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**Biculturalism and Adjustment Among U.S. Latinos: A Review of Four Decades of
Empirical Findings**

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Abstract

Incorporating both heritage (e.g., Latino) and national (e.g., American) cultural systems into our sense of self (i.e., bicultural identity) and developing the ability to successfully respond to demands associated with each of these systems (i.e., bicultural competence) have been theorized to be central to the development and positive adjustment of U.S. Latinos, a group that represents a large segment of the country's population. In this comprehensive review, we examined empirical research on biculturalism among U.S. Latinos spanning four decades (1980-2020), with a focus on synthesizing the field's understanding of antecedents and consequents associated with biculturalism and identifying directions for future research. Our review of 152 empirical articles revealed that this literature was characterized by multiple approaches to the conceptualization (i.e., dual-cultural adaptation, dual-cultural identities, bicultural identity integration, and bicultural competence) and subsequent operationalization of biculturalism. Although each conceptualization has different implications for the conclusions that can be drawn regarding an aspect or facet of biculturalism and potential influence on adjustment, a significant majority (78%) of studies, across conceptualizations, provided evidence supporting a positive association between biculturalism and Latinos' adjustment. In addition, a relatively small body of qualitative work was identified, and findings largely informed potential antecedents of biculturalism. We review this literature with attention to: the *aspects* of biculturalism that are associated with Latinos' adjustment (i.e., psychosocial and physical health), how sample characteristics may limit the generalizability of this work, and important directions for future research both in terms of conceptualization and study design.

Keywords: Adjustment; Psychosocial Health; Physical Health; Development; Latinos; Adolescents; Adults; Dual-Cultural Adaptation; Biculturalism; Bicultural Identity Integration

Biculturalism and Adjustment Among U.S. Latinos: A Review of Four Decades of Empirical Findings

“I’m bicultural, and everyone sees me as a Latina, but in my head, I see myself as both Latina and American.” — Genesis Rodriguez, Actress

The U.S. Latino population reached a record 60.6 million in 2019, becoming approximately one fifth of the total population (18%) and representing the second largest ethnic-racial group, behind White non-Latinos (Pew Research Center [PRC], 2019). Notably, despite the ethno-racial diversity of the U.S. encompassing several ethnic-racial groups, the term “American” is often associated with being ethno-racially White (Devos & Banaji, 2005; Rodriguez et al., 2010). As a result, and irrespective of the long history of residence in and contributions to U.S. society that Latino groups have made, many Latinos in the U.S. continue to feel like perpetual foreigners (Huynh et al., 2011) and to be treated as such (Sue et al., 2007).

Yet, as the quote at the opening of this article demonstrates, for many Latinos in the U.S., our identity involves incorporating both heritage (e.g., Latino) and national (e.g., American) cultural systems into our sense of self (i.e., bicultural identity). Furthermore, developing the ability to successfully respond to demands associated with each of these systems (i.e., bicultural competence) is central to the development and positive adjustment of many Latinos in the U.S. (Bacallao & Smokowski, 2009; Padilla, 2006). Biculturalism, including the development of bicultural identities and competencies, has been theorized to be positively linked to adjustment for those exposed to two cultures (e.g., LaFromboise et al., 1993; Sam & Berry, 2006). The link between biculturalism and adjustment, however, may depend on the contexts in which

individuals are embedded and the cultural systems that they are negotiating (Schwartz & Unger, 2010; Ward, & Geeraert, 2016). Furthermore, some components of biculturalism may be associated with certain indicators of adjustment but not others (Cheng et al., 2014). Indeed, a prior meta-analysis including empirical articles published through 2008 that focused on biculturalism among diverse populations revealed that the magnitude of the positive association between biculturalism and adjustment varied by country (e.g., U.S. vs. other countries), ethnic-racial group (e.g., Latinos vs. Blacks), indicator of adjustment (e.g., psychosocial health vs. physical health), and operationalization of biculturalism (e.g., summative vs. difference scores; Nguyen & Benet-Martínez, 2013). These findings highlight the variability and complexity of individuals' bicultural experiences and their associations with adjustment.

