

2022

Bipolar Screening Among Spanish-Speaking US Residents Using the Mood Disorder Questionnaire

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Bipolar Screening Among Spanish-Speaking US Residents
Using the Mood Disorder Questionnaire

by

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Presented to the Faculty of the
Graduate School of Clinical Psychology
George Fox University
in partial fulfillment
of the requirements for the degree of
Doctor of Psychology
in Clinical Psychology

Newberg, Oregon

March 18, 2022

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has been approved

at the

Graduate School of Clinical Psychology

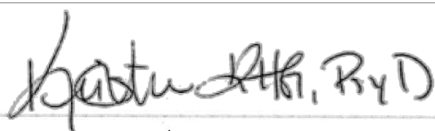
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as a Dissertation for the PsyD degree

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Bipolar Screening Among Spanish-Speaking US Residents
Using the Mood Disorder Questionnaire

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Abstract

The Mood Disorder Questionnaire (MDQ) is a self-report screening instrument used to detect Bipolar Disorder (BD). Psychometric properties of Spanish translations of the MDQ are from communities where both language and cultural differences are present. A Spanish version of the MDQ not been validated among United States individuals who identify Spanish as their preferred language of communication.

Objective

We propose that the validation of a Castilian Spanish version of the MDQ is needed for cross-cultural adaptation, determining optimal cut-off scores, and as an aid to the literature on BD prevalence, specifically BD among Spanish speakers of the United States.

Methods

One hundred ten participants recruited through Qualtrics, completed the MDQ translated by Sanchez-Moreno et al. (2005) and answered demographic questions. Four subgroups were composed, including those who self-reported a diagnosis of Bipolar, Depression, Other mental

health concern, and No mental health concern. These groups were compared for MDQ scores by analysis of covariance, controlling for demographics including age, biological sex, and years in the US.

Results

Our sample concluded good internal consistency ($\alpha = .798$). Analysis of covariance found that demographic variables did not predicted an MDQ score. A significant effect was found between groups ($F_{4, 105} = 7.18; p < .001; \eta^2 = .215$, 95% CI .070/.320; No Dx = Don't know < BDP-I = BD-II = Other). An analysis of variance showed a significant difference between those who scored high ($M = 9.35, SD = 2.15$) and low ($M = 2.72, SD = 2.11$) on the MDQ, significant variance was met ($F_{1, 108} = 231.7; p < .001; \eta^2 = .70$, 95% CI .582/.747). Levene's test showed that the variance was not equal $F(3, 106) = 16.2, p < .001$. Screening for bipolar diagnosis was accurate for 81.1% of, while classification for other was accurate for 66.7% ($\text{Eta} = .519/\text{Eta}^2$ equals .269).

Conclusion

The MDQ translated by Sanchez-Moreno et al. (2005) showed similar psychometric properties of the original MDQ developed by Hirschfeld et al. (2000). Affirmation of seven hypomanic symptoms resulted in a good discriminative capacity for BD among United States patients who identify Spanish as their preferred language of communication.

Table of Contents

Approval Page	ii
Abstract	iii
List of Tables	vi
Chapter 1: Introduction	1
Bipolar Disorder	1
Bipolar Screening Instruments	3
The Present Study	4
Purpose	5
Chapter 2: Methods	7
Participants	7
<i>DSM-5</i> Diagnoses	8
Procedure	8
Chapter 3: Results	9
Diagnosis Group and Cluster Comparisons	9
Chapter 4: Discussion	12
References	15
Appendix A Formulario de Consentimiento	22
Appendix B Cuestionario Demographic	26
Appendix C Spanish Version of the Mood Disorder Questionnaire	28
Appendix D Curriculum Vitae	30

List of Tables

Table 1	Results Obtained Following Administration of MDQ by Diagnostic Group	10
Table 2	Results Obtained Following Administration of MDQ by Score Group	10

Chapter 1

Introduction

Bipolar Disorder

Bipolar Disorder (BD) is a severe and chronic illness characterized by episodes of psychological difficulty ranging from manic or hypomanic highs to depressive lows. Manic episodes may include symptoms such as high energy, reduced need for sleep, and loss of touch with reality. Depressive episodes may include symptoms such as low energy, low motivation, and loss of interest in daily activities. Studies reveal about 30 to 60% of BD patients do not recover full psychosocial functioning (MacQueen et al., 2001) and have a 20 to 30 times increased risk of suicide than the general population (Pompili et al., 2013).

Reports on the lifetime prevalence of BD vary as some studies specifically characterize BD patients, and others include patients with subsyndromal manic symptoms. Patients with subsyndromal manic symptoms do not fully meet the criteria for BD-I or BD-II; however, they present with symptoms better explained through a classification termed BD spectrum (BDS; Hoertel et al., 2013). BDS often refers to those meeting criteria for Cyclothymic Disorder, Unspecified Bipolar Disorder, and/or Substance/Medication-induced Bipolar Disorder. Patients with a BDS diagnosis experience mood cycles between hypomania and depression; however, the symptom duration and intensity differ from those with BD-I or BD-II. According to the *Diagnostic and Statistical Manual of Mental Disorders* 5th edition (DSM-5, 2013), the distinguishing feature between BD-I and BD-II is the presentation of mania. Persons who have

experienced at least one episode of mania are diagnosed with BD-I, while those with BD-II present with only hypomania.

The National Depressive and Manic-Depressive Association estimates the lifetime prevalence of BD (BD-I and II) in the United States to be 3.4% (Hirschfeld, Holzer, et al., 2003). Another study, by the US National Epidemiological Catchment Area database, reported a 6.4 percent lifetime prevalence of BDS disorders (BD-I, -II, and BDS) in the United States (Judd & Akiskal, 2003). Worldwide, the estimated lifetime prevalence of BD-I is .6%, .4% for BD-II, and 2.4% for BDS (Merikangas et al., 2011); these data match well with those of Hirschfeld, Holzer, et al. (2003).

