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Biculturalism dynamics: A daily diary study of bicultural identity and psychosocial functioning

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Abstract

We examined two conceptualizations of bicultural identity – the Bicultural Identity Integration (BII) framework (cultural identity blendedness-distance and harmony-conflict) and cultural hybridizing and alternating (mixing one's two cultural identities and/or switching between them). Utilizing data from a 12-day diary study with 873 Hispanic college students, we examined three research questions: (1) cross-sectional and longitudinal inter-correlations among these biculturalism components, (2) links among daily variability in these biculturalism components, and (3) how this daily variability predicts well-being and mental health outcomes over time. Bicultural hybridizing was positively related to, and longitudinally predicted by, both BII blendedness and harmony. Daily fluctuation scores for BII blendedness, BII harmony, and bicultural hybridizing were strongly interrelated. Well-being was negatively predicted by fluctuations in hybridizing, whereas internalizing symptoms were positively predicted by fluctuations in blendedness. These results are discussed in terms of what biculturalism is and how best to promote it.

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Keywords

Biculturalism; Longitudinal; Daily diary; Well-being

Introduction

Immigration is a worldwide phenomenon that has increased both in prominence and attention. Globally, more than 258 million people currently reside in a country other than the one in which they were born (United Nations, 2017). These numbers underestimate the proportion of people who are undergoing cultural change - in addition to immigrants themselves, their children, many of whom are born in the destination country or region, are nonetheless raised in an immigrant home and are exposed to multiple cultural influences (Portes & Rumbaut, 2014). Therefore, we use the term "immigrants" in this article to refer to both first-generation (born abroad) and second-generation (born in the destination society but raised by at least one foreign-born parent) individuals.

Differences between heritage and destination cultures generally require, on the part of immigrants, some degree of *acculturation* – cultural adaptation that results in including (or not including) various heritage-cultural and destination-cultural attitudes, values, behaviors, and identifications within one's cultural behavioral and value repertoire, and one's sense of self (Berry, 2009; see also Berry, 2017, for a recent review). Broadly, Berry has delineated at least four acculturation approaches: assimilation (adopting the receiving culture and discarding the heritage culture), separation (rejecting the receiving culture and retaining the heritage culture), marginalization (rejecting the receiving culture and discarding the heritage culture), and integration or biculturalism (adopting the receiving culture and retaining the heritage culture).

As a whole, research has indicated that biculturalism is among the most common acculturation orientations (Berry, Phinney, Sam, & Vedder, 2006) and is associated with the most favorable levels of both social and psychological adaptation, including the lowest levels of anxiety and depression compared to other acculturation approaches (Nguyen & Benet-Martínez, 2013). In addition, biculturalism is also associated with improved cognitive functioning and perspective taking, and higher levels of integrative complexity, among other advantages (e.g., Benet-Martínez, Lee, & Leu, 2006; García-Sierra & Ramírez-Esparza, 2014; Tadmor, Galinsky, & Maddux, 2012).

Although studies have consistently highlighted the positive consequences of biculturalism, research has increasingly found that biculturalism can be experienced in a variety of ways (see Benet-Martínez, 2018; West, Zhang, Yampolsky, & Sasaki, 2017, for reviews). Although some cross-sectional and experimental studies have examined different variants of biculturalism (e.g., Benet-Martinez, Leu, Lee, & Morris, 2002; Chen, Benet-Martínez, & Bond, 2008; Ward & Kus, 2012), longitudinal research exploring how these different facets of biculturalism impact psychosocial functioning has been limited. In the present study, we used a daily diary method to examine how two different conceptualizations and operationalizations of bicultural identity relate to each other and impact psychosocial functioning among Hispanic college students across 12 days. Individuals change contexts

often – in many cases repeatedly during the course of a day – and as a result, the extent to which instability in biculturalism is experienced across days is an important research question. Further, examining the interplay among bicultural identity components across days provides information regarding the lived experience of biculturalism and how the ingredients of this experience precede or follow one another.

Identity development among Hispanic young adults in the United States

Hispanic young adults in the United States – individuals whose families are from countries in Central America, South America, and the Spanish-speaking Caribbean – possess a unique range of strengths and face a unique set of challenges. Whereas the United States ranks as the most individualistic (i.e., prioritizing the needs of the person over the needs of the family or other social group) country in the world, the five least individualistic countries (and eight of the 13 least individualistic countries) are in Latin America (Hofstede, 2015). Given these contrasts between Hispanic and "mainstream" U.S. cultural streams, and because the majority of Hispanic youth in the United States are from immigrant families (Pew Research Center, 2017), mastering both heritage and U.S. cultures represents an important challenge for Hispanic youth (Schwartz, Meca, Cano, Lorenzo-Blanco, & Unger, 2018). Particularly in diverse urban areas such as New York City, Miami, Los Angeles, Houston, and Chicago, ethnic enclaves are likely to support the preservation of immigrants' cultural heritages – resulting in an enriched multicultural environment that can also foster identity-related challenges (van Oudenhoven & Ward, 2013).

Developing a sense of bicultural identity that incorporates one's heritage and destination cultural systems provides multiple perspectives on problem solving and decision making – and as a result, individuals who master multiple cultures tend to be more cognitively complex, and to develop a greater understanding of multiple cultural perspectives (Zayas, 2015), compared to monocultural individuals.

Young adulthood is generally the time when identity issues are front and center (Arnett, 2000, 2007). The advanced cognitive abilities acquired in adolescence and during the transition to adulthood provide opportunities to engage in counterfactual thinking, through which individuals can imagine not only who they currently are, but also who they might become (Thompson Jr., 2014). In many cases, young adults are no longer enrolled in compulsory education but also have not entered into full-time work – thereby presenting them with opportunities to engage in thoughtful consideration of how their lives are unfolding.

Hispanic college students are a growing population – the number of Hispanic young adults enrolling in U.S. colleges and universities has increased markedly during the 2000s (Fry, 2011). The university experience may be especially conducive to identity development (Thompson Jr., 2013). Taking classes, meeting new people, and venturing outside of one's previous environment may inspire young people to consider new possibilities for themselves. Such possibilities may include how one views oneself culturally as well as in other life domains (Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). As a result, Hispanic young adults attending college may be in a particularly advantageous situation to

engage in identity work – cultural and otherwise. Individuals not attending college may be in more constrained settings (e.g., full-time work) where such identity work is more difficult.

There is also evidence that the U.S. Hispanic population is becoming increasingly diverse in terms of national origins (Pew Research Center, 2017) – and that this diversity may help to shape identity development among Hispanic youth. Although Mexicans – who represent the largest Hispanic national group – are immigrating in far fewer numbers than in earlier decades, many other Hispanic national groups are migrating in larger numbers. Such groups include Colombians, Venezuelans, Guatemalans, Hondurans, Salvadorans, Cubans, and Puerto Ricans. Research conducted in various parts of the United States (Portes & Rumbaut, 2014) has suggested that, in areas with more diverse Hispanic populations, pan-ethnic identifications such as “Hispanic” and “Latino” may be more frequently used in addition to (or in place of) one’s nationality (e.g., Peruvian, Cuban, Mexican). That is, individuals of Spanish-speaking descent may find solidarity with one another in cases where they live in close proximity to one another.

Miami represents a prominent example of such a context (Aranda, Hughes, & Sabogal, 2014). Although Miami was a port city and tourist destination for many years, it became a major U.S. city only after the arrival of Cuban exiles in the 1950s, 1960s, and 1970s. Although the earliest waves of Cuban immigrants to Miami were highly educated and in high socioeconomic brackets, later waves of Cuban arrivals have been of more modest economic means (Stepick, Grenier, Castro, & Dunn, 2003). Nonetheless, the vast majority of political leadership positions in Miami are occupied by Cubans and Cuban Americans.