Given the dramatic population growth and projections indicating that Latinos will comprise approximately 25% of the U.S. population in 2045 (U.S. Census Bureau, 2019), coupled with a dramatic increase in the number of studies examining biculturalism among Latinos since the early 2000s (Padilla, 2006), a synthesis of the literature *focused exclusively on Latinos* is warranted. This is particularly important given the potential implications that biculturalism may have on adjustment, as noted above. As such, the current paper provides a comprehensive review of the empirical literature on biculturalism among U.S. Latinos to further illuminate the nuances in the association between biculturalism and adjustment with attention to variability in operationalizations, indicators of adjustment (i.e., psychosocial and physical health), and sample characteristics. We reviewed a total of 152 empirical articles that examined biculturalism among U.S. Latinos spanning the last forty years (1980-2020), and in this paper present a summary and synthesis of this work as well as offer important directions for future

research. We begin, however, with an overview of existing conceptualizations and operationalizations of biculturalism to frame our review.

Conceptualization and Assessment of Biculturalism

As previously introduced, biculturalism involves exposure to more than one cultural system and the ways in which individuals adapt to each of those systems (e.g., developing bicultural identities or bicultural competencies). Biculturalism has been conceptualized to emerge from *dual-cultural adaptation* comprising both acculturation and enculturation (Nguyen & Benet-Martínez, 2007; Sam & Berry, 2006). *Acculturation* refers to one's cultural adaptation (change or maintenance) to the host or national culture, whereas *enculturation* refers to one's cultural adaptation (change or maintenance) to the heritage or ethnic-racial culture (Gonzales et al., 2002). This conceptualization emerged largely from John Berry's (1974) seminal work on dual-cultural adaptation strategies. These strategies reflect individuals' endorsement of each cultural system based on two criteria: (a) whether the individual retains the heritage culture or identity and (b) whether the individual forms a positive relationship toward the host society. Berry's four strategies include: *separation* (i.e., endorsing the heritage culture and rejecting the host culture), *assimilation* (i.e., rejecting the heritage culture and endorsing the host culture), *marginalization* (i.e., rejecting both cultures), and *integration* (i.e., endorsing both cultures). The integration strategy reflects strongly endorsing heritage *and* host cultural domains (e.g., values, identifications, attitudes, practices, beliefs, and knowledge) or a high degree of adaptation (or orientation) to both cultures; thus, it is often used as a synonym of biculturalism (Boski, 2008, Schwartz et al., 2010).

Building on this conceptualization, we define biculturalism as a multifaceted, psychological construct that embodies the degree and form in which individuals have

internalized values, identifications, attitudes, practices, beliefs, and knowledge from two cultural systems (e.g., the heritage culture and the host culture), as well as the extent to which they have developed strategies and competencies to successfully respond to specific cultural cues and demands from each of the two cultures. This comprehensive definition draws on the work of several scholars, as described in further detail below.

First, LaFromboise et al. (1993) proposed two *biculturalism modes*, such that individuals either (a) fuse the two cultural systems together and form a new one, or (b) keep the two cultural systems separate and alter their behavior to fit contextual demands. Further, they postulated that individuals alternating between cultural systems rely on *bicultural competence* in six domains across the two systems: (a) knowledge of cultural beliefs and values, (b) positive attitudes toward both cultural systems, (c) bicultural efficacy or the belief that one can function effectively in both systems, (d) communication ability, (e) culturally situated role repertoire, and (f) sense of being grounded via social networks. Second, Hong et al. (2000) conceptualized cultural systems as internalized networks of domain-specific knowledge frameworks that guide cognition when they are most accessible to individuals, and introduced *frame switching* as the cognitive-behavioral ability enabling bicultural individuals to shift between cultural frameworks in response to social cues and demands. Third, Benet-Martínez et al. (2002) advanced the theoretical framework of *bicultural identity integration* (BII) to understand variations in how individuals affectively and cognitively organize their bicultural identities. BII refers to the extent to which bicultural individuals perceive their two cultural identities as compatible and integrated versus oppositional and fragmented. Fourth, Tadmor and Tedlok (2006) proposed *integrative complexity*, or the capacity to consider and combine multiple perspectives, as an important cognitive ability demonstrated by bicultural individuals. Last, Basilio et al. (2014) defined biculturalism as a

psychological construct that embodies the degree to which individuals have internalized features from two cultural systems and can respond functionally to cultural cues from both. Although each of these conceptualizations were grounded in Berry's integration strategy (some more explicitly than others), they each expanded our conceptualization of biculturalism in the ways noted above.