Reports of BD lifetime prevalence also vary because of significant misdiagnoses. Often BD is unrecognized because BD people are most likely to seek treatment when experiencing a depressed episode (Muzina et al., 2007). As such, these BD individuals commonly receive treatment for a diagnosis of unipolar depression. When assessed for BD, studies have shown a significant proportion of people who are diagnosed with unipolar depression also meet BD criteria or are within BDS. In a sample of primary care patients diagnosed and treated for unipolar depression, Hirschfeld et al. (2005) found 27.9% of diagnosed unipolar depressed individuals met criteria for BD. Similarly, Punnoose (2011) found that 31% of diagnosed unipolar depressed individuals meet BD criteria. Diagnostic accuracy is crucial in treating BD patients as early detection supports functional recovery. Errors in diagnosis of BD can result in triggering of mania and/or rapid cycling with use of antidepressants (Post et al., 2003). Errors may also result in exacerbate cognitive decline (Martinez-Aran et al., 2007) and increase financial cost associated with legal concerns, health matters, and debt due to risky spending

(Begley et al., 2001; Matza et al., 2005). As highlighted above, to improve quality of life, early detection and treatment depends on effective assessment.

Bipolar Screening Instruments

Several screening instruments have been developed to assist with BD diagnosis. These include the Scale for Hypomanic Personality (Eckblad & Chapman, 1986), the General Behavior Inventory (Depue et al., 1989), the HCL-32 (Angst et al. 2005), and the Bipolar Spectrum Diagnostic Scale (Nassir Ghaemi et al., 2005). The Mood Disorder Questionnaire (MDQ) developed by Hirschfeld et al. (2000) is predominantly utilized because of its psychometric properties and ease of use. The MDQ is a self-report screening instrument used to detect Bipolar spectrum disorders (BD-I, BD-II, BD-NOS). The MDQ consists of a 13-item Yes/No symptom checklist, an additional Yes/No question regarding whether the symptoms occurred together, and a functional impairment question with four response choices regarding problem severity (no, minor, moderate, and serious problem). The screening instrument may be completed within 5 minutes.

The MDQ was derived from the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (*DSM-IV*; 1994) criteria and clinical experience assessing hypomanic and manic symptoms throughout life. The MDQ may assist with BD diagnosis as items of the screener continue to be consistent with the identification of hypomanic or manic symptoms on the revised *DSM-5* (2013; Severus & Bauer, 2013).

The following criteria are used for a positive screen on the MDQ: (a) “Yes” responses to 7 or more of the 13 Yes/No items in question 1, (b) “Yes” to symptoms co-occur, and (c) the final item marked as “Moderate Problem” or “Serious Problem” indicating symptom severity.

Hirschfeld et al. (2000) proposed that a positive screen should be followed by a comprehensive evaluation for Bipolar Disorder diagnosis.

The English language MDQ was initially validated in a psychiatric outpatient sample of 198 patients and yielded a sensitivity of .73 and a specificity of .90 (Hirschfeld et al., 2000). Since its initial validation, several studies have demonstrated the usefulness of the MDQ in the detection of BD due to its psychometric properties. A US general population study using 711 randomly selected participants across the nation revealed a sensitivity of .28 and a specificity of .97 (Hirschfeld, Holzer, et al., 2003). Another study compared 36 unipolar depressed patients and 37 Bipolar spectrum patients using the MDQ. The study suggested greater sensitivity for BDP-I (.69) compared to BDP-II or BP-NOS. Overall sensitivity was .58 and specificity .67 (Miller et al., 2004). A general outpatient clinic sample of 649 primary care patients in the U.S. receiving treatment for depression found a sensitivity of .58 and a specificity of .93 (Hirschfeld et al., 2005).

Similar sensitivity and specificity are found in language translations of the MDQ using the original scoring criteria, including Spanish (Sanchez-Moreno et al., 2008), Turkish (Konuk et al., 2008), and Korean (Jon et al., 2009) versions. Other language translations, like Italian (Hardoy et al., 2005), Chinese (e.g. Lin et al., 2011), French (e.g. Weber et al., 2005), and Thai (Waleeprakhon et al., 2014) obtained similar sensitivity and specificity using alternative cutoff scores to accommodate cross-cultural and sample population factors (e.g. patients with or without an affective disorder).

The Present Study

Using a back-translation method, Sanchez-Moreno et al. (2005) were the first to translate a Castilian Spanish version of the MDQ. Using a sample of 236 (62 BD-I, 56 BD-II, 58 Unipolar

Depressed, 60 Healthy) outpatients in 15 psychiatric hospitals across Spain, Sanchez-Moreno et al., (2008) tested their translation and found sensitivity of .81 (95% CI = 0.73/0.88) and specificity of .95 (95% CI = 0.89/0.99) using the 7-point cutoff scoring criteria proposed by Hirschfeld et al., (2000). Their translation has been used in several studies yielding promising results in the detection of BD among Spanish speakers (e.g. Aragonès et al., 2015; De Dios et al., 2008; Tafalla et al., 2009). However, these results may have limited application to cross-cultural adaptation in Latin America and the U.S. as the samples for these studies were drawn from communities in Spain where both language and cultural differences are present. A guideline for cross-cultural adaptation of a self-report measure is that a measure must not only be “translated well linguistically, but also must be adapted culturally to maintain the content validity of the instrument at a conceptual level across different cultures” (Beaton et al., 2000, p. 3186). Hall et al., 2018 further specified “field testing” as a means for accounting for cultural difference. Other Spanish translations of the MDQ suggest an alternative cutoff score (González et al., 2009) or the incorporation of linguistic nuances (Corona et al., 2007) for accurate cross-cultural adaptation outside of Spain.

A Castilian, or other Spanish version of the MDQ, has not been validated among Spanish speakers in the US. Here, we propose that the validation of the Spanish version of the MDQ is needed for cross-cultural adaptation and determining optimal cut-off score for the detection of BD among Spanish Speakers of the U.S. This study will also serve as an aid to the literature on BD prevalence, specifically BD among Spanish speakers of the US.

Purpose

Four subgroups will be examined: Bipolar, Depressed, Other mental health concerns, and No mental health concerns. These four groups will be compared for MDQ scores by analysis of

covariance, controlling for demographic variables of age, biological sex, and years in the US.

