
Interian 2011	Latinx 45-65 (23 - 33)
Ishikawa 2014	Latinx 23-41*
Green 2017	Latinx 46*

* Only percentage reported

Table 3. Summary of Health Belief Related Findings

Author and Year	Health Belief Finding
Ayalon 2005	Greater concerns about ADs, lesser beliefs in the importance of ADs, and lesser satisfaction are significant predictors of intentional nonadherence
Diaz 2005	Latinx believe that the determinants of health are external <u>forces</u> and this external locus of control may increase nonadherence
Gonzalez 2009	Immigrants with less acculturation were less apt to use an AD than their acculturated counterparts
Interian 2011	Stigma was associated with increased depressive symptom persistence and was independent of AD use -Direct link between AD utilization and long-term outcomes; non-utilization worsened trajectory of depressive symptoms
Garrido 2014	Did not identify a modifiable belief associated with adherence
Chen 2018	Non-English speakers had 81% lower odds of AD use than monolingual English speakers

Qualitative

Table 4. Most Common Themes Identified in Qualitative Studies

Theme (number of references reporting N=5)	Representative Quote(s)
Fear of side effects limits antidepressant use (n=4)	"I think it [the medication] will cause harm to my liver, stomach, all of that." ⁷
Concerns about addiction and dependence decreased desire to start and reason for stopping (n=4)	"One becomes dependent on the medication to be well and able to do things." ⁷
Depression or antidepressant related stigma as a barrier to starting and continuing antidepressant (n=5)	"[People] think it is like laziness . . . they say those people are apathetic, negative, that they do nothing to better themselves" (laziness)." ⁷
Spanish language discordance with providers and educational materials negatively influenced adherence (n=3)	"I didn't read anything. I don't speak English. If I asked my <u>children</u> they would help me, but I've never said anything to anyone. No one in my family knew I was taking antidepressant medication." ⁸
Lack of scientific understanding about depression and antidepressants discourages use (n=4)	"I think the first day [after taking medication for depression] there should be a change, even if small, but it has to do something." ⁷
Familism can encourage or discourage antidepressant use (n=5)	". . . my family right now is not with me but soon my daughter and my wife will come . . . what motivated me to take them [the antidepressants], was wanting to be well for when my wife and my family came." ⁵ "My husband says I am crazy because I suffer from depression." ⁷

- Most studies (n=3) reported the need for provider support to continue antidepressant use. However, in one study almost half of participants reported discontinuing without informing the provider
- Only one study mentioned pharmacists as a resource for depression treatment information

Table 5. Summary of Generated Analytical Themes using Meta-Synthesis

Theme and subthemes	Representative Quote
Self-efficacy	
-Vicarious experiences	"I lived the experience of addiction to medication through my mother, so none of the information provided to me was enough to reduce my fear of becoming an addict." ⁸
-Emotional arousal	"It's that you get tired of taking medications. There are so many medications to take, there are moments that you get tired, don't want to take medications." ⁹
Resilience	
-Skill at facing fears	"I, for example, once had three, four days, five days without taking them to see what would happen with me. I fell into [a depression] again, so then what happens? I told the doctor, "Doctor, I have to use this for the rest of my life, forever." ⁹
-Coping skills	"Then, since that time, I started coming [to the clinic] . . . And I prayed and everything, but at the same time, like my mother used to say, "Praying, but doing." That is, I prayed but also looked for help." ⁹
-Social support	"It's better to talk to one of my friends and I make my own proper decisions. And I tried to get ahead of my depression. To give myself a desire for life that's all, by myself." ⁶
Health literacy	
-Provider relationship	"If I tell the [primary care] doctor how I'm feeling and he sends me to the psychologist, it shows me he is not prepared to deal with that type of problem... So, the best person to prescribe you and inform you is a mental health specialist." ⁸
-Knowledge	"[Using medication for a long time] would be . . . relying entirely on the pill to feel well. And the pills only, in my opinion, [should be used for] a limited time to help the person return to their normal state." ⁷

Pending:

1. Finish coding the data from our focus groups in CHASS and Ypsilanti clinics
 - a. Perform data analysis using cultural conceptual framework
2. Develop the intervention with the input and clearance of our Steering Committee
3. Perform focus groups aimed at assessing efficacy of intervention/adjusting to participant response.

Conclusion (~250-500 words):

We had several limitations to our work. First, our systematic review assessed observational studies, which do not assess cause and effect. Further, there were small number of participants in some studies, variability in how antidepressants use assessed, and variations in the sampled populations. Those studies were also heterogeneous and assessed a variety of measures of culture, which excluded data for meta-analysis due to high heterogeneity among the cultural factors (variables) identified. However, at each point of my research, it was clear that culture has a clear influence on not only antidepressant use among Latinx adults with depression, but also on their perceptions of their own depression diagnoses.

Our systematic review of the qualitative and quantitative studies provided insight into already published data that showed unique cultural barriers to Latinx adults with depression. These unique barriers are often addressed through resilience and self-efficacy. From previous literature, it is evident how strong culture factors affect mental health engagement.

For our focus group work, we also learned similar ideas from our focus groups conducted at both sites. We were able to identify particular words that Latinx individuals use to describe their depression symptoms that are not always well-known or understood universally by providers. Further, we learned about how protective and detrimental family influence can be on Latinx with depression. Many reported ideas of self efficacy and resilience that is prominent throughout Latinx culture in addition to gender pressures.

As we finalize the focus groups data analysis and develop our interventions, we are cognizant that any interventions should target patients' negative beliefs and concerns about antidepressants as well as focus on how patient's perceive the importance of antidepressants as part of their depression treatment. Further, we are in the process of finalizing the interventions to be implemented at each site, which will be voted on by our Steering Committee which includes various leaders within the Ypsilanti Health Center and CHASS in Detroit. While we have not finished coding and analyzing our focus group data, many of the ideas found during our systematic review supported the work and findings from our own focus groups at Ypsilanti and CHASS. I am eager to finish this component in the next few months.

Reflection/Impact Statement:

I have learned many different lessons while developing this project. First, I did not know what Community-Based Participatory Research was prior to this project. I learned the importance in partnering with local health centers before, during, and after developing an intervention. I had previously believed that academics and community medicine had to be separate but I was able to join the two for this project and hope to mirror this sort of research model throughout my career. Further, I loved working with the Latinx population in Ypsilanti and Detroit, where I was able to see similarities but difference in this group that is often believed to be monochromatic, but is actually quite diverse. I hope to continue partnering with community members as I work to fill the needs of various communities I am a part of in the future.

One limiting factor to my project was that the COVID pandemic affected the rate at which we could do our focus groups, so some of our results and data will likely not be finished until about May/June. Nonetheless, the different phases of my project allowed for learning at every step of the way. Any project that allows for subsequent smaller projects or data analysis is ideal for the CFI framework.

My biggest advice for students completing their CFI project is to take this opportunity to work on something that either they are already passionate about or have always wanted to explore more. This is a time you get to

focus on something in healthcare outside of what is normally part of the traditional curriculum. I encourage future students to also push themselves to try new things/new ways of doing research, as this proved to be one of the most fulfilling parts of developing and completing my project.