Operationalization and Assessment/Measurement

As is true with any psychological construct, conceptualization is critical but empirical findings purporting to expand understanding of any given construct can only be interpreted with careful attention to how the construct was operationalized (and, in turn, assessed or measured) in a given study. Not surprisingly, the complex, multifaceted nature of biculturalism as portrayed above is also reflected in its assessment. Thus, we turn now to how these conceptualizations of biculturalism have been operationalized and assessed in existing studies. As described below, operationalizations have varied based on the facet of the construct being assessed as well as the subsequent scoring methods used to classify (or rank order) individuals (Celenk & Van de Vijver, 2014). Our review identified four primary operationalization approaches (i.e., dual-cultural adaptation, dual-cultural identities, bicultural identity integration, and bicultural competence), and each was characterized by unique scoring methods (Table 1).

Dual-Cultural Adaptation

Studies following a dual-cultural adaptation operationalization tend to focus on investigating individuals' endorsement of Berry's (1974) integration strategy or simultaneous endorsement of heritage and host cultural domains (e.g., values, identifications, attitudes, practices, beliefs, and knowledge), which we refer to as *dual-cultural orientations*. This

operationalization is somewhat unique from the other three we review below because it is characterized by three different types of assessments relying on various scoring procedures. In one approach, which we refer to as *dual-cultural adaptation strategies*, researchers use separate (but not independent) subscales or response options to measure each of Berry's strategies, namely assimilation (e.g., "The holidays I celebrate are from the United States"), separation (e.g., "The holidays I celebrate are from the country my family is from"), marginalization (e.g., "The holidays I celebrate are from neither"), and integration (e.g., "The holidays I celebrate are from both; Acculturation, Habits, and Interests Multicultural Scale for Adolescents; Unger et al., 2002). Higher scores in the integration strategy, relative to the other three strategies, represent biculturalism. This approach assumes that a preference for the integration strategy is commensurate to its adoption or developing a dual-cultural orientation (Celenk & Van de Vijver, 2014; Nguyen & Benet-Martínez, 2007).

The second and third assessment approaches focus on individuals' dual-cultural orientations, rather than their preference for a specific adaptation strategy, and differ in their operationalization of cultural orientation as a *unidimensional* or *bidimensional* construct. Measures that rely on a *unidimensional* operationalization assess dual-cultural orientations with a single-dimension scale (e.g., "what is your music preference;" Acculturation Rating Scale for Mexican Americans-I; Cuellar et al., 1980) with a continuum of response options ranging from "*heritage only*" to "*heritage and host about equally*" to "*host only*," thereby creating scores that reflect high heritage cultural orientation on one end and high host cultural orientation at the other. Lower scores (i.e., high heritage culture orientation) are interpreted to reflect separation, higher scores reflect assimilation (i.e., high host culture orientation), and middle scores reflect biculturalism. Unidimensional measures interpret orientation to one culture as a lack of

orientation to the other culture and conceptualize biculturalism as a transitional step between complete endorsement of the heritage culture and complete endorsement of the host culture (Schwartz et al., 2014); this approach assumes that individuals are unable to simultaneously develop high orientations to two cultures (Celenk & Van de Vijver, 2014; Nguyen & Benet-Martínez, 2007).

In contrast, *bidimensional* measures assess dual-cultural orientations using separate subscales for the heritage (e.g., “I enjoy Spanish language TV”) and host cultures (e.g., “I enjoy English language TV;” Acculturation Rating Scale for Mexican Americans-II; Cuellar et al., 1995), with individual scale items being rated on a Likert-type scale for each subscale. This operationalization is pervasive in the literature, with 49% of all quantitative studies following a *dual-cultural adaptation bidimensional* operationalization (Table 1). Biculturalism scores are often calculated using either difference scores (i.e., scores close to zero indicate biculturalism; e.g., Martin et al., 2017) or summative scores (e.g., sum scores in which higher scores represent biculturalism; e.g., Smokowski et al., 2010) across subscales. Additionally, these scores are frequently used in conjunction with cut-points (high vs. low) that determine the “high” scores associated with individuals in the biculturalism group compared to the assimilation or separation groups. These scoring procedures may inflate measurement error, and arbitrary cut-points (e.g., median-splits) may not reflect the meaningfulness of individuals’ scores (Basilio et al., 2014). Further, this approach assumes that biculturalism is equal to the independent influences of each cultural orientation (West et al., 2017).