English language proficiency among immigrants is hypothesized to be impacted by time of entry and years of residence in the United States (Xi, 2013). Demographic data will allow statistical analysis of participants who may have had challenges with the English language. Given significant differences among groups are detected, we will seek an optimal cutoff score to identify persons who are likely experiencing Bipolar disorder.

Chapter 2

Methods

Participants

Participants were recruited online through Qualtrics. Qualtrics is a crowdsourcing platform similar to Amazon's Mechanical Turk (MTurk). MTurk is an efficient method of quality data collection (Peer et al., 2014; Schmidt & Jettinghoff, 2016) and previous research assessing for mood disorder using MTurk (e.g. King et al., 2019; Nelson 2018; Stanton, Khoon et al., 2019) has validated the use of Qualtrics in the current study. Participation was restricted in response to international, repeated and bot-response survey concerns consistent with MTurk best practice (Sheehan, 2018). MTurk was initially chosen as the method of recruitment however lack of participants ($n = 12$) gathered over the course of several months resulted in the use of Qualtrics.

Inclusion criteria to participate included identifying as a US resident, being at least 18 years of age, and identifying Spanish as the preferred language. Difficulty in obtaining an MTurk sample may be related to this last qualification.

The current study included 110 participants; 51 were male (46.36%) and 59 were female (54.64%). One participant indicated being under 18 years of age and was removed from the sample. Age was categorized into groups (25.3% between 18-23 years, 24.3% between 24-29 years, 18% between 30-35 years, 8.1% between 36-39 years and 22% ≥ 40 years of age). The number of years participants have been a United States resident was also categorized in groups

with $34.2\% \leq 5$ years, 14.4% between 6-11 years, 13.5% between 12-17 years, 9.9% 18-23 years and $27\% \geq 24$ years of residency.

DSM-5 Diagnoses

In all, 24 male and 25 female participants self-reported being diagnosed with bipolar disorder. Twenty participants endorsed BD-I, 10 of which were males; 18 participants endorsed BD-II, 4 of which were males; 4 participants reported not knowing their BD type, 3 of which were males; and 7 participants reported their BD type as other, 4 of which were males.

A total of 66 participants self-reported a diagnosis of depression.

Procedure

The study was conducted entirely in the Spanish language using Qualtrics. Having consented to participate (Appendix A) and meeting inclusion criteria, participants answered a demographic questionnaire (Appendix B) and completed the Spanish language version of the MDQ developed by Sanchez-Moreno et al. (2005; Appendix C). Participants were asked to answer their age, biological sex, national origin, and Yes/No confirmation of Bipolar, Depressive, Other mental health disorder, or No mental health concern. Modest compensation was provided to participants by Qualtrics; the researchers were not involved with participant compensation.

Chapter 3

Results

Exploratory factor analysis suggested the MDQ is comprised of a single factor with an eigenvalue of 4.20. A Principle Components Analysis showed all items loaded on a single factor with loadings ranging from .40 to .65. The Kaiser-Meyer-Olkin measure of sampling adequacy was .82, indicating an adequate sample, and Bartlett's test of sphericity was significant ($\chi^2_{91} = 324.12, p < .001$). The reliability of the MDQ was calculated using a one factor analysis. Overall alpha was good ($\alpha = .798$). Although corrected item-total correlations were modest, alpha could not be improved by omitting any items.

Diagnosis Group and Cluster Comparisons

Analysis of covariance controlling for gender, age, and numbers of years in the US found that none of these demographic characteristics predicted MDQ scores. Thus, an analysis of variance was used to compare group MDQ scores based on diagnosis. These groups were no BD Dx ($M = 5.78, SD = 3.80$); BD-I ($M = 9.10, SD = 1.94$); BD-II ($M = 9.27, SD = 3.21$); Other BD type ($M = 9.71, SD = 3.86$); don't know BD type ($M = 5, SD = 2.44$). A significant main effect was found between groups ($F_{4, 105} = 7.18; p < .001; \eta^2 = .215, 95\% \text{ CI } .070/.320$; No Dx = Don't know < BD-I = BD-II = Other).

Table 1*Results Obtained Following Administration of MDQ by Diagnostic Group*

	TOTAL (N = 110)		NO DX (N = 61)		BD-I (N = 18)		BD-II (N = 20)		OTHER BD (N = 7)		DK BD TYPE (N = 4)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
MDQ ITEM 1 (13 QUESTIONS HYPOMANIA SYMPTOMS, 'YES/ NO')	7.18	3.78	5.78	3.80	9.10	1.94	9.27	3.21	9.71	3.86	5	2.44

A k-cluster analysis was performed on MDQ scores to ascertain whether there were distinct groups among participants in terms of their MDQ scores. MDQ scores distinguished two clusters. The association of clusters with diagnosis was explored by cross-tabulation and a Chi-square test (X^2_4 (N = 110) = 21.21, $p < .001$). About half of the participants who reported no BD diagnosis scored high on the MDQ.

Table 2*Results Obtained Following Administration of MDQ by Score Group*

	HIGH SCORE (N = 74)		LOW SCORE (N = 36)	
	Mean	SD	Mean	SD
MDQ ITEM 1 (13 QUESTIONS HYPOMANIA SYMPTOMS, 'YES /NO')	9.35	2.15	2.7	2.11
AGE	3.72	1.48	3.83	1.59
SEX	1.53	.50	1.33	.47
YEAR IN THE US	3.18	1.61	2.06	1.45

An analysis of variance showed a significant difference between those who scored high ($M = 9.35$, $SD = 2.15$) on the MDQ and those who scored low ($M = 2.72$, $SD = 2.11$), significant variance was met ($F_{1, 108} = 231.7$; $p < .001$; $\eta^2 = .70$, 95% CI .582/.747). Levene's test showed that the variance was not equal $F_{3, 106} = 16.2$, $p < .001$. Analysis of variance also showed that each item of the MDQ was highly significant for distinguishing clusters.

Analysis of variance revealed that self-reported severity of life problems was also scientifically related to cluster membership ($F_{3, 106} = 7.93$; $p < .001$; $\eta^2 = .183$, 95% CI .054/.294).

