

**The Role of Bilingualism on Biculturalism, Psychological Wellbeing and Academic
Achievement in Mexican-Origin Undergraduates**

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Dedication

This thesis is dedicated to all Hispanic/Latinx undergraduate students, especially those who are the first in their families completing a Bachelor's degree. You are creating a bigger impact on the world than you know. Though the journey can be incredibly difficult, your achievements do not go unnoticed, and you are never alone.

Esta tesis está dedicada a todos los estudiantes Hispanos/Latine, especialmente aquellos que son los primeros en sus familias en completar una licenciatura. Estan creando un impacto más grande en este mundo de lo que se imaginan. Aunque el viaje puede ser increíblemente difícil, sus logros no pasan ignorados y nunca están solos. ¡Si se puede!

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Abstract

The U.S. Hispanic population has shown significant disparities in mental health and degree attainment when compared to other racial/ethnic groups in the country. This trend is most exacerbated among those of Mexican-origin, who display some of the poorest rates of mental wellness and degree attainment when compared to most other Latinx groups. Past research has linked these deficits to acculturation and biculturalism, especially experiences regarding English-Spanish language competency and use. However, prior literature has neglected to investigate these effects in undergraduate populations. Furthermore, few studies have considered the exact role bilingualism may play in these relationships despite it being an essential element of bicultural identity. To address these gaps, this study examined the impact of biculturalism on academic achievement and psychological wellbeing in a sample of Mexican-origin undergraduate students. Moreover, the study analyzed bilingualism as a moderator in the aforementioned relationship. Bilingualism was not found to moderate the relationship between biculturalism, achievement and wellbeing. Furthermore, no significant correlation was found between biculturalism, wellbeing, and achievement.

Keywords: biculturalism, acculturation, language competence, bilingualism, Mexican-origin Hispanic/Latinx college students, academic achievement, psychological wellbeing

The Role of Bilingualism on Biculturalism, Psychological Wellbeing and Academic Achievement in Mexican-Origin Undergraduates

The Hispanic population in the United States faces significant deficits in mental health and academic achievement when compared to other racial or ethnic groups, and these effects are further exacerbated in those who are born in the U.S. In two studies by Alegría et al. (2007; 2008), U.S.-born Hispanics demonstrated higher rates of mood, anxiety, and substance use disorders when compared to foreign-born Latinxs. When results were analyzed by ethnic group, Mexican-origin participants showed the largest discrepancies among their U.S.-born and foreign-born groups across all three disorders (Alegría et al, 2008). Similar disparities are seen in Latinx degree attainment rates. Despite showing an overall rising trend in the past twenty years, Latinxs still hold the lowest rates of Bachelor's and Post-Baccalaureate degree attainment when compared to other racial and ethnic groups (Krogstad, 2016; Noe-Bustamente, 2020). Recently arrived Mexican immigrants specifically hold one of the lowest shares of college-educated individuals among Hispanic ethnic groups despite being the largest origin group among the U.S. Latinx population (Noe-Bustamente, 2020). Additionally, only one-in-ten of Latinx immigrants who have resided in the U.S. for over ten years have a college degree while their recently-arrived counterparts demonstrate more than twice this rate in degree attainment (Noe-Bustamente, 2020).

The disparities in psychological wellbeing and academic achievement shown among Hispanic samples have been empirically linked to acculturation, although the exact definition of this term has been heavily debated across decades of research. However, more recent studies have defined acculturation as psychological and behavioral changes which arise from the process of adjusting to a foreign culture at the individual- or group-level (Berry et al., 2006; Schwartz et

al., 2010; Driscoll & Torres, 2021). This definition has inspired the creation of a myriad of labels explaining how people may acculturate, including assimilation and marginalization. For U.S.-born Hispanics, the acculturation method most commonly used to describe their experiences at an individual level is biculturalism. Generally, biculturalism describes how an individual exposed to two different cultures, often their heritage culture and a dominant culture, internalizes elements from both (Nguyen & Benet-Martínez, 2007). This definition has been the more accepted version in recent research, although there remains some debate among researchers on what makes an individual truly bicultural. Some believe equal integration of certain behaviors from both cultures (e.g. speaking both languages) demonstrates true biculturalism, while others argue true biculturalism involves mixing both cultures into an individualized third culture (Schwartz & Unger, 2010).