Dual-Cultural Identities

Studies that operationalize biculturalism using a *dual-cultural identities* approach also focus on examining individuals’ beliefs and attitudes regarding membership in the heritage and

host groups but differ from the dual-cultural adaptation operationalization by focusing explicitly on the *processes* through which those beliefs and attitudes are formed; furthermore, unlike the others, this approach is grounded largely in conceptualizations of ego identity theory (e.g., Marcia et al., 1994). The measures used with this approach typically capture individuals' efforts to learn about their heritage or host culture identity (e.g., "I have spent time trying to find out more about my Latino group, such as its history, traditions, and customs;" Multigroup Ethnic Identity Measure; MEIM; Phinney, 1992); gain clarity about the meaning of this identity (e.g., "I have a clear sense of my Latino background and what it means for me;" Revised-MEIM; Roberts et al., 1999); and express their degree of attachment, pride, and positive feelings associated with the heritage or host cultural identity (e.g., "I have a lot of pride in the United States and its accomplishments;" American Identity Measure; Schwartz et al., 2012). This approach yields separate continuous scores indicating individuals' variation in heritage and host identities, respectively. When used to assess biculturalism, scores are often derived by computing an interaction term (e.g., Moise et al., 2019) or calculating latent profiles (e.g., Meca et al., 2017). This operationalization relies on the assumption that a bicultural identity is informed by the independent influence (weighted equally) of each cultural identity. Although this operationalization considers the intersection of these two identities, it does so using a mathematical computation rather than a psychological assessment of their intersection as it is perceived by the participant. The mathematical approach to capturing this intersection may less accurately reflect the nuances and complexity with which individuals are interpreting their bicultural identity.

Bicultural Identity Integration

Studies that operationalize biculturalism using a *bicultural identity integration* approach also focus on heritage and host cultural identities but focus explicitly on measuring *individuals' perceptions* of the intersections formed between the heritage and host identities by asking participants to simultaneously think about both identities. Specifically, this approach investigates the extent to which individuals perceive their cultural identities to be integrated versus fragmented (e.g., “I keep heritage and American cultures separate,” reverse-scored) and compatible versus oppositional (e.g., “I do not feel trapped between heritage and American cultures;” Benet-Martínez & Haritatos, 2005). Studies following this operationalization have used the Bicultural Identity Integration Scale-I (Benet-Martínez & Haritatos, 2005) or the Bicultural Identity Integration Scale-II (Huynh et al., 2018). The latter is a longer, yet more reliable, scale that includes original items plus additional items tapping into cultural blendedness versus compartmentalization (e.g., “I do not blend my heritage and American cultures”) and cultural harmony versus conflict (e.g., “I find it easy to harmonize heritage and American cultures”). Two independent continuous scores for cultural blendedness and cultural harmony are derived with higher scores on each subscale indicating higher bicultural identity integration. This operationalization assumes that individuals have a clear understanding of how they organize their cultural identities and overlooks any contextual differences in individuals' perceptions of their intersecting heritage and host identities.

Bicultural Competence

The final operationalization, *bicultural competence*, focuses on individuals' perceived ability to access, integrate, and switch between cultural frames of reference across multiple domains (e.g., values, identifications, attitudes, practices, beliefs, and knowledge). Studies using this operationalization rely on measures that assess individuals' behaviors, feelings, and thoughts

about their *ability* to jointly negotiate heritage and host cultural demands (Basilio et al., 2014; David et al., 2009). Items may ask participants to report how easy or difficult certain demands are for them (e.g., “Being obligated to satisfy my family’s needs sometimes, and satisfying my own needs other times is ____;” Mexican American Biculturalism Scale; MABS; Basilio et al., 2014; e.g., “I feel like I fit in when I am with mainstream Americans as well as people from the same heritage culture as myself;” Bicultural Self-Efficacy Scale; BSES; David et al., 2009). Responses are used to produce a continuous score that reflects individuals’ bicultural competence across multiple components (e.g., facility vs. comfort, MABS; social groundedness vs. role repertoire, BSES). This operationalization assumes that anyone exposed to two cultural systems will demonstrate some degree of bicultural competence; furthermore, it overlooks differences between individuals with integrated versus compartmentalized cultural identities.