The mean number of affirmative responses to the first part of the MDQ, by group, was 9.10 ($SD = 1.94$) for BDI, 9.30 ($SD = 3.21$) for BDII, 9.7 ($SD = 3.86$) for other BD type and 5.7 ($SD = 3.90$) for no mental health concern.

Using a scoring criterion of only seven or more affirmative responses on questions 1-13, classification for those with a bipolar diagnosis was accurate for 81.1% of, while classification for those classified as other was accurate for 66.7% ($\eta^2 = .519$ / η^2 equals .269).

Chapter 4

Discussion

Several studies (Hirschfeld et al., 2005; Punnoose, 2011) reveal that patients with BD are often misdiagnosed or receive a late BD diagnosis resulting in a worsen quality of life (Begley, 2001; Martinez-Aran et al., 2007; Matza et al, 2005). As such, screening instruments for the detention of BD have been developed and become crucial in detecting BD (Angst et al., 2005; Nassir Ghaemi et al., 2005). Screeners have also assisted in understanding the lifetime prevalence of BD.

The Mood Disorder Questionnaire (MDQ) developed by Hirschfeld et al. (2000), is a widely utilized screener because of its psychometric properties and ease of use. The original English version of the MDQ has been translated into Spanish as well as other languages. Psychometric properties of these Spanish translations have been drawn from communities suggesting an alternative cutoff score (González et al., 2009) or the incorporation of linguistic nuances (Corona et al., 2007) for cross-cultural adaptation. Because Spanish is a polycentric language, the present study explored if a Castilian Spanish version of the MDQ would yield similar psychometric properties as the original English version of the MDQ among Spanish speakers in the United States. Nineteen percent of the United States population identify immigrating from a Spanish speaking country (Lopez et al., 2021).

This study used the Castilian Spanish version of the MDQ developed by Sanchez-Moreno et al., (2005) because several have concluded its robust psychometric properties in the detection

of BD among Spanish speakers (e.g. Aragonès et al., 2015; De Dios et al., 2008; Tafalla et al., 2009). Sanchez-Moreno et al., (2005) were the first to translate a Spanish version of the MDQ, and Castilian Spanish is thought to be understood by most Spanish speakers. Furthermore, Spanish is the 3rd most widely spoken language in the world.

The Castilian Spanish version of the MDQ showed good internal consistency ($\alpha = .798$) for United States individuals who identified Spanish as their preferred language of communication. Internal consistency was not impacted by demographic factors, including gender, age, or the number of years in the U.S. These factors were analyzed for the purpose of cross-cultural adaptation as proposed by Beaton et al., (2000).

Using seven affirmative responses in Part 1 as the discriminative criterion, sensitivity (.81) was comparable to the English (.73 sensitivity) and equal to the Spanish (.81) version of the MDQ. Specificity (.61), however, was not comparable to the English or Spanish version of the MDQ (.90; .95). The lower specificity in the present study may be due to the small number of participants who had no mental health complaints. However, other factors such as language and culture could also account for this difference.

Significant differences were found between those who score high and low on the MDQ; surprisingly, about half of participants who reported no mental health diagnosis scored high on the MDQ. This finding was interesting as several hypotheses were considered. The MDQ may have picked up on general mental health concerns that resulted in high scores. This hypothesis is supported by the significant number of individuals who reported no mental health diagnosis but endorsed symptoms causing moderate or serious problems in their life (Part 2 on the MDQ). It is possible that our sample included a significant number of individuals not diagnosed with BD,

misdiagnosed, or are undiagnosed with a mental health concern but who nonetheless manifest bipolar symptoms.

The relationship of diagnosis to MDQ scores may have also been impacted by self-report diagnosis. Originally, Amazon's Mechanical Turk (MTurk) was utilized for this study. However, controlling for higher quality responders (e.g., masters qualified users and Spanish only recruitment) resulted in an insignificant sample. Qualtrics was used as it allowed a broader population to be sampled.

The current study would have benefited from a test-retest procedure to ensure quality responding on the MDQ and/or additional survey questions measuring quality responding. The current study would have also benefited from another BD screener to compare symptoms and/or other mental health screener to better understand reported symptoms.

The detection of manic symptoms can be reliably detected with self-report tests (Truman et al., 2002), the latter paired with our findings suggests the Castilian Spanish version of the MDQ developed by Sanchez-Moreno et al., (2005) may help detect individuals needing clinical evaluation for the detection of BD. Epidemiological data showing the prevalence of bipolar disorder in patients with a major depressive episode are controversial (Hirschfeld et al., 2005; Punnoose, 2011). If given the MDQ, a patient seeking treatment during a depressed episode, as is common, may more confidently be ruled out for Bipolar Disorder (Muzina et al, 2007). Ultimately, the risks associated with treating Bipolar Disorder with antidepressants may be avoided (Post et al., 2003; Martinez-Aran et al., 2007; Begley, 2001; Matza et al, 2005). This study may be utilized to better understand the number of BD Spanish speakers in the United States.

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Appendix A

Formulario de Consentimiento

CONSENTIMIENTO PARA PARTICIPAR EN UN ESTUDIO DE INVESTIGACIÓN

*Cribado De Trastorno Bipolar Entre Residentes Hispanohablantes Del Los Estados Unidos
Usando El Cuestionario De Trastornos Del Estado De Ánimo*

Has sido invitado a través de Qualtrics ser voluntario para participar en un estudio de investigación realizado por Emanuel Recinos M.A. y patrocinador de la facultad Rodger Bufford, Ph.D. de la Universidad George Fox Escuela de posgrado de Psicología Clínica.

▪ PROPOSITO DEL ESTUDIO DE INVESTIGACION

Validez de la versión en español del Mood Disorder Questionnaire (MDQ) realizado por Sanchez-Moreno et al. (2005) entre Residentes Hispanohablantes Del Los Estados Unidos

▪ PROCEDIMIENTOS

La participación en este estudio requerirá los siguientes procedimientos: completar la versión en español del Mood Disorder Questionnaire (MDQ) y las preguntas demográficas.