Nationwide patterns within the U.S. Hispanic population echo the sentiments of the former argument. Across the general population and several generational statuses, speaking Spanish was voted as the most important element of an individual's Hispanic identity (Gonzalez-Barrera, 2020). In a comprehensive review of biculturalism research, LaFramboise et al. (1993) listed several studies that have found positive relationships between non-English language competency and ethnic identification. Clearly, bilingual competency can be a highly influential factor in bicultural identity. However, the exact impact bilingualism can have on established links between biculturalism, mental wellbeing, and academic achievement have been largely neglected. Additionally, not many studies on biculturalism have investigated these links in undergraduate populations, as most research focuses on adolescents. To fill this gap, the present study examined the effects of bilingualism in the relationship between biculturalism, academic achievement, and psychological wellbeing among Mexican-origin undergraduates.

Influence of Language Competency on Ethnic Identity

In a national survey of U.S. Hispanic adults, speaking Spanish was voted as the most essential part of individual Hispanic identity across the general population (Gonzalez-Barrera, 2020). However, this sentiment becomes increasingly less popular with U.S.-born immigrant generations. For example, in the same survey by Gonzalez-Barrera (2020), 54% of foreign-born Hispanics felt speaking Spanish was an essential part of their ethnic identity while only 44% of second-generation and 20% of third-generation Hispanics said the same.

Similar patterns are also reflected in empirical research over language competence (or proficiency in a certain language) and strength of identification with one's ethnic culture. Across multiple studies in children and adolescents, researchers have repeatedly found positive associations between non-English language competence and identification with one's ethnic heritage (Phinney et al., 2011; Lee et al., 2021). The correlation can be so strong, foreign language competence itself is often utilized as a behavioral indicator of ethnic identification (Morales & Hanson, 2005). Perceived self-competence in the heritage language alone may also strongly influence identification with the heritage culture. In a study with second-generation Korean American college students, Kang & Kim (2012) found Korean identification was stronger in subjects who self-assessed their Korean language skills as proficient or nearly native.

Frequent use of the ethnic language can also strengthen personal identification with the ethnic culture, so long as this use is regarded as a positive experience. This effect is most often observed in studies investigating the impact of language brokering on children of foreign-born immigrants. Language brokering is defined as the act of translating on behalf of family members who are not fluent in the dominant language (Morales & Hanson, 2018). Among young children and adolescents, multiple studies have found positive associations between biculturalism, ethnic

identity and language brokering (Buriel et al., 1998; Phinney et al., 2001; Weisskirch & Alva, 2002; Weisskirch, 2005; Love & Buriel, 2007). Language brokering naturally exposes these youth to adult immigration experiences, thereby strengthening their connection to the host culture.

The Biculturalism-Psychological Wellbeing Paradox

Past studies on the potential links between biculturalism and psychological or subjective wellbeing have historically been largely split. On one end, many researchers argue biculturalism is the ideal way to acculturate due to its multiple demonstrated benefits. LaFromboise et al. (1993) points out biculturalism encourages greater competence in navigating between both the heritage and dominant cultures. Other studies have found biculturalism encourages improved psychological adjustment to the foreign culture (Sam 2006; Berry et al., 2006), while identifying with two cultures can extend individual social support across members of both cultures (Nguyen & Benet-Martínez, 2013). Tadmor et al. (2009) found bicultural individuals demonstrated greater integrative complexity than their assimilated or separated counterparts in a sample of Asian American college students. In a meta-analysis of 141 studies on biculturalism, Nguyen & Benet-Martínez (2013) also found that biculturalism may make these individuals more effective in adapting to different situations across cultures, especially among Latin samples residing in the United States.