The Current Review

We identified over 150 unique studies focused on U.S. Latinos’ biculturalism, which were characterized by considerable differences in how biculturalism was conceptualized, aspects or facets of the construct that were examined, and the operationalization of biculturalism used. Below we describe our sampling approach for this review and the resulting literature that emerged. Throughout our Results and Discussion, we present descriptive high-level summaries of the characteristics of extant studies to provide a broad perspective on the landscape of this body of work. We also discuss how conceptualization, assessment, varying indicators of adjustment, and developmental and contextual factors inform the patterns that we identified in the literature and, importantly, help us begin to understand the aspects of biculturalism that may be most consequential for the adjustment of Latinos in the U.S.

Method

Our review focused on peer-reviewed empirical articles investigating biculturalism among Latinos in the U.S. The following search terms were entered in the PsycINFO database: “bicultura*” in the abstract or as a keyword AND “Latin*” OR “Hispan*” OR “Mexican*” OR “Cuban*” OR “Puerto Rican*” anywhere in the study. Mexican, Cuban, and Puerto Rican were included as search terms because these three groups are the largest Latino groups in the U.S. (U.S. Census Bureau, 2019). This search, which ultimately included anything published through November 2020, returned 388 total hits. The first author and a team of graduate students read all abstracts and full-texts (if needed) and eliminated 231 articles for the following reasons: not focused on Latinos’ biculturalism ($n = 120$; e.g., focused on bicultural stress or bicultural contexts, used the word bicultural as a descriptor like bicultural staff or bicultural clinician), not empirical ($n = 69$; e.g., review articles, program descriptions, narratives), not focused on U.S. Latinos ($n = 13$; e.g., conducted outside the U.S., focused on other ethnic-racial groups), not focused on either development or health outcomes of biculturalism ($n = 11$; e.g., focused on discrimination, marketing research focused on brand choices), used a demographic characteristic such as nativity as the only measure of biculturalism ($n = 9$), or unable to tease apart findings for Latinos ($n = 9$; e.g., ethno-racially diverse sample pooled for analyses). Three articles were omitted because they represented errata for other articles and two because they were duplicates. This resulted in 152 relevant articles.

Our primary goal was to synthesize the literature on biculturalism and adjustment among U.S. Latinos. We began by coding articles based on the conceptualization that guided the study, and within each conceptualization we identified how biculturalism was operationalized and scored (Table 1). We also coded each article according to study design (i.e., cross-sectional, longitudinal), research aims (i.e., links with adjustment, predictors of biculturalism), type of

adjustment examined (i.e., psychosocial health, physical health), and demographic characteristics (e.g., sample size, Latino heritage, nativity status, developmental period; Table 2). Finally, we coded the findings for all articles that examined links with adjustment based on whether results demonstrated: null associations; associations suggesting that greater biculturalism was related to positive outcomes, either via direct positive links or by enhancing the positive effects of other promotive factors; associations suggesting positive links between biculturalism and negative outcomes; or mixed findings (i.e., a combination of at least two of the above; Table 3).

Below, we provide a descriptive overview of the prevalence of conceptualizations and operationalizations of biculturalism that have informed our understanding of links between biculturalism and adjustment among U.S. Latinos. Further, we present a summary and synthesis of the empirical literature on antecedents and consequents of biculturalism among U.S. Latinos, focusing specifically on links between biculturalism and adjustment across different operationalizations and scoring methods, varying indicators of adjustment, and developmental and contextual factors. Finally, we close with a discussion of directions for future research.

Results and Discussion

The 152 studies included in this review were characterized primarily by quantitative designs ($n = 136$), with 109 examining links with adjustment ($n = 106$ quantitative, $n = 3$ qualitative). Qualitative studies tended to focus more on antecedents of biculturalism, whereas quantitative studies focused more on links between biculturalism and adjustment (Table 2). Generally, our review revealed a significant empirical base from which to conclude that a robust positive association exists between biculturalism and multiple indicators of Latinos' positive adjustment. Indeed, most studies (78%) provided some evidence for the positive link of biculturalism with psychosocial and physical health among U.S. Latinos. However, as described

below, we observed variability in these associations based on the operationalization of the construct and the indicator of adjustment examined.