Miami’s Hispanic population has become increasingly diversified as a result of successive waves of Caribbean, Central American, and South American immigration. For example, as Aranda et al. (2014) note, the 1980s saw Salvadorans, Hondurans, and Nicaraguans fleeing dictatorships and civil wars; the 1990s witnessed Colombians escaping drug wars and guerrilla violence; and the 2000s and 2010s have witnessed Venezuelans, Peruvians, and Argentinians fleeing political instability, Puerto Ricans relocating for economic reasons, and Dominicans arriving to join family members who had immigrated earlier. Although Cubans remain the largest national group within Miami’s Hispanic population, their share has been decreasing as the Hispanic population has become increasingly diverse. With Mexican immigration to the United States slowing, and with migration increasing among other Hispanic nationalities, Miami may represent somewhat of a model for what other U.S. cities may look like in the future (Lopez, Gonzalez-Barrera, & Cuddington, 2013).

Biculturalism and bicultural Identity

The presence of multiple cultural systems within a given social space creates opportunities for individuals to become bicultural. That is, young people who are exposed to their cultural heritage at home and to the receiving culture at school or work (and with friends) are likely to become bicultural (Berry et al., 2006). However, there are likely multiple variants of biculturalism that differ in terms of comfort with the two cultures and in terms of links with psychosocial adjustment. The introduction of the concept of bicultural identity integration (BII) has helped to delineate between and among these variants of biculturalism (Benet-Martinez et al., 2002; Benet-Martínez & Haritatos, 2005). Haritatos and Benet-Martínez

(2002), p. 599) described BII "as a framework for organizing and understanding individual differences in the way biculturals perceive the intersection between their mainstream and ethnic cultures."

BII is defined as the degree to which cultural identities are viewed and felt as blended versus fragmented and as compatible versus in conflict (Benet-Martínez, 2012). BII research has highlighted the role of both socio-cognitive (perceptions of blendedness versus distance or compartmentalization; e.g., "I feel part of a combined culture" vs. "I do not blend Mexican and American cultures") and affective (feelings of harmony versus conflict; e.g., "I rarely feel conflicted about being bicultural" vs. "I feel that Mexican and American cultures are incompatible") elements in contributing to and defining an integrated identity (Huynh, Nguyen, & Benet-Martínez, 2011; Schwartz, Birman, Benet-Martínez, & Unger, 2017). Research has indicated that blendedness and harmony are generally associated with different constellations of antecedents and outcomes (Benet-Martínez, 2012; Benet-Martínez & Haritatos, 2005). Overall, work on BII has significantly advanced cultural identity research by defining the core cognitive and affective characteristics of an integrated identity, providing a measurement of integrated identity, and describing the antecedents and outcomes of harmony and blendedness. It can be surmised, then, that the BII dimensions represent an original and creative way of combining and synthesizing one's two cultural backgrounds so that they are experienced as a single, individualized culture.

Another approach to bicultural identity highlights the ways in which two or more cultural identities can be sustained – namely hybridizing and alternating (Ward, Ng Tseung-Wong, Szabo, Qumseya, & Bhowon, 2018). Hybridized identities are based on having identified and combined specific elements from two or more cultures, often in a unique and novel way (e.g., "I am a 'mélange' of New Zealander and Chinese"). Alternating identities are situated (Noels & Clément, 2015) and change and shift depending upon the circumstances (e.g., "I am Chinese at home and a New Zealander at school/work"). Although both hybridizing and alternating offer ways to maintain a bicultural identity, it is not clear (a) how hybridized and alternating identities come into being and (b) the extent to which such identities are integrated within the self in a meaningful and coherent way. See Table 1 for a summary of the four biculturalism components included in the present study.

In essence, then, at least two approaches to bicultural identity have been proposed – (a) perceptions of cultural identity blendedness and harmony and (b) hybridizing and alternating cultural identities. BII blendedness and hybridizing are conceptually overlapping, as both reflect a degree of merging of cultural identities. However, BII blendedness represents an *individual difference* in the extent to which cultural identities are seen as intersecting or overlapping, whereas hybridizing represents the *extent to which* one's cultural identities are drawn together and interconnected. That is, BII blendedness may serve as a mechanism through which hybridizing is initiated and maintained. As a result, we expected a strong positive relationship between the two constructs, as reported in Ward et al.'s (2018) research with immigrants in New Zealand. Such knowledge is important in refining and sharpening the operational definition of bicultural identity and our knowledge of how bicultural identity operates.

The theoretical relationship between the BII dimensions and alternating identities is less clear. Alternating between heritage and destination cultural identities is often a spontaneous attempt to adapt to changing cultural cues and social contexts – such as going from home to work or school and vice versa (Doucerain, Dere, & Ryder, 2013; Hong, Morris, Chiu, & Benet-Martinez, 2000; Verkuyten & Pouliasi, 2002). However, because alternation does not always occur deliberately and intentionally, the extent to which it represents a form of confusion and conflict is not clear – and therefore it is uncertain whether it would be expected to relate negatively to BII harmony. On one hand, multiple cultural identities can operate in parallel without implying integration or conflict (Hong et al., 2000; Sirin & Fine, 2008) – suggesting that alternation can occur independently of BII blendedness and harmony (such as feeling Mexican at home and American at work). On the other hand, Roccas and Brewer (2002) suggest that alternating identities imply compartmentalization and conflict, and Ward et al. (2018) found a significant negative relationship between alternating identities and BII harmony. In the present study, we aimed to provide more evidence regarding the links between the BII dimensions and bicultural alternating.

A further empirical question involves the links of the BII and hybridizing-alternating models of biculturalism with psychological outcomes such as well-being and symptoms of anxiety and depression. Some cross-sectional research has examined these links. Regarding the alternating-hybridizing model, Nguyen and Benet-Martínez (2013) found that biculturalism – operationalized as endorsing one's heritage and destination cultural systems – is associated with increased well-being. When operationalized as a single dimension (with blendedness and harmony combined), BII has been associated with greater life satisfaction and self-esteem, and with lower symptoms of distress (Chen et al., 2008; Ferrari, Rosnati, Manzi, & Benet-Martínez, 2015). However, the literature on alternating biculturalism and psychosocial outcomes is inconsistent. Yampolsky, Amiot, and de la Sablonnière (2013) found in their qualitative study that a tendency to keep one's multiple cultures separate – one way in which bicultural alternating has been framed – is linked with lower well-being. There is also some evidence that switching between cultural systems may not involve confusion and conflict (Sirin & Fine, 2008).

It stands to reason, then, that BII blendedness, BII harmony, and hybridizing should be related to indices of well-being, and protective against indices of distress over time – controlling for earlier levels of these outcomes. Put differently, do the cross-sectional links between biculturalism indices and adjustment, as found in other studies, replicate within a short-term longitudinal study? Replication of prior findings longitudinally would provide further definitional clarity vis-à-vis bicultural identity and its predictive links with outcome variables. Cole and Maxwell (2003) make clear that longitudinal research, including controls for prior levels of outcome variables, should be considered more authoritative than cross-sectional research. As a result, if prior results were not replicated longitudinally, some reformulation of the BII and hybridizing-alternating models – at least as related to outcome variables – may be necessary.