On the other end, many theories and studies on biculturalism attest that juggling between two cultures on a daily basis can only be detrimental to individual wellbeing. Such studies suggest that biculturalism can be a significant source of stress in trying to integrate conflicting or non-compatible cultural norms (Bochner, 1982), and such stress can lead to marginalization from both cultures (Rudmin, 2003) and even threaten attachment to one's ethnic identity (Vivero &

Jenkins, 1999). However, the meta-analysis by Nguyen & Benet-Martínez (2013) also points out that stronger orientation to only one culture can lead to feelings of non-belongingness with the second culture, which may lead to negative effects in adjustment.

Past meta-analyses on bicultural studies have found the contrast in findings is largely due to how researchers define biculturalism and acculturation. Using the bidirectional and multidimensional model (or the assumption that an individual can have different degrees of attachment to both cultures), an increasing number of studies have found equal integration of two cultures may actually buffer individuals from negative psychological wellbeing and maladjustment (Nguyen & Benet-Martínez, 2013). In contrast, studies which conceptualized biculturalism as unidirectional (or as a linear change from the heritage culture towards assimilation) tended to demonstrate inconclusive results in adjustment more frequently than those which defined biculturalism as bidirectional (Moyerman & Forman, 1992; Sam 2006). Due to these results, the present study utilized a scale which measures acculturation and biculturalism through a multidimensional approach.

Biculturalism, Bilingualism and Academic Success

In academic settings, biculturalism has been implicated as a considerable influencer on academic achievement and performance. In a study on Latinx adolescents, Zarate et al (2005) demonstrated that students who labelled themselves with a bicultural identity (e.g. “Mexican American”, “Chicano”) tended to show higher standardized test scores. Additionally, the same study found bicultural students who used cultural definitions in their ethnic label choices significantly outperformed most of their peers. In a similar sample, Buriel et al (1998) found language brokering, academic self-efficacy, and biculturalism all contributed to the variance seen in academic performance among high school students.

Bilingualism also has well-established ties to academic performance, although these benefits are most often observed in school-aged children or adolescents. For example, Marian et al. (2013) showed instruction provided in both the majority and minority languages through a bilingual two-way immersion program promoted academic achievement in all elementary students, regardless of the language they were most proficient in. Additional studies have also found similar trends between bilingualism and achievement, mainly through higher test scores, higher GPA, and lower drop-out rates (García-Vázquez et al., 2010; Golash-Boza, 2005; Ke, 2014). In another study with English-proficient Latinx children, Lutz & Crist (2009) found that those with stronger literate and oral Spanish proficiency demonstrated higher achievement than their lower-skilled peers. However, not many studies have considered possible interactions with biculturalism when it comes to academic achievement.

Conclusions

Prior literature has demonstrated largely positive associations between biculturalism, academic performance, and mental wellbeing. Being able to access constructive and protective elements from either the heritage or mainstream culture has been shown to have beneficial effects in the latter two variables. Additionally, frequent use of the heritage language has consistently shown stronger associations with one's ethnic culture, implying language competency is an essential determinant of one's bicultural alignment. However, not many studies up to date have considered the possible moderating role of language competency or bilingualism in the relationship between biculturalism, academic performance, and wellbeing. Furthermore, majority of the studies that have been done regarding the relationship between these variables have focused entirely on children and adolescents, and their focus has largely been on the general Hispanic population instead of specific ethnic groups. To address these gaps, the present study

sought to determine the role bilingualism plays within the relationship between biculturalism, academic achievement, and psychological wellbeing in a sample of Mexican-origin undergraduates.