El MDQ es un cribado autoinforme utilizado para la detección del trastorno bipolar. Se puede completar en 5 minutos. El MDQ consta de una lista de verificación de síntomas Sí / No de 13 ítems, y dos preguntas adicionales con respecto a la aparición y gravedad de los síntomas.

Las preguntas demográficas incluyen edad, sexo biológico, etnia, años de residencia en los estados unidos, y confirmación diagnóstica Sí / No del trastorno bipolar, trastorno de depresión, o otro trastorno mental.

Para proteger su identidad y confidencialidad, no se solicita información de identificación personal. No proporcione su nombre, dirección u otros datos de identidad personal.

▪ TIEMPO DE PARTICIPACION

La participación en el estudio implicará un tiempo estimado de 6 a 8 minutos.

▪ POTENCIALES RIESGOS Y INCOMODIDADES

No hay riesgo percibido asociado con este estudio; sin embargo, puede interrumpir la participación en cualquier momento durante la prueba si siente molestias. Dado el propósito de este estudio, no se le proporcionarán los resultados del MDQ. Las respuestas demográficas y del MDQ no se compartirán con nadie que no realice el estudio. No se recopilará información de identificación personal haciendo su identidad completamente confidencial.

▪ BENEFIOS DE PARTICIPACION

Los participantes que completen la tarea recibirán una compensación a través de Qualtrics.

La participación en el estudio también ayudará a la literatura sobre la prevalencia de trastorno bipolar entre hispanohablantes de los Estados Unidos y puede permitir una detección más confiable de las personas con esta afección para que se pueda proporcionar un tratamiento temprano.

▪ **CONFIDENCIALIDAD**

La confidencialidad de los registros de investigación será estrictamente mantenida por la Facultad de la Universidad George Fox Escuela de posgrado de Psicología Clínica.

Solo se compartirán los datos agregados de este estudio. Cualquier información que se obtenga en relación con este estudio y que pueda identificarse con usted permanecerá confidencial y se divulgará solo con su permiso por escrito o según lo exija la ley. La confidencialidad se mantendrá mediante el uso de un número de identificación; no se solicita información de identificación personal. Sus datos personales serán confidenciales.

▪ **PARTICIPACIÓN Y RETIRADA**

La participación en este estudio es voluntaria. Puede negarse a participar o retirarse en cualquier momento.

▪ **CONTACTOS**

Si tiene preguntas sobre este estudio de investigación, comuníquese con Emanuel Recinos en erecinol0@georgefox.edu.

▪ **DERECHO DE PARTICIPANTES EN LA INVESTIGACIÓN**

Puede retirar su consentimiento en cualquier momento o suspender su participación. Si tiene preguntas sobre sus derechos como sujeto de investigación o cualquier otra pregunta, comentario o inquietud sobre el estudio, comuníquese con Chris Koch, Ph.D. Cátedra IRB de la Universidad George Fox Escuela de posgrado de Psicología Clínica.

▪ **CONTACTO DE IMPARCIAL TERCEROS**

Si desea comunicarse con un tercero imparcial no asociado con este estudio con respecto a cualquier pregunta o queja que pueda tener sobre el estudio, puede comunicarse con Mary Peterson, Ph.D. Miembro del IRB de la Universidad George Fox Escuela de posgrado de Psicología Clínica al 503-554-2377 para obtener información y asistencia.

▪ **CONSENTIMIENTO INFORMADO**

He leído el contenido del formulario de consentimiento y los entiendo. Por lo presente doy mi consentimiento voluntario para participar en este estudio. Al marcar sí a continuación, acepto participar en este estudio.

___ Si

___ No

CONSENT TO PARTICIPATE IN A RESEARCH STUDY*Bipolar Screening Among Spanish-Speaking US Residents
Using the Mood Disorder Questionnaire*

You have been invited through Qualtrics to volunteer to participate in a research study conducted by Emanuel Recinos M.A., faculty sponsor Rodger Bufford, Ph.D. from the George Fox Graduate School of Clinical Psychology.

▪ PURPOSE OF THE STUDY

Validation of the Spanish version of the Mood Disorder Questionnaire (MDQ) developed by Sanchez-Moreno et al. (2005) among Spanish-speaking residents of the United States

▪ PROCEDURES

Participation in this study will require the following procedures: completion demographic questions and the Spanish version of the Mood Disorder Questionnaire (MDQ) developed by Sanchez-Moreno et al. (2005).

The MDQ is a self-report screening instrument used for the detection of bipolar disorder (BD). It may be completed within 5 minutes. The MDQ consists of a 13-item Yes/No symptom checklist, and two additional questions regarding symptom occurrence and severity.

Demographic questions include age, biological sex, ethnicity and Yes/No diagnostic confirmation of bipolar, depression, or other mental disorder.

To protect your identity and confidentiality, no personally-identifying information is requested. Please do not provide your name, address or other personal identity data.

▪ TIME INVOLVEMENT

Participation in the study will involve an estimated time of 6-8 min.

▪ POTENTIAL RISKS AND DISCOMFORTS

There are no perceived risks associated with this study. You may discontinue participation at any time during the test if you feel discomfort. Given the purpose of this study, results on the MDQ will not be provided to you. Individual scores on any task will also not be shared with anyone not conducting the study. All data will be identified by ID number only; no personally identifying information will be collected so your personal identity is completely confidential.

▪ BENEFITS OF PARTICIPATING

Participants completing the task will be compensated through Qualtrics.

Participation in the study will also aid the literature on BD prevalence among Spanish speakers of the US and may enable more reliable detection of individuals with this condition so that early treatment can be provided.

▪ CONFIDENTIALITY

Confidentiality of research records will be strictly maintained by George Fox Graduate School of Clinical Psychology

Only aggregated data from this study will be shared. Confidentiality will be maintained by the use of ID number instead of names; no personally-identifying information is requested. Your personal data will remain confidential.

▪ **PARTICIPATION AND WITHDRAWAL**

Participation in this study is voluntary. You may decline to participate or withdraw at any time.

▪ **CONTACTS**

If you have questions about this research study, please contact Emanuel Recinos at erecinos10@georgefox.edu.