Short-term longitudinal dynamics of bicultural identity

Thus far, much of the research literature on biculturalism – including research pertaining to the study of BII and the hybridizing-alternating models – has consisted of cross-sectional and experimental studies (for exceptions, see Safa et al., in press; Schwartz et al., 2015). Less emphasis has been placed on longitudinal dynamics (including short-term longitudinal dynamics) of biculturalism – that is, ways in which biculturalism indices relate to and influence one another, and predict outcome variables, over time. Establishing directionality between the BII components and the alternating-hybridizing indices requires a longitudinal design where each index can be predicted by the others, with earlier levels of each dependent variable controlled (Hamaker, Kuiper, & Grasman, 2015). Such a design, paired with the appropriate statistical analyses, would allow us to test the hypothesis that BII blendedness and harmony precede bicultural hybridizing. A longitudinal design would also further clarify the meaning of bicultural alternating – that is, whether alternating is an adaptive, maladaptive, or some of both.

Second, although cross-sectional designs only permit examination of associations between and among variables at one specific point in time, longitudinal designs allow for many more theoretical and analytic possibilities. One such possibility involves cross-lagged panel modeling (Little, 2013), which allows for examination of directionality between variables (e.g., between the BII dimensions and bicultural hybridizing). An additional possibility, especially within intensive longitudinal, daily diary studies, involves examining fluctuation (i.e., instability) across days (Kernis, Grannemann, & Barclay, 1989). Research on other domains of identity (e.g., friendships, education) indicates that instability in one's sense of identity across days is linked with decreased well-being and higher levels of depressive and anxiety symptoms (Klimstra et al., 2016; Klimstra, Hale III, Raaijmakers, Branje, & Meeus, 2010). We do not yet know whether, among Hispanic college students, instability in bicultural identity components across days predicts decreased well-being and elevated levels of internalizing symptoms. Further, it is important to ascertain *in which of the specific bicultural identity components* instability is most problematic for psychosocial functioning. A finding that fluctuations in at least some bicultural identity components are problematic implies that maintaining consistent levels of biculturalism and bicultural identity is important for psychosocial adjustment.

The present study: research questions and hypothesees

The present study was designed to map the short-term, daily links between the BII and hybridizing-alternating models of bicultural identity. Given the issues addressed in the introductory section, we pursued four research questions vis-à-vis mapping and understanding the longitudinal dynamics of bicultural identity among Hispanic college students. First, how do the hybridizing-alternating and BII models relate to one another cross-sectionally? This question is important in terms of replicating prior cross-sectional work (e.g., Ward et al., 2018). The remaining questions are longitudinal and extend prior work. Second, is there directionality across time among the four biculturalism variables? That is, do hybridizing and alternating predict the BII components, do the BII components predict hybridizing and alternating, or are these associations bidirectional? Third, at the level of stability versus instability, do fluctuations in the BII components co-occur with

fluctuations in hybridizing and alternating? A “yes” answer to this question suggests a larger, overarching biculturalism construct, whereas a “no” answer suggests that the BII and hybridizing-alternating models of bicultural identity may be conceptually separate from one another. Fourth, do fluctuations in the biculturalism variables predict subsequent levels of well-being and distress?

In terms of hypotheses, we expected that, across the three types of relationships examined (cross-sectional, cross-lagged, and fluctuations), BII blendedness and harmony would be inter-related; BII blendedness would be positively related to hybridizing; and BII harmony would be negatively related to alternation. With regard to cross-lagged predictive relationships, we expected that the BII dimensions would temporally precede hybridizing (in a positive direction) and alternating (in a negative direction). We also expected that fluctuations in both BII components, and in hybridizing, would negatively predict well-being, and positively predict internalizing symptoms, on the last assessment day. We did not advance a hypothesis as to whether these associations would hold for fluctuations in alternation. Because alternation involves switching back and forth between two sets of cultural identities, fluctuations in such alternation indicate that the person is switching more on some days than on others. It is not clear whether such fluctuations in alternation would be adaptive or maladaptive.

Method

We used a 12-day diary study conducted with 824 Hispanic college students (76.1% female, M_{age} = 20.86 years, SD = 2.80, range 18 to 29). The 12-day design allowed us to include two full weekends (4 weekend days) and 8 weekdays (see Fig. 1). Approximately 34.5% of respondents were first-generation immigrants (i.e., born outside of the United States), 45.0% were second-generation immigrants (i.e., born in the United States but both of their parents were born abroad), and 20.5% of respondents were 2.5 generation (i.e., they and one of their parents were born in the United States). First-generation immigrants had resided in the United States for a mean of 12.50 years, with an average age of 9.26 at arrival in the United States. The majority (71.3%) of first-generation immigrants had arrived in the United States at age 12 or younger (matching Portes & Rumbaut’s, 2014, definition of “1.5 generation”). Additional demographic information is provided in Table 2.

When asked to characterize their ethnicity in their own words, 70% of those participants (n = 757) who answered the question provided a pan-ethnic label (e.g., Hispanic, Latino), 15% provided a specific nationality (e.g., Colombian, Cuban), 3% characterized themselves as American or White, and 12% provided responses that were not specific to ethnicity (e.g., human, citizen of the world). Of participants providing a pan-ethnic label, 94% characterized themselves as Hispanic, 4% as Latina/o, and 2% as Hispanic/Latino. The predominance of the term “Hispanic” is typical of Miami-area samples (Aranda et al., 2014).

Procedure

Participants were recruited from a psychology department participant pool at a public university in Miami where approximately 65% of students are Hispanic. Only participants who self-identified as Hispanic were eligible to participate. Data were collected across ten

weekly cohorts of approximately 90 participants each. Data collection included a range of measures targeting acculturation, biculturalism, personal identity, beliefs about government and civic responsibility, well-being, and internalizing symptoms. The baseline and final-day surveys took approximately one hour to complete, and the daily (Day 2–11) surveys took 15–20 min to complete. In exchange for their participation, participants received credit toward a university research requirement.

For each cohort, data collection started on a Thursday and ended on a Monday (see Fig. 1). Results indicated no significant differences across cohorts in any of the study variables. Completion rates across the study days ranged from 80% to 90%; and across all measurements, 13.3% of data were missing. Little's (1988) Missing Completely at Random test indicated that data were missing at random [$\chi^2(8608) = 8458.44$, $p = .87$], suggesting that our results were not biased as a result of missing values. All cases were retained in analysis regardless of amount of missing data.

The daily survey link was sent out at 3 AM each day, giving students a full 24 h to complete the survey. Participants completed a longer battery on the first and last days consisting of demographic questions as well as closed-ended measures of identity, acculturation, well-being, and psychosocial functioning. On days 2–11, participants received a shorter survey with selected closed-ended items from the questionnaire battery (one item per construct). Use of such single-item measures is standard in daily diary studies of identity processes (Klimstra et al., 2010, 2016; Schwartz et al., 2011). There is also evidence that single-item identity measures are valid and reliable (Postmes, Haslam, & Jans, 2013). As part of the item selection process for the measures in the current study, we conducted confirmatory factor analyses on the Hispanic subsample from a large, multi-site college student study (Castillo & Schwartz, 2013). The highest loading item from each measure or subscale was then selected and reworded to reflect individuals' daily experiences.