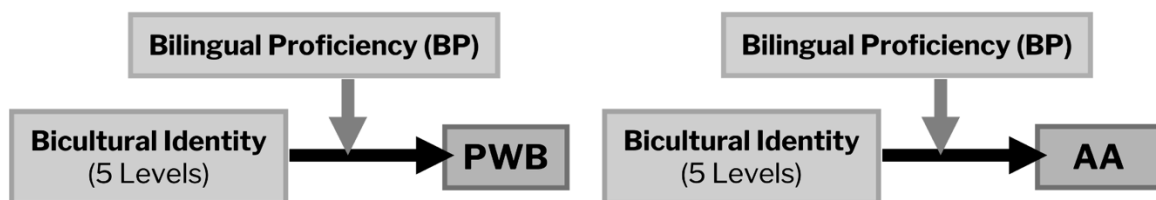
Materials and Methods

Study Design Overview

The study assessed the direct impact of the independent variable, biculturalism, on academic achievement (“Achievement”) and Psychological Wellbeing (PWB) among a sample of Mexican-origin college students. Bilingualism was measured for its possible role as a moderator in the separate relationships between biculturalism-achievement and biculturalism-PWB (see Figure 1). Students with more balanced biculturalism (or approximately equal integration of both Mexican and Anglo cultures) were expected to demonstrate significant differences in both achievement and PWB when compared to their monocultural peers (those who are either strongly Mexican- or Anglo-oriented). Bilingualism was expected to act as a significant moderator, demonstrating strengthening effects in the primary direct relationships. Participants were all asked to complete the study through a one-time anonymous Qualtrics survey.

Figure 1

Moderating Study Design



Note. “AA” signifies Academic Achievement while “PWB” signifies Psychological Wellbeing.

The “5 Levels” underneath Bicultural Identity refers to the five acculturation groups produced by the ARSMA-II.

Participants

The final sample consisted of 38 Mexican-origin college students currently pursuing a Bachelor's degree. Participants were all recruited online using two different sources. The primary source was Prolific, a subject pool which recruits participants globally to participate in online experiments ($n = 27$). Exposure to the survey was limited to participants who met the following criteria: must currently be a student pursuing a Bachelor's degree, reside in the U.S., aged 18-24, be of Mexican-descent, and must select either the U.S. or Mexico as their nationality. A balanced sample was also set to recruit about an equal number of male and female participants from this subject pool. The secondary source for participants were current undergraduates at The University of Texas at Austin ($n = 11$). These participants were recruited through Latinx or Hispanic-centric student organizations on social media (e.g. Texas Familia) and were screened using the same criteria as Prolific, excluding the nationality question. Participant characteristics are fully summarized in Table 1. In this table, classification refers to current grade level in college while generational status distinguishes among immigrant generations. First-generation participants are foreign-born, second-generation includes those U.S.-born with at least one foreign-born parent, third generation includes those U.S.-born with all grandparents being foreign-born, and fourth generation includes those U.S.-born with at least one foreign-born grandparent.

Table 1*Demographic Distribution of Final Sample*

Factor	Frequency (N)	%
Gender		
Female	25	0.66
Male	11	0.29
Non-binary/Genderqueer	2	0.05
Classification		
First-year	6	0.16
Second-year	5	0.13
Third-year	9	0.24
Fourth-year	14	0.37
Fifth-year or greater	4	0.11
Race		
White	23	0.61
Black or African American	2	0.05
American Indian or Alaska Native	2	0.05
Other or prefer not to say	11	0.29
Generational Status		
First generation	8	0.21
Second generation	25	0.66
Third generation	4	0.11
Fourth generation	1	0.03