Biculturalism and Adjustment with a Dual-Cultural Adaptation Approach

Bidimensional Assessment

Consistent with recommendations to assess heritage and host cultural orientations separately (e.g., Celenk & Van de Vijver, 2014; Nguyen & Benet-Martínez, 2007), we found the *bidimensional* approach to be the most widely adopted dual-cultural adaptation operationalization. Of the 67 studies using this approach, 53 examined links with adjustment and a significant majority of these (77%) provided support for the positive link between biculturalism and adjustment across the multiple scoring procedures (Table 3). This work indicated that high biculturalism, operationalized by independent and simultaneously higher or similar endorsement of heritage and host cultural orientations, was associated with a range of indicators of psychosocial health including lower anxiety (e.g., Rivera-Sinclair, 1997) and alienation (e.g., Suarez et al., 1997), higher self-worth (e.g., Kapke et al., 2017), and better academic performance (e.g., Buriel et al., 1998). Additionally, biculturalism was linked to a range of indicators of physical health including better sleep (e.g., Zeiders et al., 2017), more adaptive cortisol stress response (e.g., Gonzales et al., 2018), and greater engagement in health-promotive behaviors (e.g., using sunscreen; Heckman & Cohen-Filipie, 2012).

Turning to the different scoring methods used within this approach, the interpretation of scores varied across studies based on the computations used to derive biculturalism scores from the heritage and host orientation subscales (i.e., difference vs. summative computations; Table 1). Of studies examining links to adjustment, 38 relied on biculturalism scores that reflected a higher endorsement of both cultures (did not use difference scores) and 15 relied on

biculturalism scores, closer to 0, that reflected an equal endorsement of heritage and host cultures (difference scores). Our review indicated that positive associations between biculturalism and better adjustment emerged across both methods, although a relatively higher number of promotive findings were reported for studies that did not use difference scores (i.e., 31 out of 38 vs. 10 out of 15). A notable difference of the scoring methods is that the use of a difference score characterizes as “high” biculturalism a value that is close to zero, but one can achieve a score of zero with scores reflecting simultaneously low endorsement of both cultural orientations; in contrast, with a summative scoring method, “high” biculturalism is determined by strong simultaneous endorsement of both heritage and host cultures. Thus, findings from the work using difference scores suggest that there is benefit associated with developing a *balanced* orientation in which Latinos endorse both cultures to a similar degree. It is possible that irrespective of one’s degree of endorsement, balanced orientations are associated with positive adjustment because they are likely to involve less conflict across heritage and host orientations. The fact that findings from the summative score approaches more consistently returned positive links with adjustment suggests that perhaps the *ideal balance* of orientations is one in which individuals are simultaneously developing strong heritage and host cultural orientations.

Taking a look at the use of categorical versus continuous scoring methods, 66% of studies relied on a scoring method that placed participants into categories, and the remainder used a continuous scoring method. Positive associations between biculturalism and adjustment emerged uniformly across these scoring methods, although a relatively higher number of mixed findings were reported in studies using categorical scoring procedures (i.e., 14 out of 35 studies using a categorical scoring approach had mixed findings, relative to 2 out of 18 studies that used a continuous scoring approach). Perhaps inconsistent findings are due to the limitations of relying

on cut-off scores (e.g., median splits) that may inflate measurement error and less accurately reflect individuals' experiences, as argued by Basilio et al. (2014).

Moving beyond scoring methods and considering the varied indicators of adjustment that were examined, our review indicated that a majority of studies found positive associations with biculturalism for both physical (68%) and psychosocial (74%) indicators of health. Moreover, only a few negative associations were found ($n = 9$), and these emerged mostly when examining the links between biculturalism and physical health (i.e., 7 out of 22) rather than when examining psychosocial health (i.e., 2 out of 35). Further, across the nine studies reporting negative associations, five were categorized as “mixed findings” because within the same sample they also found positive associations between biculturalism and health. Perhaps biculturalism may simultaneously promote some indicators of adjustment and inhibit others. For example, biculturalism was associated with more marital conflict in some domains (e.g., conflict about relatives and in-laws) but less conflict in other domains (e.g., conflict about money; Flores et al., 2004), and was concurrently linked to poor (e.g., higher sodium intake) and promotive health-related behaviors (e.g., higher bean consumption and less cigarette smoking; Winham et al., 2018). Furthermore, different profiles of biculturalism were found to be positively associated with some alcohol-related risk behaviors and negatively linked with others (e.g., frequency of drunk driving; Des Rosiers et al., 2013). It is possible that the variability found within Latinos' bicultural experiences influences the association between biculturalism and different indicators of physical and psychosocial health.