Measures

All measures were administered using a 5-point Likert-type scale anchored by 1 = *strongly disagree* and 5 = *strongly agree*. Sample items presented below reflect the items chosen as part of the daily portion of the study. Per Klimstra et al. (2010), reliability for all single-item measures was calculated using mean Heise (1969) reliability estimates, an estimate of test-retest reliability that separates true change from measurement error. Heise reliability coefficients are calculated using the following equation: $r_{xx} = (r_{12} \times r_{23})/r_{13}$. As there were 10 days of single-item measurement, 8 Heise estimates were calculated for each construct. Mean Heise coefficients are reported below, along with the range of coefficients. It should be noted that Heise coefficients may be somewhat lower than traditional Cronbach's alpha coefficients, because high Heise coefficients indicate the presence of little variability across daily measurement occasions. However, there should nonetheless be a balance between over-time fluctuations and reliability coefficients, such that there is enough stability to produce acceptable reliability coefficients.

Bicultural identity integration

The Bicultural Identity Integration Scale version 2 (BIIS-2; Huynh, Benet-Martínez, & Nguyen, 2018) consists of 20 items, 10 of which assess blendedness (versus compartmentalization) and 10 of which assess harmony (versus conflict) between the person's heritage and U.S. cultural orientations. Full BIIS-2 scale scores were used at baseline to estimate cross-sectional correlations among the four biculturalism indices; and single items (reworded to refer to "today") were used on Days 2–11 to estimate fluctuation scores and in the random-intercept cross-lagged panel model. Sample items include "[Today] I feel Hispanic and American at the same time" (blendedness) and "[Today] I find it easy to harmonize my Hispanic and U.S. cultures" (harmony). For the baseline correlations, alpha coefficients, using the full measures at baseline, were 0.85 for blendedness and 0.81 for harmony. For the daily measures, Heise reliability estimates, averaged across the eight available 2-day time lags, were 0.69 for blendedness and 0.61 for harmony.

Hybridizing and alternating biculturalism

The Multicultural Identity Styles Scale (MISS) was used to assess bicultural hybridizing and alternating (Ward et al., 2018). The MISS consists of 14 items, 7 of which assess hybridizing ($\alpha = 0.89$) and 7 of which assess alternating ($\alpha = 0.84$). As with the BIIS, full scale scores were used at baseline for the cross-sectional analyses, and single items (reworded to refer to "today") were used on Days 2–11 for the cross-lagged and fluctuation score analyses. Sample items include "[Today] I see myself as a culturally unique mix of Hispanic and American" (hybridizing) and "[Today] I alternate between being Hispanic and American depending on the circumstances "(alternating). For the daily scores, mean Heise coefficients were 0.65 for hybridizing and 0.62 for alternating.

Well-being

Well-being was assessed in terms of self-esteem, satisfaction with life, psychological well-being, and eudaimonic well-being. Self-esteem was assessed using the Rosenberg (1968) Self-Esteem Scale, which consists of 10 items ($\alpha = 0.87$ at baseline). A sample item is "I feel that I have a number of good qualities." Satisfaction with life was assessed using the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), which consists of five items ($\alpha = 0.89$ at baseline). A sample item is "If I could live my life over again, I would not change anything." Psychological well-being was assessed using the 18-item version of the Scales for Psychological Well-Being ($\alpha = 0.84$; Ryff & Singer, 2008). Sample items include "I feel I am in charge of the situation in which I live." Eudaimonic well-being (engaging in challenging and self-defining activities) was assessed using the Questionnaire for Eudaimonic Well-Being ($\alpha = 0.87$; Waterman et al., 2010). Sample items include "My life is centered around a set of core beliefs that give meaning to my life." These well-being indicators were combined into a latent well-being variable, as described in the results section.

Internalizing symptoms

Internalizing symptoms were assessed in terms of anxiety and depression. Anxiety was assessed using an adapted, general-population version of the Beck Anxiety Inventory, with items referring to clinically elevated symptoms (e.g., wobbliness in legs) removed and items added to refer to excessive worrying and "butterflies" in one's stomach (see Schwartz et al., 2011, for validity evidence for this adapted version). The adapted version consists of 18 items referring to symptoms of anxiety in the past week ($\alpha = 0.94$; sample item: "I have been worrying a lot this week"). Depressive symptoms were assessed using the Centers for Epidemiologic Studies Depression Scale (Radloff, 1977). This measure consists of 20 items ($\alpha = 0.86$), including "I have felt down and unhappy this week."

Results

Analytic plan

We conducted analyses in four primary steps, in accordance with the four research questions posed above. To investigate the first research question regarding interrelationships among the BII and hybridity-alternation variables, we computed bivariate correlations among these variables at baseline. To examine the second research question regarding directionality between (a) BII blendedness and harmony and (b) bicultural hybridizing and alternating indices, we estimated a random-intercept cross-lagged panel model (RI-CLPM) using the four indices. To examine the third research question regarding associations among indices of short-term instability in the BII and hybridizing-alternating indices, we computed fluctuation scores for these four processes and estimated bivariate correlations and multiple regression models among these four fluctuation scores. Specifically, we sought to determine the extent to which fluctuations in each biculturalism index (computed as the standard deviation of Day 2–11 scores for that index) were related to fluctuations in each of the other indices. Multiple regression analyses allowed us to estimate the multivariate associations among the four indices – that is, the unique and shared contributions of fluctuations in each biculturalism index to the other biculturalism indices. To examine the final research question regarding effects of instability in the biculturalism components on well-being and internalizing outcomes on Day 12, we used structural equation modeling to ascertain the effects of fluctuations in the four biculturalism indices on final-day (Day 12) well-being, controlling for well-being at baseline. These four analytic steps allowed us to (a) replicate prior cross-sectional findings regarding links between the BII and hybridizing-alternating models of bicultural identity, (b) examine directionality between indicators from these two models, and (c) examine fluctuations in indicators from these two models, as well as the effects of these fluctuations on subsequent levels of well-being and distress.

Bivariate correlations at baseline

Table 3 displays the bivariate correlations among the biculturalism indices at baseline. As expected, BII blendedness was strongly associated with BII harmony and with hybridizing. BII harmony was also positively related to hybridizing, and as predicted, negatively associated with alternating, both associations demonstrating a medium effect size. Hybridizing and alternating were moderately and positively interrelated. These correlations appear to support Hypothesis 1.

Random-intercept cross-lagged panel models

Next, to test the second research question regarding directionality among the biculturalism components, we estimated RI-CLPM models across Days 2–11, where each biculturalism index at Day *x* was allowed to predict each of the other processes at Day *x* + 1. RI-CLPM explicitly separates within-person variability (cross-lagged paths) from between-person variability (random intercepts; Hamaker et al., 2015). A first step in cross-lagged modeling is to test for stationarity – that is, whether each corresponding path is equivalent across all of the lags. For example, if the stationarity assumption is satisfied, then the path from blendedness at Day *x* to hybridizing at Day *x* + 1 can be considered equal from Day 2 to Day 3, from Day 7 to Day 8, and from Day 10 to Day 11. In essence, stationarity allows for estimation and comparison of only one set of path coefficients, as opposed to a separate set of comparisons for each lag. It should be noted that RI-CLPM path coefficients tend to be small because of controls for autocorrelations and for between-person variability.

The stationarity assumption is tested using invariance testing procedures, where the fit of a model with each corresponding path (e.g., blendedness at Day *x* predicting hybridizing at Day *x* + 1) free to vary across lags is compared against the fit of a model with each set of corresponding paths constrained equal across lags. We used standard structural equation modeling fit indices to evaluate the fit of each of these models. Fit of the overall model to the data was evaluated using the comparative fit index (CFI), the non-normed fit index (NNFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). According to Kline (2014), good model fit is represented as CFI ≥ 0.95, NNFI ≥ 0.95, RMSEA ≤ 0.05, and SRMR ≤ 0.06. The RMSEA also provides a 90% confidence interval, as well as a "close fit probability" that the population RMSEA value is below 0.05 (Hancock & Freeman, 2001). The chi-square index tests the null hypothesis of perfect model fit and is generally not used in interpretation.