Materials and Measures***Biculturalism***

The Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) assesses the degree to which Mexican-origin individuals identify with either their heritage culture or Anglo-American culture. This 30-item scale measures this alignment through a Mexican Orientation Subscale (MOS) and an Anglo Orientation Subscale (AOS) consisting of 17 items and 13 items, respectively. Across both subscales, the ARSMA-II includes items such as “My thinking is done in Spanish”, “I like to identify myself as an Anglo American” and “I have difficulty accepting some values held by some Mexicans”. Participants indicate how frequently they perform each action on a scale from 1 (“Not at all”) to 5 (“Extremely often or almost always”). Because this

scale takes a bidirectional and multidimensional approach to acculturation, respondents can be categorized into one of five groups based on their final acculturation scores: “Very Mexican-oriented”, “Mexican-oriented to approximately-balanced bicultural”, “Slightly Anglo-oriented bicultural”, “Strongly Anglo-oriented”, and “Very assimilated or Anglicized”. Cuéllar et al. (1995) has demonstrated high test-retest reliability coefficients for both the AOS ($r = 0.94$) and MOS ($r = 0.96$) after a 1-week interval, as well as high concurrent validity with the original ARSMA scale ($r = 0.89$).

Bilingualism or Bilingual Proficiency

Bilingual proficiency was measured using the English-Spanish version of the Bilingual Language Profile (BLP) adapted directly from Birdsong, et al (n.d.). The BLP consists of 19 items total, each assessing the participant’s language history (“At what age did you start learning the following languages?”), language use (“In an average week, what percentage of the time do you use the following languages at school/work?”), language attitudes (“I identify with an English/Spanish-speaking culture.”) and language proficiency (“How well do you write English/Spanish?”). Language history questions are measured on a scale from 0 (“Since birth”) to 20 (“20+”), language use was measured on a scale of 0 (“0%”) to 10 (“100%”), and language attitudes were assessed on a scale from 0 (“disagree”) to 6 (“agree”). Language proficiency was assessed similarly, on a scale ranging from 0 (“not well at all”) to 6 (“very well”).

To achieve a global language score (or separate scores for English and Spanish proficiency), total scores for each domain were calculated and multiplied by a numerical factor separately by language. Each domain score is then added together to make up the global language score, where the highest a participant can score per language is 218. To assess language dominance, the global Spanish score was subtracted from the global English score. Scores near 0

reflect equal dominance or balanced bilingualism, more positive scores indicate English-dominance, and more negative scores represent Spanish-dominance.

Psychological Wellbeing

The Psychological Wellbeing Scale (PWBS) is a 42-item measure which assesses psychological wellbeing across six domains: life purpose, self-acceptance, personal growth, autonomy, environmental mastery, and positive relations with others (Ryff, 1989). Items within each subscale prompt participants to indicate their level of agreement to a given statement on a 7-point Likert scale, with 1 indicating strong agreement and 7 indicating strong disagreement. Sample items include “The demands of everyday life often get me down” and “I have not experienced many warm and trusting relationships with others”. Ryff (1989) has also demonstrated acceptable internal consistency for all six domains ($\alpha = .86 - .93$) and acceptable test-retest reliability after six weeks ($r = .81 - .88$).

Academic Achievement

Undergraduate academic achievement was solely assessed by the student’s cumulative GPA as of the Fall 2021 semester. If this was the student’s first semester in college, they were prompted to indicate their estimated GPA for that semester. GPA was self-reported and rounded to the nearest hundredth of a decimal.

Procedures

The study materials were presented through a digital survey hosted on Qualtrics. Participants were first presented with an informed consent form and asked for their consent to participate, as well as to confirm whether they were 18 years of age or older. Afterwards, all participants were prompted to answer a set of demographical questions about their age, gender, classification, ethnic origin, race, and generational status. Based on responses to this section, if

all inclusionary criteria were met, participants were granted access to the survey items compiled from each measure. Those that did not pass this screening process were omitted from the final sample. Every scale utilized was counterbalanced on the survey, meaning participants were shown the ARSMA-II, BLP, PWBS, and GPA question in random order. The end of the survey was signaled by a debrief form, contact information, and counseling resources. In the same form, participants were given the choice to enter a drawing for \$100 in appreciation for their participation through an external Google Form. If they were interested, they were prompted to share their full name and personal email address. If not interested, they could simply exit from the Qualtrics debriefing form to successfully submit their response. Responses from the Google Form were stored separately from the Qualtrics responses to ensure anonymity.