Notably, only two studies (e.g., Caetano et al., 2008) found that higher biculturalism was *exclusively* related to greater maladjustment (i.e., no promotive or null findings emerged), and these studies focused on substance use. Other studies reported positive (Winham et al., 2018),

mixed (e.g., Pham & Lui, 2019), or null (Unger et al., 2009) findings when substance use was examined as an outcome. The small number of studies that examined substance use ($n = 6$) limits the ability to draw clear conclusions but findings suggest that understanding the links between biculturalism and Latinos' substance use is an important direction for future research, and that this indicator of adjustment may reflect a key potential negative outcome of biculturalism. Notably, biculturalism emerges within a transactional cultural system in which individuals interact with and respond to heritage and host cultural affordances and demands (Garcia Coll et al., 1996), and this system may promote some indicators of adjustment but may undermine or fail to promote others (White et al., 2018). It is important to consider, therefore, that the benefits of biculturalism may not extend to all indicators of physical health.

Looking specifically at the indicators of physical health, we observed that 18 studies focused on health-promotive behaviors (e.g., healthy diet; Soto et al., 2019) and 6 on perceptions of health (e.g., quality of physical functioning; Thoman & Surís, 2004). Additionally, most studies (i.e., 5 out of 6) examining health perceptions documented positive associations with biculturalism (e.g., Hasnain et al., 2013; Heckman & Cohen-Filipie, 2012). In contrast, our review revealed inconsistent findings across the most examined health-promotive behaviors. For instance, all studies focused on medical visits or treatment adherence ($n = 3$) documented a positive association with biculturalism (e.g., Bermúdez-Parsai et al., 2012). Conversely, as noted above, we observed inconsistencies in studies examining substance use and a similar pattern emerged for studies focused on eating behaviors and/or physical activity ($n = 7$). Indeed, these seven studies reported positive (e.g., Martin et al., 2017), mixed (e.g., Winham et al., 2018), negative (Perez et al., 2017), and null (Carvajal et al., 2002) findings. Given that biculturalism involves multiple cultural domains (e.g., values, identifications, attitudes, practices, beliefs, and

knowledge), it is possible that some domains are more consequential to Latinos' physical health-related behaviors and others to their perceptions. It may be important, therefore, to examine whether the endorsement of unique domains across heritage and host cultures qualifies the link of biculturalism with specific indicators of physical health.

Regarding indicators of psychosocial health, we observed that 22 studies focused on indicators of psychosocial adjustment (e.g., well-being) and 19 on indicators of psychosocial maladjustment (e.g., internalizing symptoms). We noted that commonly examined indicators of psychosocial *adjustment* included well-being ($n = 8$; e.g., self-esteem; Smokowski et al., 2010), academic and social outcomes ($n = 7$; e.g., GPA; López et al., 2002), and family processes and functioning ($n = 5$; e.g., family cohesion; Unger et al., 2009). Further, our review indicated that positive associations between biculturalism and psychosocial adjustment emerged consistently across studies (i.e., 19 out of 22) with only a few studies ($n = 6$) documenting either null (e.g., Birman, 1998) or mixed results (e.g., Wong & Quintana, 1987). These findings suggest that the development of heritage and host cultural orientations is an important correlate of Latinos' positive psychosocial health.

Additionally, the most examined indicator of psychosocial *maladjustment* was internalizing symptoms, emerging in 16 of the 19 studies. Among the 16 studies focusing on internalizing symptoms, 8 reported null findings (e.g., González et al., 2001) and 8 documented that higher biculturalism was associated with lower maladjustment (e.g., lower depressive symptoms; Bulut & Gayman, 2020). Upon closer examination, we observed a pattern of differences in sample characteristics such that studies finding a negative association only included participants from the largest U.S. Latino groups (i.e., Mexicans, Puerto Ricans, and Cubans) and were characterized by variability in gender composition (e.g., 7 of 8 studies

included approximately equal proportions of female and male participants, relative to 4 of 8 in studies reporting null findings). Perhaps social position variables, such as ethnicity and gender, introduce important variability into these associations. For instance, Latino groups with a smaller numerical representation, which also tend to have a more recent history of settlement in the U.S., vary in whether they live in communities where social support and other resources specific to their Latino heritage group abound (e.g., Umaña-Taylor & Bámaca, 2004); this variability could lead to differences in whether and how biculturalism is associated with psychological adjustment.