▪ **RIGHTS OF RESEARCH PARTICIPANTS**

You may withdraw your consent at any time or discontinue participation. Safety

▪ **IMPARTIAL THIRD-PARTY CONTACT**

If you wish to contact an impartial third party not associated with this study regarding any question or complaint you may have about the study, you may contact Mary Peterson, Ph.D. George Fox University IRB Member at 503-554-2377 for information and assistance.

▪ **INFORMED CONSENT STATEMENT**

I have read the contents of the consent form and understand them. I hereby give voluntary consent to participate in this study. By pressing the yes tab below I agree to participate in this study.

____ Yes
____ No

Appendix B**Cuestionario Demographic**

- 1) Edad: _____
- 2) Sexo biológico: Hombre/ Mujer
- 3) Origen Nacional: _____
- 4) Años de residencia en los estados unidos: _____
- 5) Trastorno bipolar: Sí / No
- 6) ¿Cuál de las siguientes opciones describe mejor su experiencia??
 - Bipolar I
 - Bipolar II
 - Otro
 - No se
- 7) Trastorno de depresión: Sí / No
- 8) Otro trastorno mental: Sí / No

Demographic Questionnaire

age, biological sex, ethnicity and Yes/No diagnostic confirmation of bipolar, depression, or other mental disorder

- 1) Age : _____
- 2) Biological Sex : _____
- 3) National Origin : _____
- 4) Number of years as a United States resident : _____
- 5) Bipolar Disorder: Yes / No
- 6) Which of the following best describes your experience?
 - Bipolar I
 - Bipolar II
 - Other
 - Don't Know
- 7) Major Depressive Disorder : Yes / No
- 8) Other mental health diagnosis: Yes / No

Appendix C

Spanish Version of the Mood Disorder Questionnaire (Sanchez-Moreno et al, 2005)

Cuestionario De Trastornos Del Estado De Ánimo

1. ¿Alguna vez ha pasado por un período en el que se sentía que no era la misma persona de siempre, y...	Sí	No
...se sintió tan bien o tan eufórico/a que otras personas pensaron que usted no era el/la mismo/a de siempre o estaba tan eufórico/a que se metió en problemas?	<input type="checkbox"/>	<input type="checkbox"/>
...estaba tan irritable que gritaba a la gente o provocaba peleas o discusiones?	<input type="checkbox"/>	<input type="checkbox"/>
...se sentía mucho más seguro/a de sí mismo/a de lo habitual?	<input type="checkbox"/>	<input type="checkbox"/>
...dormía mucho menos que de costumbre y no necesitaba dormir más?	<input type="checkbox"/>	<input type="checkbox"/>
...era mucho más hablador/a o hablaba más rápido que de costumbre?	<input type="checkbox"/>	<input type="checkbox"/>
...le pasaban ideas muy rápidamente por la cabeza o no podía hacer que su mente fuera más despacio?	<input type="checkbox"/>	<input type="checkbox"/>
...se distraía tan fácilmente con cosas de su alrededor que tenía dificultades para concentrarse o para seguir con lo que estaba haciendo?	<input type="checkbox"/>	<input type="checkbox"/>
...tenía mucha más energía que de costumbre?	<input type="checkbox"/>	<input type="checkbox"/>
...era mucho más activo/a o hacía muchas más cosas que de costumbre?	<input type="checkbox"/>	<input type="checkbox"/>
...era mucho más sociable o abierto/a que de costumbre, por ejemplo, telefoneaba a amigos en mitad de la noche?	<input type="checkbox"/>	<input type="checkbox"/>
...estaba mucho más interesado/a en el sexo que de costumbre?	<input type="checkbox"/>	<input type="checkbox"/>
...hacía cosas que eran inusuales en usted o que otras personas podrían haber considerado excesivas, insensatas o arriesgadas?	<input type="checkbox"/>	<input type="checkbox"/>
...el gasto de dinero le creó problemas a usted o a su familia?	<input type="checkbox"/>	<input type="checkbox"/>
2. Si usted marcó Sí en más de una de las preguntas anteriores, ¿algunas de estas situaciones ocurrieron durante el mismo período? Por favor, marque con un círculo sólo 1 respuesta.		
Sí	No	
3. ¿Hasta qué punto alguna de estas situaciones le causó problemas (como no poder trabajar, problemas familiares, de dinero o legales, implicarse en discusiones o peleas)? Por favor, marque con un círculo sólo 1 respuesta.		
Ningún problema	Pequeños problemas	Problemas moderados
Problemas graves		

The Mood Disorder Questionnaire (Hirschfeld et al, 2000)

1. Has there ever been a period of time when you were not your usual self and...	YES	NO
...you felt so good or so hyper that other people thought you were not your normal self or you were so hyper that you got into trouble?	<input type="checkbox"/>	<input type="checkbox"/>
...you were so irritable that you shouted at people or started fights or arguments?	<input type="checkbox"/>	<input type="checkbox"/>
...you felt much more self-confident than usual?	<input type="checkbox"/>	<input type="checkbox"/>
...you got much less sleep than usual and found that you didn't really miss it?	<input type="checkbox"/>	<input type="checkbox"/>
...you were more talkative or spoke much faster than usual?	<input type="checkbox"/>	<input type="checkbox"/>
...thoughts raced through your head or you couldn't slow your mind down?	<input type="checkbox"/>	<input type="checkbox"/>
...you were so easily distracted by things around you that you had trouble concentrating or staying on track?	<input type="checkbox"/>	<input type="checkbox"/>
...you had more energy than usual?	<input type="checkbox"/>	<input type="checkbox"/>
...you were much more active or did many more things than usual?	<input type="checkbox"/>	<input type="checkbox"/>
...you were much more social or outgoing than usual, for example, you telephoned friends in the middle of the night?	<input type="checkbox"/>	<input type="checkbox"/>
...you were much more interested in sex than usual?	<input type="checkbox"/>	<input type="checkbox"/>
...you did things that were unusual for you or that other people might have thought were excessive, foolish, or risky?	<input type="checkbox"/>	<input type="checkbox"/>
...spending money got you or your family in trouble?	<input type="checkbox"/>	<input type="checkbox"/>
2. If you checked YES to more than one of the above, have several of these ever happened during the same period of time?	<input type="checkbox"/>	<input type="checkbox"/>
3. How much of a problem did any of these cause you - like being unable to work; having family, money or legal troubles; getting into arguments or fights?		
<input type="checkbox"/> No problems <input type="checkbox"/> Minor problem <input type="checkbox"/> Moderate problem <input type="checkbox"/> Serious problem		