Statistical Analyses

After confirming normality and variance assumptions using the Shapiro-Wilk's test ($p = .68$) and Levene's Test ($p = .98$) respectively, a One-Way Analysis of Variance (ANOVA) test was conducted to compare the PWB scores among the final four biculturalism groups. This is because only four out of the original five groups determined by the ARSMA-II were observed in the final sample, where the only group not represented was "Very assimilated or Anglicized". If post-hoc testing was needed due to significant ANOVA results, a Tukey's HSD test was performed to determine which specific groups were significantly different. Because GPA failed to meet the normality assumption under the Shapiro-Wilk's test, a Kruskal-Wallis Test was used to determine if GPA differed significantly between all four biculturalism groups. Finally, a moderation analysis was conducted to determine whether bilingualism acted as a significant moderator in the biculturalism-PWB and biculturalism-achievement relationships. This analysis was run through simple linear regression models using the total numerical acculturation score

obtained from the ARSMA-II and an interaction term. All statistical analyses and data visualization were performed through RStudio.

Results

Relationship Between Biculturalism and Psychological Wellbeing

A One-Way ANOVA test was conducted to determine if Psychological Wellbeing (PWB) differed significantly among the final four acculturation groups. The final results showed significant differences among the four acculturation groups when measuring PWB ($F(3, 34) = 3.34, p = .03$). That is, at least one pair of acculturation groups scored very differently in PWB when compared to each other. Table 2 provides more information about this ANOVA test, as well as the mean and standard deviation of each acculturation group.

Table 2

Means, Standard Deviations, and One-Way ANOVA Among Biculturalism Groups on PWB

Source	Group 1		Group 2		Group 3		Group 4		F	η^2
	M	SD	M	SD	M	SD	M	SD		
Biculturalism	178	35.4	182	28.7	150	27.2	174	41.1	3.34*	0.23

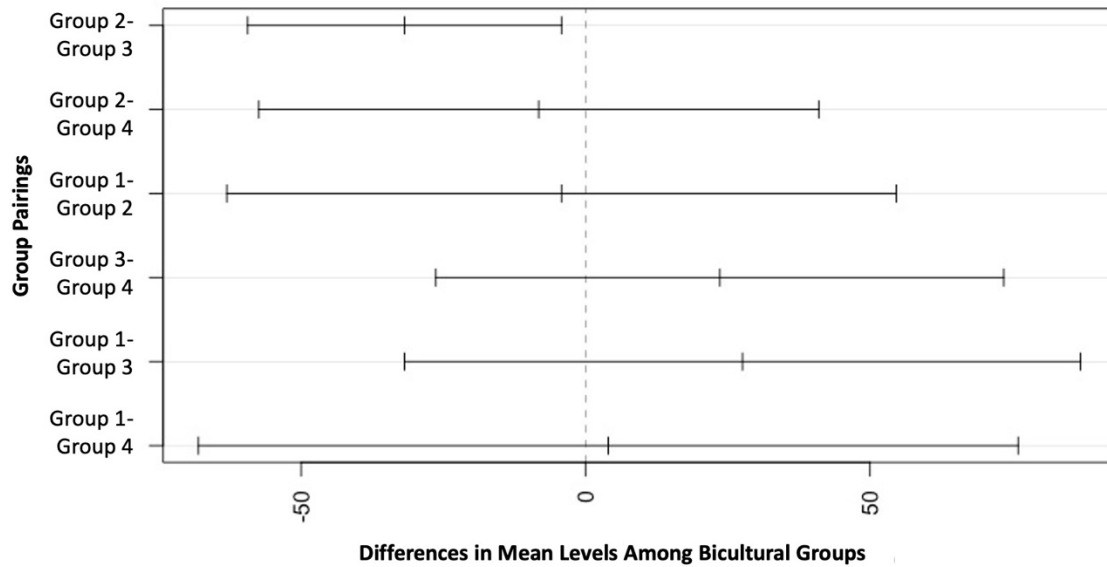
Note. “Group 1” refers to the “Very Mexican-oriented” group, “Group 2” refers to the “Mexican-oriented to approximately-balanced bicultural” group, “Group 3” refers to the “Slightly Anglo-oriented bicultural” group, and “Group 4” refers to the “Strongly Anglo-oriented” group.