Models are compared using differences in the CFI and RMSEA indices, where differences of 0.01 or less are considered indicative of invariance (or stationarity in this case). The chi-square difference is reported, but not used in interpretation, because the chi-square difference test often indicates significant differences between models when the differences in the fit indices themselves are trivial (West, Taylor, & Wu, 2012).

The invariance test indicated that the assumption of stationarity could be retained, $\Delta\chi^2$ (6) = 177.73, $p < .001$; ΔCFI = 0.001; ΔRMSEA = 0.001. Because each set of corresponding path coefficients can be considered equivalent, we report all of our cross-lagged comparisons as between Day *x* and Day *x* + 1. In the following subsections, we report cross-lagged paths predicting each of the four biculturalism indices (see Table 4).

BII blendedness

At the within-person level, BII harmony was the only significant predictor of BII blendedness (β = 0.06, $p < .005$), indicating that within-person deviations in BII harmony symptoms were predictive of within-person deviations in BII blendedness. Put another way, on days when an individual's scores on BII harmony were above that individual's overall mean BII harmony score, on the next day the individual was likely to report BII blendedness

scores above the individual's overall mean. Hybridizing (β = 0.00, p = .88) and alternating (β = 0.01, p = .65) did not emerge as significant predictors.

BII harmony

Controlling for prior levels of BII harmony, BII blendedness was the only significant predictor of BII harmony (β = 0.05, p < .02), hybridizing (β = 0.02, p = .27), and alternating (β = 0.02, p = .26) did not emerge as significant predictors. On days when individuals reported blendedness scores that were above that individual's mean blendedness score, on the next day they tended to report BII harmony scores that were above the individual's overall mean.

MISS hybridizing

Controlling for prior levels of hybridizing, BII harmony (β = 0.05, p < .01) and BII blendedness (β = 0.05, p < .01) emerged as significant predictors of hybridizing. Alternating (β = 0.01, p = .68) did not emerge as a significant predictor. Individuals reporting above-mean scores on blendedness and harmony on a given day tended to report above-mean levels of hybridizing the next day.

MISS alternating

No significant predictors emerged for alternating. These RI-CLPM results suggest the presence of a within-person feedback loop between blendedness and harmony, and that both blendedness and harmony feed into bicultural hybridizing. The RI-CLPM models also suggest that alternating is largely separate from the other biculturalism-related indicators over time.

At the between-person level, RI-CLPM models also involve reporting correlations between random intercepts for the various biculturalism components (Hamaker et al., 2015). Correlations between random intercepts are reported in Table 4. These correlations provide estimates of between-person stability. For example, the positive correlation between BII blendedness and harmony implies that, at a characterological level (i.e., across time), individuals with higher BII blendedness also tended to report higher levels of BII harmony. As a whole, at the between-person level, results indicated high correlations between BII blendedness and BII harmony, BII blendedness and hybridizing, and BII harmony and hybridizing. On the other hand, although alternating was positively correlated with BII blendedness, BII harmony, and hybridizing at the between-person level, these correlations were small to moderate. As a result, alternating appears to be less strongly related to hybridizing and to the BII dimensions than these variables are to one another.

Associations among fluctuation scores

Our next step was to test the hypothesis that fluctuation scores for BII blendedness and BII harmony would be positively intercorrelated, that fluctuations in BII blendedness would be positively related to hybridizing, and that fluctuations in alternation would be negatively associated with fluctuations in harmony. Fluctuation scores subsume the entire diary period (Days 2–11) and provide a between-person estimate of the amount of variability in a given indicator across days. We therefore estimated correlations among fluctuation scores

for the four biculturalism components. The four fluctuation scores were all positively correlated with each other at the bivariate level. Bivariate correlations among fluctuation scores for BII blendedness, BII harmony, and MISS hybridizing were all above 0.50 (see Table 5). Correlations involving fluctuations in alternating were all below 0.40. We then estimated four multiple regression models, one for each of the biculturalism indices as a dependent variable and the other three as predictors, as an index of the overlap among them.[1] Standardized regression coefficients were highest for fluctuations in BII blendedness and harmony predicting one another, and for fluctuations in BII blendedness predicting fluctuations in hybridizing. R^2 values were between 0.41 and 0.50 for fluctuations in BII blendedness, BII harmony, and hybridizing, but only 0.17 for alternating (see Table 5). Again, fluctuations in the two BII dimensions are closely interrelated (this time in terms of change patterns across days), whereas change patterns in flunctuations in alternating are less strongly related to change patterns for fluctuations in the other biculturalism indices.

Our final step of analysis was to test the fourth hypothesis that fluctuations in BII blendedness, BII harmony, and bicultural hybridizing would negatively predict well-being and internalizing symptoms on Day 12. We estimated a structural equation model where the four fluctuation scores were entered as predictors of well-being and internalizing symptoms on the final day, controlling for these same outcomes at baseline as well as for age, gender, and nativity (U.S. born versus foreign born). Well-being was defined as a latent variable with self-esteem, life satisfaction, psychological well-being, and eudaimonic well-being as indicators (Waterman, 2008). Factor loadings (λ) ranged from 0.58 to 0.86 (mean 0.72) at baseline and from 0.63 to 0.86 (mean 0.77) on the final day. Internalizing symptoms were defined as a latent variable with anxiety (λ = 0.88 at baseline and 0.91 on the final day) and depression (λ = 0.85 on at baseline and 0.85 on the final day) as indicators.

The model including the Day 2–11 fluctuation scores and the baseline and final-day outcome variables fit the data well. With controls for baseline well-being and for covariates, final-day well-being was significantly and negatively predicted by fluctuations in hybridizing (β = −0.11, $p < .04$). With controls for internalizing symptoms at baseline and for covariates, internalizing symptoms on the final day were significantly predicted only by fluctuations in blendedness (β = 0.25, $p < .002$). None of the covariates (grade, gender, or nativity) were significantly predictive of well-being or of internalizing symptoms. These results indicate that fluctuations in the extent to which one's cultural backgrounds could be smoothly integrated were predictive of mental health outcomes.

Discussion

We conducted the present study to expand our understanding of bicultural identity dynamics by empirically integrating two models of biculturalism – the bicultural identity integration (BII) framework (Benet-Martínez & Haritatos, 2005) and the alternating-hybridizing conceptualization of cultural identity maintenance – within a sample of Hispanic college students. Given the need to operationally define biculturalism (and cultural identity

[1]Structural equation modeling cannot be used in situations where every variable in a set will be used to predict every other variable in the set, as was done in this case

generally; Schwartz et al., 2017; West et al., 2017), integrating these approaches is an important exercise. We used three different analytic methods – bivariate correlations, random-intercept cross-lagged panel models, and fluctuation score analyses – to test hypotheses regarding the interrelationship among components derived from the BII and hybridizing-alternating frameworks. These methods advance the biculturalism literature because they allow us to examine directionality and daily fluctuations among biculturalism components, as well as how these fluctuations (as an index of instability) predict later levels of well-being. Such advances are important because most prior research on biculturalism has been cross-sectional or experimental, with few longitudinal studies available. Information about this natural progression and interrelationships is essential to informing the design of interventions to promote biculturalism in Hispanic college students, as well as other groups of young people. We return to the issue of intervention at the end of this discussion section.