Appendix D

Curriculum Vitae

Emanuel T. Recinos M.A., Clinical Psychology

3217 NE Daffodil Dr McMinnville Oregon 97128
Phone: (503)-437-2105 E-mail: erecinos10@georgefox.edu

Education

- | | |
|------------|--|
| 2016- 2022 | Psy.D., Clinical Psychology: George Fox University:
Graduate School of Clinical Psychology - Newberg, OR |
| 2016- 2018 | M.A., Clinical Psychology: George Fox University:
Graduate School of Clinical Psychology - Newberg, OR |
| 2012- 2015 | B.S. Psychology: Linfield University - McMinnville, OR |
| 2010- 2012 | Associate of Arts Oregon Transfer Degree: Chemeketa
Community College - Salem, OR |

Supervised Clinical Experience

- | | |
|-----------|--|
| 2021-2022 | Doctoral Internship: Counseling, Health, & Wellness Services: University of Puget Sound – Tacoma, WA
Licensed Clinical Supervisor: Charee Boulter, Ph.D. |
|-----------|--|

Provided 60-min short-term individual counseling to undergraduate students in a university clinic using CBT foundations. Treated presenting concerns including bipolar disorder, depression, anxiety, eating disorders, sexual identity, gender identity and substance abuse in consultation with a multidisciplinary team (PMHNP, RN, and Dietician). Co-facilitated a 12-week group focused on Mindfulness, Distress Tolerance, Emotion Regulation, and Interpersonal Effectiveness. Conducted crisis assessments regarding suicide, non-suicidal self-injury, and risk of harm to others. Supervised intern counselors completing their master's in counseling. Maintained electronic medical records through Point & Click.

- | | |
|-----------|---|
| 2020-2021 | Doctoral Pre-Internship: Physician's Medical Center
McMinnville, OR
Licensed Clinical Supervisor: Martin Robison, Psy.D. |
|-----------|---|

Provided 30-minute counseling in Primary Care (Internal, Pediatric, and Family Medicine) using empirically supported practice that is short term and solution focused with strong CBT foundations. Population across the lifespan in a rural community. Consulted with a multidisciplinary team emphasizing improved engagement, as well as development of coping strategies for managing mental health symptoms. Provided psychoeducation for patients with

chronic utilizing medication intervention. Treated presenting concerns including depression, anxiety, and eating disorder. Maintained electronic medical records through Centricity.

2019-2020

Doctoral Practicum III: Rural Child and Adolescent Psychological Services, Assessment Specialist

Yamhill Carlton School District, OR

Licensed Clinical Supervisor: Elizabeth Hamilton, Ph.D.

Conducted intellectual, academic, psychological, and neuropsychological assessments and wrote integrated reports. Students between 5 and 18 years of age assessed for intellectual disability; learning disability; ADHD; impact of complex trauma, in utero exposure to drug or alcohol, and behavioral concerns including self-harm, harm to others, suicide ideation and/or attempt. Assisted in a multidisciplinary team developing IEP/504 interventions to meet student's academic and psychological needs. Developed safety plans for self-harm and suicide prevention. Supervised doctoral practicum students regarding school based short-term individual therapy and psychoeducational assessment (interpretation and writing). Maintained electronic medical records through Therapy Notes.

2018- 2019

Doctoral Practicum II: George Fox Behavioral Health Clinic, Therapist – Newberg, OR

Licensed Clinical Supervisor: Kristie Knows His Gun, Psy.D.

Provided 60-min short-term individual, family, and couples counseling to uninsured or underinsured residents of Yamhill County across the lifespan. Treated presenting concerns including depression, anxiety, bipolar disorder, and OCD. Treatment focused on CBT foundations. Conducted adult neuropsychological assessments. Developed safety plans for self-harm and suicide prevention. Maintained electronic medical records through Titanium.

2017-2018

Doctoral Practicum I: Rural Child and Adolescent Psychological Services – Newberg, OR

Licensed Clinical Supervisor: Elizabeth Hamilton, Ph.D.

Provided 60- min short-term counseling within a school based behavioral health setting, serving Yamhill Carlton High School students, between 14 and 18 years of age. Treated presenting concerns including depression, anxiety, sexual identity, gender identity and PTSD. Conducted and wrote integrated psychoeducational assessments. Assisted in a multidisciplinary team developing IEP/504 interventions to meet student's academic and psychological needs. Developed safety plans for self-harm and suicide prevention. Maintained electronic medical records through Therapy Notes.

Mental Health Experience

2016- 2021

Bridges Residential Respite: Adult Behavioral Health

Yamhill County, OR

Supervisor: Callie Gamble, MSW, QMHP, CADC II

Credentialed as a Qualified Mental Health Associate, I worked with adults suffering from severe mental illness or are dual diagnosed and reside in crisis respite or supported housing programs. Responsibilities include providing supportive counseling, individual and group skills training, medication monitoring, case management with multidisciplinary team for client treatment, and maintained electronic medical records through Juniper.

2016- 2021

Peer Assisted Crisis Center: Adult Behavioral Health
Yamhill County, OR
Supervisor: Bethany Ball, LCP, CADC III

Credentialed as a Qualified Mental Health Associate, I worked with adults achieving psychiatric stabilization as an alternative to the emergency department, acute care, or jail. PAC house is a 24-hour center intended for individuals stepping down from acute care or state hospitalization who require additional support for a successful transition back to the community. Responsibilities include providing supportive counseling, individual and group skills training, medication monitoring, case management with multidisciplinary team for client treatment, and maintained electronic medical records through Juniper.

2016- 2020

Oregon Family Support Network
Yamhill County, OR
Supervisor: Tiffany Swanson, Regional Manager

Counselor providing skills training for individuals between 4 and 17 years of age with behavioral, developmental, or other health challenges. Hands on activities were used to develop social skills, coping skills, and advocacy of needs.