* $p < .05$

Once significance was confirmed, a Tukey’s HSD post-hoc test was conducted to determine exactly which pair of bicultural groups differed significantly in PWB. Only Group 2 (Mexican-oriented to approximately-balanced bicultural) and Group 3 (Slightly Anglo-oriented bicultural) were significantly different at the 95% confidence level ($p = .019$). This shows that out of all the possible acculturation group pairings, only both of the biculturalism groups showed a notable contrast in PWB scores.

Figure 2

Tukey’s HSD Results: 95% Family-Wise Confidence Level



Note. “Group 1” refers to the “Very Mexican-oriented” group, “Group 2” refers to the “Mexican-oriented to approximately-balanced bicultural” group, “Group 3” refers to the “Slightly Anglo-oriented bicultural” group, and “Group 4” refers to the “Strongly Anglo-oriented” group.

Relationship Between Biculturalism and Academic Achievement

Due to a failed test of normality through the Shapiro-Wilk’s test ($p = .0018$), differences in GPA among bicultural groups were assessed using the Kruskal-Wallis Test. Based on the final results of this test, no significant differences in GPA were found among the four acculturation groups ($H = 3.06(3, N = 38), p > .05$). That is, all four acculturation groups scored very similarly to each other in terms of GPA. Due to this outcome, no additional post-hoc testing was performed.

Bilingualism as a Moderator

To test for bilingualism’s influence as a moderator on the above relationships, a simple linear regression was conducted among the biculturalism-PWB and biculturalism-GPA

relationships to establish a linear relationship between the two before testing for interaction effects. Since the ARSMA-II determines a participant's acculturation group based on a final linear score, the numerical score was used in the linear regression analyses in place of the categorical groups. As a result, no significant correlation was found between participants' numerical acculturation score and their total PWB score ($r = -.27, p = .097$). Additionally, no significant correlation was found between degree of acculturation and cumulative GPA ($r = -.13, p = .4$). When running a linear regression analysis with the interaction terms, no significant interaction effect was found between biculturalism and bilingualism on PWB ($p = .66$) and GPA ($p = .53$). All of this indicates that bilingualism does not act as a significant moderator in the relationships between biculturalism-PWB and biculturalism-achievement. Despite these non-significant findings, a significant positive relationship was found between bilingualism and biculturalism ($r = .78, p < .05$). This indicates that the more Anglo-oriented a participant was, the more dominant their English proficiency was in comparison to their Spanish proficiency.

Discussion

It was hypothesized that bicultural students, regardless of slight Mexican or Anglo orientation, would demonstrate significantly higher levels of Psychological Wellbeing (PWB) and academic achievement than students who were very Mexican-oriented or very Anglo-oriented/Anglicized. Additionally, bilingualism was predicted to be a significant moderator in the relationships between biculturalism-PWB and biculturalism-GPA with strengthening effects in both scenarios. A significant difference in PWB was found among acculturation groups, but contrary to the first hypothesis, this difference was only found between the Mexican-oriented to approximately-balanced bicultural and Slightly Anglo-oriented bicultural groups. According to the results, Mexican-oriented to approximately-balanced bicultural students demonstrated significantly higher PWB scores than their slightly Anglo-oriented counterparts. No significant differences in GPA were found among any of the final four acculturation groups represented in this study. Contrary to the second hypothesis, bilingualism was not found to be a significant moderator in the relationships between biculturalism, PWB and GPA. In fact, a student's degree of acculturation demonstrated no association to both their PWB and GPA.