At the bivariate level using baseline data, we found that BII blendedness and harmony were strongly interrelated, and that BII blendedness was strongly related to hybridizing and unrelated to alternating. BII harmony was moderately linked with hybridizing (in a positive direction) and with alternating (in a negative direction). The longitudinal random-intercept correlations suggested a similar overall pattern - blendedness, harmony, and hybridizing were strongly interrelated, whereas alternating is less strongly related to the other three components. The correlations replicate prior work (Ward et al., 2018) and point to associations among (a) perceiving that cultural identities can be blended, (b) feeling that cultural identities are in harmony, and (c) merging or intermingling these identities. In contrast, identity switching and shifting are largely unrelated to cultural identity harmony.

These results suggest that, at least within our sample of Hispanic college students, a belief that one's heritage and destination cultures are compatible is associated with developing a cultural self where the two sets of cultural influences are mixed with one another. This finding regarding BII dimensions predicting hybridity may be facilitated by the bicultural context in which our participants lived – namely Miami, where a strong pan-Hispanic cultural system is mixed with U.S. cultural influences (Aranda et al., 2014).

Interestingly, hybridizing and alternating were *positively* related in our sample. Ward et al. (2018) have argued that hybridizing and alternating are relatively independent and that both options are available to bicultural individuals; however, individual differences and social climate can affect their usage. It may be that, within a highly bicultural context (Miami), individuals may merge identities in some settings (e.g., with friends and in some work contexts) but alternate identities in other settings (e.g., with family). The bicultural, highly Hispanic university where the data were collected may have also facilitated biculturalism, in that the presence of large numbers of co-ethnic peers is likely to support both Hispanic and U.S. cultural orientations. The sum total of these various configurations is a weakly positive relationship (i.e., the same individuals can both hybridize and alternate). We return to the meaning of alternating biculturalism later in this discussion section.

Directionality among biculturalism dimensions

The random intercept cross-lagged panel analyses permitted us to move beyond prior cross-sectional work and examine the sequencing among the biculturalism dimensions. As might

be expected, at the within-person level, BII blendedness and harmony appeared to predict one another over time, such that the two BII dimensions reinforce each other. A perception of blendedness across one's two cultural identities may engender a feeling of harmony the next day, and vice versa. Such a finding is consistent with predictions advanced by Huynh et al. (2011; see Fig. 35.1 in that chapter) and represents an important advance in the biculturalism literature. Of course, the bicultural context (both the university and the city in which the university is embedded) where the study took place is essential to consider – we do not know whether the same results would have emerged in a different type of setting.

A second important result is that the two BII dimensions predicted subsequent levels of hybridizing, but hybridizing responses did not significantly predict either of the BII dimensions. This pattern of findings suggests that, among Hispanic college students, the tendency to perceive cultural identities as blended and feel that they are in harmony is likely to produce a bicultural self by mixing and merging. That is, perceiving one's cultural backgrounds and identities as capable of being integrated (BII blendedness), and as compatible with one another (BII harmony), may pave the way for a sense of self where the person is comfortable creating an individualized cultural mosaic (hybridizing). Again, these results go beyond prior work in specifying directionality among biculturalism components. These methods advance the biculturalism literature because they allow us to examine directionality and daily fluctuations among biculturalism components, as well as how these fluctuations (as an index of instability) predict later levels of well-being. Information about the interrelationships among biculturalism components is essential to informing the design of interventions to promote biculturalism in Hispanic college students, as well as other groups of young people. It is essential for future studies to examine the replicability of the present findings within other contexts, other age groups, and individuals not enrolled in higher education.

A final pattern of directional results indicates that alternation did not predict, and was not predicted by, any of the other biculturalism dimensions. That is, greater levels of BII blendedness and harmony did not decrease later levels of alternating. Hybridizing and alternating also did not predict one another across days. These patterns indicate that, contrary to our hypotheses, alternation is not the opposite of hybridization, nor is it incompatible with BII blendedness and harmony. Rather, alternating – switching back and forth between cultural identities – appears to be orthogonal to BII blendedness and harmony. At least within a bicultural context such as Miami, the extent to which one switches cultural identities across contexts may not be a function of one's levels of blendedness and harmony. Rather, within such a highly bicultural context, alternating identities may be a function of the different settings in which one operates – some of which may be more bicultural than others (e.g., work/school versus family). Such a contextual, rather than intrapersonal, framing of alternation may support the literature on cultural frame-switching (e.g., Hong et al., 2000; Verkuyten & Pouliasi, 2002). Alternating between public and private spheres (e.g., Arends-Tóth & van de Vijver, 2007) may be expected, especially within a bicultural context, and as such it may not be associated with distress (cf. van Oudenhoven & Benet-Martínez, 2015).

Fluctuation score analyses

Fluctuations in blendedness and harmony were closely interrelated, suggesting that, within our sample of Hispanic college students, daily variability in the degree to which one views one's cultural orientations or selves as compatible with one another was strongly associated with daily variability in the degree to which one perceives one's cultures as overlapping with one another. Consistent with the cross-sectional and random-intercept longitudinal results, fluctuation score analyses indicated that fluctuations in blendedness were the primary contributors to fluctuations in hybridizing. That is, if one perceives daily changes in the extent to which one's two cultural backgrounds can be successfully combined, one's cultural hybridizing responses will fluctuate accordingly. Daily changes in the extent to which one experiences one's cultural backgrounds as not being in conflict (i.e., the harmony dimension) were less strongly related to changes in mixing or hybridizing one's cultural identities.

Beyond the commonalities between the cross-sectional and cross-lagged analyses, fluctuations across all four bicultural variables were significantly related. However, the magnitude of the associations of blendedness, harmony, and hybridizing with alternating tended to be lower than the associations among the other biculturalism components, and a markedly smaller proportion of variance in alternating was explained by the other variables. Again, findings suggest that, at least within the current sample and context, alternation captures a different phenomenon than do hybridization and the BII dimensions. As we discuss further below, alternation may be more situational, and less traitlike, compared to hybridization and the BII dimensions.

Fluctuation scores and well-being

Although prior studies (e.g., Nguyen & Benet-Martínez, 2013) have examined links between biculturalism and well-being, the present study is the first to do so longitudinally, with controls for earlier levels of well-being so as to permit us to assume directionality. Fluctuations in blendedness across Days 2–11 negatively predicted well-being on the final day, and fluctuations in blendedness predicted symptoms of anxiety and depression on the final day. Similar to findings reported by Schwartz et al. (2011) on fluctuations in personal identity vis-à-vis increases in anxiety and depressive symptoms, variability in identity-related processes across days appears to be destabilizing and upsetting to the person. As Erikson (1950) wrote regarding personal identity, stability and consistency in self-definitions is critical for healthy psychological functioning. The same appears to be true for biculturalism-related identity dimensions, particularly the extent to which one perceives one's cultures as capable of being integrated into a coherent whole and the extent to which one engages with both cultures within a given situation. Fluctuations in alternating were not related to well-being or to internalizing symptoms, suggesting that such fluctuations may be situationally determined and may not be perceived as bothersome. Indeed, it may be possible for some bicultural people to use alternation as a "tool" to manage potentially conflicting situations. The parallels between the current findings and those from Schwartz et al. (2011) are reassuring given that Schwartz et al. studied a sample of Dutch adolescents whereas the present study focused on Hispanic college students in Miami.

So what is biculturalism?