2015-2016

Family and Youth Services: Wraparound Care Coordinator – Yamhill County, OR
Supervisor: Zoe Pearson, LPC, NCC, ACS

Credentialed as a Qualified Mental Health Associate worked with individuals between 6 and 17 years of age who were involved in the criminal justice system, were drug/alcohol dependent, or who were at-risk for multiple agency involvement. Trauma informed care practice used to develop problem-solving skills, coping skills, safety crisis plan, and self-efficacy by building ties to community and other natural resources. Maintained electronic medical records through Juniper.

Teaching Assistance

2020

PSYD 552 Cognitive Behavioral Psychotherapy –
George Fox Graduate School of Clinical Psychology
Newberg, OR

Assisted in students' understanding of CBT theoretical concepts and conceptualizations from first, second, and third wave approaches through role play and skills demonstration. Supported

growth of CBT clinical skills through feedback of written and oral assignments. Assessed for CBT theoretical concepts, case conceptualization, and treatment intervention.

2019/2020

PSYD 526 Child and Adolescent Assessment – George Fox Graduate School of Clinical Psychology Newberg, OR

Assisted in an extensive overview of the assessment writing process for pediatric populations, incorporating intellectual, academic, and psychological assessments. Emphasized the comprehensive and holistic context of the assessment process, with an integration of assessment tools, analysis and synthesis of testing results, and the application of findings to individualized treatment recommendations.

2019

PSYC 382 Advanced Counseling – George Fox University Newberg, OR

Assisted in curriculum development, presented weekly on topics related to theoretical clinical skills in various settings including schools and clinics, and with various populations, and led weekly clinical consultation meetings with undergraduates pursuing graduate degrees in clinical psychology. Reviewed *mock therapy* videos and provided structured feedback to students.

Research

Recinos, E., Hamilton, E., Richmond, M., Bigon, J., Flores M., Van Asselt, A., (2019) *Comparison of Adaptive Functioning Measures in Rural Youth*. **Presented at the American Psychological Association 2020 virtual convention - Division 16.**

Dissertation

Bipolar Screening Among Spanish-Speaking US Residents Using the Mood Disorder Questionnaire (MDQ). Funded by the Paul K. Richter Memorial Fund and the Evalyn E.C. Richter Memorial Fund – George Fox University

The study will employ the Spanish language version of the MDQ developed by Sanchez-Moreno (2005). We propose that the validation of the Spanish version of the MDQ is needed for the purpose of cross-cultural adaptation, determining optimal cut-off scores, and as an aid to the literature on Bipolar Disorder (BD) prevalence, specifically BD among Hispanic Spanish speakers of the United States.

Competencies

Spanish: fluency in oral and written form

Certifications/Trainings

Renewed 2021

Collaborative Assessment and Management of Suicidality (CAMS): University of Puget Sound

Renewed 2020	Mandatory Abuse Reporting – Adults with Developmental Disabilities: Yamhill County Behavioral Health
Renewed 2020	Mandatory Abuse Reporting – People with a Mental Illness: Yamhill County Behavioral Health
Renewed 2020	HIPPA Privacy and Security for Health Care Providers: Yamhill County Behavioral Health
Renewed 2020	Certified Qualified Mental Health Associate (QMHA): Mental Health and Addiction Certification Board of Oregon
2017	Leadership Training Workshop: George Fox University Graduate School of Clinical Psychology
2015	Wraparound Certified Practitioner: Portland State University School of Social Work: Center for Improvement of Child and Family Services
2015	Cooperative Problem-Solving Tier I Certified Practitioner: Massachusetts General Hospital: Department of Psychiatry

Committees and Memberships

2020 - Present	OPA Membership Committee: Oregon Psychological Association (OPA)
2018 - Present	OPA Student Committee: Oregon Psychological Association (OPA) - George Fox Graduate School of Clinical Psychology
2016- present	American Psychological Association: Member
2018- 2020	APA Campus Ambassador: American Psychological Association (APA) Campus Ambassador Program (CAP)
2016- 2020	Multicultural Committee: George Fox School of Clinical Psychology
2013-2015	Phi Theta Kappa Honor Society: Member, Linfield College

- 2012- 2015 **Linfield College Latinos Adelante:** Student Mentor
- 2010- 2012 **Phi Theta Kappa Honor Society Chapter President:**
Yamhill Valley Chemeketa Community College
- 2010- 2012 **Student Ambassador:** Yamhill Valley Chemeketa
Community.

Volunteer Service

- 2006- 2018 **City Outreach Ministries:** McMinnville, OR
Food and clothing distribution, social services networking.

Psychological Assessment Competencies

Achenbach System of Empirically Based Assessment (ASEBA)
 Adaptive Behavior System 3rd Edition (ABAS-3)
 Behavior Assessment System for Children 3rd Edition (BASC-3)
 Behavior Rating Inventory of Executive Function 2nd Edition (BRIEF-2)
 Delis Kaplan Executive Functioning System (D-KEFS)
 Gray Oral Reading Test 5th Edition (GORT-5)
 House-Tree-Person Projective Drawing Technique (H-T-P)
 Millon Adolescent Clinical Inventory (MACI)
 Minnesota Multiphasic Personality Inventory 2 - Restructured Form (MMPI-2-RF)
 Penn State Worry Questionnaire for Children (PSWQ-C)
 Perceived Stress Scale- Children Version (PSS-C)
 Roberts Apperception Test for Children 2nd (Roberts-2)
 The Conners 3rd Edition (Conners 3TM)
 Trauma Symptom Checklist for Children (TSCC)
 Wechsler Adult Intelligence Scale 4th Edition (WAIS-IV)
 Wechsler Individual Achievement Test 4th Edition (WIAT-4)
 Wechsler Intelligence Scale for Children 5th Edition (WISC-5)
 Wide Range Achievement Test—4th Edition (WRAT-4)
 Wide Range Intelligence Test (WRIT)
 Woodcock-Johnson Tests of Achievement 4th Edition (WJ-IV Ach)
 Woodcock-Johnson Tests of Cognitive Abilities 4th Edition (WJ-IV Cog)