Cultural Orientation and Wellbeing

The significant difference found between the two bicultural groups in the study was an unexpected result, based on findings from previous studies on biculturalism and psychological adjustment. The strongest difference was expected between both of the bicultural groups and the Mexican-oriented or Anglo-oriented groups, since prior literature has demonstrated that bicultural individuals exhibit numerous psychological benefits when compared to people who identify strongly with only one culture (Nguyen & Benet-Martínez, 2013). The results of this study initially suggest even slight inclinations towards the origin culture may contribute

significantly to an individual's wellbeing. However, it is important to acknowledge that a large majority of the participants in the final sample placed among the bicultural groups. Only two students qualified as "Very Mexican-oriented" and only three students were categorized as "Very Anglo-oriented". This raises the question of whether bigger differences in psychological wellbeing may have been witnessed if all acculturation groups were equally represented in the study, given that both bicultural groups had a similar amount of participants yet still showed a significant difference in PWB.

Non-Effect of Acculturation Status on GPA

Although no significant differences in GPA were found among the four acculturation groups represented in this study, this finding may actually provide further evidence that biculturalism's impact on achievement relies on external factors, especially among young adults. This would be consistent with findings from a study by Moní et al. (2018), which found no relationship between acculturation strategy and GPA across two studies involving a sample of Latinx college students. Instead, they found that biculturalism was more strongly associated with positive school attitudes than other acculturation strategies, which led to a decreased likelihood of dropping out of college. Such findings imply that while biculturalism on its own may be influential on achievement among children and adolescents, the implications may not be generalizable to young adults. To better address postsecondary academic outcomes in this group, it would be beneficial to investigate alternative components of academic success and their links to biculturalism, aside from GPA or standardized test scores.

Limitations and Future Directions

One of the biggest limitations to the present study is the unequal representation of acculturation groups. Previous nationwide surveys have shown that even if individuals are

Hispanic-origin, if they were born into much later generational statuses, they were much less likely to self-identify as Latinx/Hispanic and more likely to identify as American (Gonzalez-Barrera, 2020). When recruiting participants, the title and survey strongly stressed the Mexican-origin condition to successfully screen participants who fit this inclusionary criterion. However, doing so may have possibly discouraged Mexican-origin individuals who were more assimilated or Anglicized from participating since they wouldn't be as likely to identify with the "Mexican-origin" label. Future studies should make an effort to be more inclusive of such individuals to best capture any potential differences in both PWB and achievement among the sample. Another significant limitation to this study was the usage of GPA as the sole indicator for undergraduate academic achievement. Tork et al. (2015) argues that although GPA can be a useful means of measuring achievement due to its wide accessibility, operationalizing achievement this way can be problematic for three main reasons. One, GPA does not accurately reflect learning ability. Two, inconsistent grading approaches between instructors calls the reliability of GPA into question. And three, results using GPA may not be generalizable since achievement is only one component of academic success. Future studies could benefit from operationalizing academic success through alternative domains, such as academic self-efficacy. Lastly, the high correlation witnessed between biculturalism and bilingualism may have played a role in the non-significant result of bilingualism as a moderator. A future study may want to consider the possible role of language brokering instead. Several studies have already found that if regarded as a positive experience, language brokering can be very beneficial in terms of both wellbeing and academic success (Morales & Hanson, 2005). Future research in this field would help extend current knowledge on biculturalism, especially since language brokering may promote biculturalism by reinforcing navigation between two different cultures.

Conclusions

The study highlights the importance of biculturalism research and the need to increase empirical knowledge on its impacts in both wellbeing and achievement. No significant differences in GPA were found among the acculturation groups. However, the difference in psychological wellbeing among the Mexican-oriented and Anglo-oriented bicultural groups reflects a need for further research on the impact of biculturalism among young adults, especially as most research has focused on adolescents. Bilingualism was also found not to be a significant moderator in either relationship, yet its high correlation with biculturalism raises further questions on whether bilingualism directly leads to adoption of a bicultural identity, or if biculturalism directly encourages bilingual competency.

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