Given that a similar pattern of results emerged across three different analytic techniques and across three different time scales (within a single day, between adjacent days, and across a 10-day span), these results may offer important insights regarding what biculturalism (particularly bicultural identity) is and how it functions. First, for our sample of Hispanic college students, blendedness appears to be the more critical of the two BII dimensions. That is, whether or not one perceives one's cultural backgrounds as able to be integrated is a key determinant of the extent to which one will combine identifications associated with the two cultures. Stable levels of both blendedness and hybridizing are also important predictors of one's well-being. Indeed, as Schwartz et al. (2011) have found in their study of personal identity among Dutch adolescents, instability in identity components across days can be disequilibrating (i.e., associated with symptoms of anxiety and depression). Given that bicultural blending and hybridizing are identity components, the present finding is consistent with prior work. The negative end of the blendedness dimension – distance – may help explain the finding. Rudmin (2003) postulated that the distance between one's heritage and receiving cultural streams would predict difficulties with well-being. Fluctuations in this perceived distance may be even more destabilizing, because the difficulty involved in cultural adjustment is changing across days. Difficulties with biculturalism may be particularly upsetting in a bicultural context where many of one's peers are bicultural (e.g., Schwartz & Unger, 2010).

Blendedness and harmony within one's cultural identifications appear to predict a hybridized approach to bicultural identity – suggesting that beliefs and feelings about the compatibility of one's cultural identities precede the actual blending of these identities, and that interventions to promote biculturalism (e.g., Bacallao & Smokowski, 2017) should focus on helping young immigrants to view their heritage and receiving cultural backgrounds as compatible. Broadly, biculturalism appears to involve a sense of comfort with one's identity as a bicultural person, and with living within two cultural worlds. This sense of comfort feeds into a pattern of responses where one integrates one's cultural orientations into a unique cultural whole.

Of course, some settings are more facilitative of biculturalism because both cultural streams are prominent – such as Algerian and French cultures in Paris and Marseille, Hispanic and U.S. cultures in Miami and San Antonio, and Bangladeshi and British cultures in London (e.g., Schwartz & Unger, 2010). So the results that we obtained in the present study – conducted in Miami – might well have been different had the study been conducted in a more monocultural context. However, there is evidence (Smokowski & Bacallao, 2011) that BII blendedness and harmony can be facilitated through intervention – specifically by helping young people and their families to enumerate, highlight, and internalize the strengths of their cultures of origin and of the culture of the country or region in which they have settled.

As noted earlier, Erikson (1950), one of the first theorists to write extensively about identity, proposed temporal-spatial continuity as a primary component of an adaptive sense of self. Consistent with Erikson's theorizing, shifts in dimensions of biculturalism – especially blendedness and hybridization – appear to be detrimental to well-being, likely because the

extent of identity integration within the person is not stable. That is, one must experience oneself as "the same person" across days, weeks, months, and years. Large changes in one's degree of bicultural blendedness and hybridization across days may reflect a fragmented, confusing or unstable sense of self, which in turn undermine people's attempts to establish themselves as "something in particular" (Erikson, 1968). Instability across days may be especially difficult to manage, because individuals are unable to establish themselves as something in particular before their identities shift again. So, in essence, biculturalism represents not only conceptualizing one's cultural backgrounds in a way such that they can be integrated, but also maintaining the same (or a similar) mixture across time. Fluctuations in one's cultural sense of self may be similar to the concept of "reconsideration of commitment" within the personal identity literature, which refers to a sense of being unsure about – and rethinking or challenging – one's beliefs, goals, and plans (Crocetti, Rubini, & Meeus, 2008). As Crocetti et al. (2008) have reported, reconsideration of commitment is also linked with symptoms of anxiety and depression.

As we have suggested earlier in this discussion section, the alternating approach may represent a different manifestation of biculturalism than blendedness, harmony, and hybridization do. The relationship of alternating to the other biculturalism components was somewhat complex: cross-sectionally, alternating was negatively related to harmony and positively related to hybridizing – but no negative associations emerged in the cross-lagged or fluctuation models. What this pattern of results may suggest is that, at any given moment in time, individuals who feel their bicultural identities as harmonious may be unlikely to see a need to alternate between these identities. However, across time, alternating – which may be more situationally determined (e.g., changing cultural identities between public and private spheres) – does not appear to be contraindicated by a proclivity toward hybridizing, blendedness, or harmony. For Hispanic college students in Miami, the difference between school/work environments (which are likely to be English-dominant) and home environments (which are likely to be Spanish-dominant) may require bicultural alternating. Such a conclusion is bolstered by participants' living arrangements, where more than 80% of respondents resided at home with their parents or other family members.

The finding that fluctuations in alternating were not linked with mental health outcomes may represent further evidence for the situational specificity of alternation – and suggests that alternating biculturalism may not necessarily be linked with distress. Indeed, if a phenomenon is situationally specific, it should fluctuate from one day to the next. Indeed, fluctuation scores were significantly greater for alternating ($M = 0.75$, $SD = 0.40$) than for hybridizing ($M = 0.58$, $SD = 0.36$), $t(849) = 11.61$, $p < .001$, Cohen's $d = 0.40$.

Limitations and future directions

Although the present results provide some advances in the literature on biculturalism, they should be interpreted in light of some important limitations. First, the use of a college sample suggests that generalizations to non-college young adults should be drawn with caution. Because the college setting can serve as a "laboratory" for identity work (Schwartz, 2016), it is essential to examine identity-related processes in individuals who are not attending college. Second, the use of a psychology participant pool resulted in a

heavily female sample. The majority of college students are now women, largely because 71% of young women, compared with 61% of young men, enroll in higher education immediately following their high school graduation (Lopez & Gonzalez-Barrera, 2014). The social sciences are even more heavily female (American Psychological Association, 2015). Although our sample was large, the overrepresentation of women suggests that the men in our sample may not have been representative of men majoring in other fields.

Third, although conducting biculturalism-related work in Miami (and other similarly bicultural settings) is advantageous, it may not be safe to generalize the results to other types of settings. The present results should be replicated in more varied settings, both in terms of the extent of diversity and in terms of how well the diversity is accepted and celebrated, to ascertain the extent to which the results might differ based on setting characteristics. It is also worth noting that the university where the present data were collected is approximately 70% Hispanic. We do not know whether the results might have been different in a more predominantly White university, even less than 2 weeks. Different results might have emerged using shorter (several observations each day) or longer time scales (e.g., weeks or months between assessments). Another possibility would be to conduct several daily diary bursts over longer periods of time – for example, fifteen 5-day diary periods over the course of two or three years (Klimstra et al., 2016). Fifth, the MISS, used to assess hybridizing and alternating, is a new instrument not previously used in the United States. Its items vary in the extent to which they capture the process elements involved in managing cultural identities, especially in the hybridizing domain, and this should be borne in mind when interpreting the findings. It is essential to acknowledge, however, that the hybridizing and alternating subscales do not appear to be redundant with BII. Sixth, the use of only self-report surveys may have biased the results. Implicit measures, interviews, or tasks might help to alleviate self-report bias in future work.

Finally, although the present study has advanced our understanding of the *processes* through which bicultural identities may be developed, our methods do not permit us to examine the *content* of those identities. Qualitative or mixed method studies would be necessary to determine how young people are defining themselves culturally. For example, given the predominance of the “Hispanic” ethnic label among our participants, it is possible that they identified commonalities with other Hispanic people (including people from different national backgrounds). It is essential to examine the content of bicultural identities so that we understand how young people come to define themselves within specific local, national, and university contexts.

Conclusions and implications for intervention

Despite these and other limitations, the present results have helped to clarify what biculturalism is and how biculturalism dynamics operate, how its components and mechanisms interrelate, and how their fluctuations predict well-being and distress. Biculturalism appears to involve a sense of comfort with one’s multiple backgrounds and a belief that these backgrounds can be integrated – which may then give rise to an experience of flourishing within both cultures simultaneously. The extent to which these bicultural

experiences can be maintained across days then facilitates well-being and protects against symptoms of anxiety and depression.

These findings may have important implications for intervention, especially in terms of promoting a stable bicultural sense of self in young immigrants. In particular, promoting BII blendedness and harmony is critical given that (a) blendedness and harmony predicted hybridizing and (b) fluctuations in blendedness and in hybridizing predicted mental health outcomes. In an experimental study, Cheng and Lee (2013) found that asking participants to recall positive bicultural memories (e.g., feeling proud of being both Asian and American) increased BII blendedness and harmony immediately following the task. It is possible, then, that a longer-term intervention encouraging Hispanic college students to recall situations where they were happy being both Hispanic and American (e.g., receiving an individual award with family members in attendance), and facilitating more such experiences, would yield increases in the BII dimensions. Based on our results, such increases may then promote bicultural blendedness.

Additionally, encouraging BII blendedness and bicultural hybridizing across a series of days may help to decrease fluctuations in these dimensions, which may in turn facilitate well-being and prevent internalizing symptoms. It may be helpful to create groups where Hispanic college students can share experiences and encourage each other to develop positive bicultural mindsets. Further, it is clear from our results that alternating between cultural systems is not problematic and should not be discouraged.

There may also be important implications for higher education professionals such as college counselors, deans, and provosts. Thompson Jr. (2013, 2014), for example, has called for reforming higher education to be more attentive to the cognitive and emotional needs of students – for example, including more class discussion, more critical-thinking writing assignments, and less rote memorization. In a similar vein, we would call for more attention to the *cultural* needs of Hispanic students – such as opportunities to draw on their cultural heritage as part of learning assignments and group projects, culturally sensitive college counseling (e.g., providing counselors who understand the multiple cultural backgrounds in which Hispanic students are rooted), and opportunities to connect in meaningful ways with other Hispanic students on and off campus to ease the stressors involved in maintaining a sense of bicultural identity (e.g., Arana & Blanchard, 2018). It is also essential to consider the context of the college or university that students are attending – paradoxically, Zerquera and Gross (2017) found that Hispanic students at urban campuses, and at campuses with more co-ethnic faculty and students, were *more* likely to drop out before completing a bachelor's degree. Simply adding more co-ethnic students and faculty to a campus may not provide Hispanic college students with the support they need to succeed. Rather, it may be essential to facilitate meaningful and positive interactions with co-ethnic peers and professors (e.g., through ethnic organizations and other supportive groups). We hope that the present study will encourage more work exploring the ways in which Hispanic students may develop a sense of bicultural identity, how such a bicultural identity facilitates well-being over both the short and long term, and methods through which bicultural identity can be promoted in this population.

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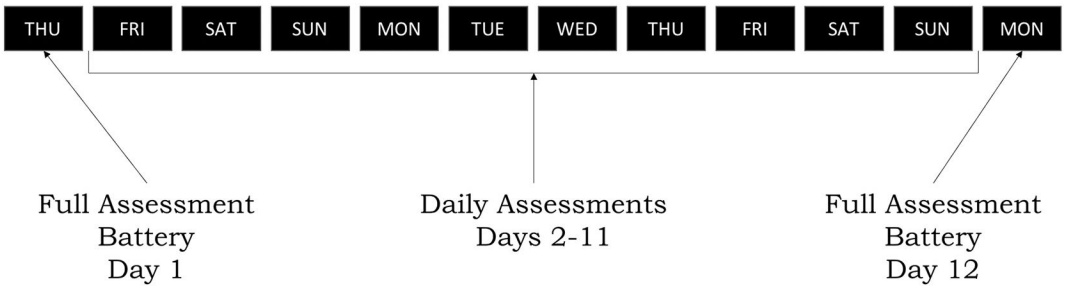

Fig. 1.
Study design.

Table 1

Definitions of biculturalism components.

Component	Definition
Bicultural Identity Integration Blendedness	Tendency to view one's multiple cultural backgrounds as *integrated* with one another
Bicultural Identity Integration Harmony	Tendency to view one's multiple cultural backgrounds as *not in conflict* with one another
Bicultural Hybridizing	Merging or mixing cultural identities, typically by choosing the most desirable elements of two or more cultures
Bicultural Alternating	Shifting cultural identities depending on the situation or context

Table 2

Demographic information.

Characteristic	Distribution
Country of Own/Familial Origin	41.0% Cuban
	13.2% Colombian
	7.5% Nicaraguan
	7.2% Venezuelan
	6.5% Dominican
	24.6% Other
Living Arrangements	83.1% With Parents or Relatives
	9.1% Off-Campus Houses/Apartments
	4.5% University Housing
	3.3% Other
Year in School	27.7% Freshmen
	14.6% Sophomores
	30.0% Juniors
	27.8% Seniors
Relationship Status	46.2% Single
	33.8% Committed Relationship
	3.5% Married
	16.5% Other

Table 3

Bivariate correlations among biculturalism and psychosocial functioning indices at baseline.*

Variable	1	2	3	4	5	6	7	8	9	10
1. BII Blendedness	–									
2. BII Harmony	0.55***	–								
3. CIS Hybridizing	0.62***	0.24***	–							
4. CIS Alternating	0.01	−0.30***	0.30***	–						
5. Self-Esteem	0.23***	0.26***	0.14***	−0.11**	–					
6. Life Satisfaction	0.17***	0.16***	0.14***	−0.06	0.55***	–				
7. Psychological Well-Being	0.33***	0.36***	0.16***	−0.17***	0.65***	0.48***	–			
8. Eudaimonic Well-Being	0.33***	0.28***	0.19***	−0.07	0.50***	0.39***	0.64***	–		
9. Depressive Symptoms	−0.11**	−0.21***	0.04	0.20***	−0.41***	−0.30***	−0.45***	−0.28***	–	
10. Anxiety Symptoms	−0.12**	−0.24***	0.02	0.19***	−0.44***	−0.36***	−0.46***	−0.27***	0.75***	–

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Table 4

Random-intercept cross-lagged panel model results.

Components	Random Intercept *r*	Cross-Lag *A → B*	Cross-Lag *B → A*
Blendedness-Harmony	0.47***	0.05*	0.06**
Blendedness-Hybridizing	0.53***	0.05**	0.00
Blendedness-Alternating	0.19***	0.01	0.01
Harmony-Hybridizing	0.45***	0.05**	0.02
Harmony-Alternating	0.17***	0.02	0.02
Hybridizing-Alternating	0.23***	0.01	0.01

* $p < 0.05$.

** $p < 0.01$.

*** $p < .001$

Table 5

Bivariate correlations and multiple regression analyses among fluctuation scores.

Predictor	Dependent variable							
	BII Blendedness		BII Harmony		CIS Hybridity		CIS Alternation	
	r	β/R^2	*r*	β/R^2	*r*	β/R^2	*r*	β/R^2
BII Blendedness	–	–	0.61***	0.47***	0.49***	0.45***	0.34***	0.10***
BII Harmony	0.61***	0.40***	–	–	0.60***	0.17***	0.34***	0.16***
CIS Hybridizing	0.49***	0.38***	0.60***	0.17***	–	–	0.37***	0.23***
CIS Alternating	0.34***	0.06*	0.34***	0.12***	0.37***	0.16***	–	–
Model R^2		0.50		0.41		0.41		0.17

* p < 0.05.

** p < 0.01.

*** p < 0.001.