Although most studies examined links with adjustment, seven studies within this bidimensional assessment approach focused on the development and antecedents of biculturalism. Findings from these studies were consistent with theoretical notions suggesting that cultural affordances and demands contribute to the development of biculturalism (e.g., Motti-Stefanidi et al., 2012; Tadmor & Tetlok, 2006). For instance, affordances such as spending time in heritage and host countries (e.g., Matsunaga et al., 2010; Schwartz & Zamboanga, 2008) and having access to support networks (Rivera-Sinclair, 1997) were associated with greater biculturalism (i.e., more balanced or stronger dual-cultural orientations) among Latino adolescents and adults. Further, exposure to demands such as needing to use both heritage and host skills (e.g., language brokering; Acoach & Webb, 2004) predicted greater biculturalism among adolescents. These findings highlight the multiple individual and contextual factors that may play a role in the development of biculturalism among Latinos and the intricacy of negotiating affordances and demands associated with heritage and host cultures (Knight et al., 2018).

With respect to demographics, this body of work largely reflected the experiences of both foreign-born and U.S.-born Latino adolescents and adults, although approximately 21% of studies did not indicate the nativity status of participants (Table 2). This is a significant limitation, given the strong correlation between acculturation/enculturation processes and generational or nativity status (Safa et al., 2020b). Nevertheless, among studies that reported nativity status, no distinct patterns emerged in the links to adjustment based on this demographic characteristic. Turning to geographical context, 63% of these studies were conducted in contexts with long histories of a Latino presence (i.e., Arizona, California, Florida, Texas, and New York) highlighting that our knowledge of biculturalism and adjustment is informed largely from studying those who are embedded in established immigrant communities across the U.S. where opportunities to engage in activities that nurture both heritage and host cultures are more readily available. Within these U.S. contexts, Latinos may experience affordances such as access to public channels in Spanish, to Latino owned businesses, and to Latino communities.

Unidimensional Assessment

The second most common operationalization found in this literature was the unidimensional approach ($n = 38$), in which dual-cultural orientations were measured on a single scale with middle scores representing biculturalism. Among the 31 studies that examined links with adjustment, 24 (77%) found a positive link between biculturalism and better adjustment (Table 3). With the *dual-cultural adaptation – unidimensional* approach, biculturalism scores reflect an equal endorsement of heritage and host cultures. Thus, to some extent these findings supplement work on the bidimensional approach relying on difference scores (scores closer to 0 represent biculturalism) and suggest that Latinos who hold a balanced orientation, in which both heritage and host cultures are equally endorsed, are better adjusted. A notable difference of these

approaches is that the unidimensional approach assesses the extent to which individuals hold an equal endorsement of the two cultures using one scale. Conversely, the bidimensional approach assesses the extent to which individuals (separately) endorse each culture using two subscales and derives a biculturalism score by subtracting subscales scores. Among studies relying on a unidimensional assessment, being classified as bicultural or scoring higher (i.e., toward the middle) on a continuous measure was associated with better psychosocial health, such as reporting lower anxiety (e.g., De Mendoza et al., 2016), a more positive self-concept (e.g., De Domanico et al., 1994), and improved physical health (e.g., being better equipped to access health resources, Harmon et al., 1996; reporting better health, Kimbro et al., 2012).

We now turn to the different scoring methods used within this approach. First, relying on a categorical versus continuous scoring approach did not appear to introduce variability into the patterns that emerged. However, the interpretation of scores varied across studies where biculturalism scores (i.e., middle scores) were parsed from non-biculturalism scores (e.g., lower and higher scores) by categorizing participants with middle scores into the biculturalism group or by creating a continuous variable in which middle scores were recoded to represent higher values (Table 1). Among studies examining links to adjustment, most (i.e., 24 out of 31) either categorized participants in the biculturalism group or recoded middle scores into higher scores. Most of these studies (i.e., 19 of 24) documented positive associations between biculturalism and adjustment. Seven studies relied on continuous scores in which middle scores represented biculturalism, and most of these ($n = 5$) provided additional information to contextualize their findings. Specifically, studies highlighted that sample mean scores reflected greater biculturalism, or were closer to middle scores (e.g., Arnold & Orozco, 1989; Castillo et al., 2008), used participants' narratives to supplement quantitative findings (Laganá, 2003), or only

counted responses to scale items in which participants chose middle scores (Torres & Rollock, 2009). Notably, all studies that provided additional information on biculturalism scores documented positive associations between higher biculturalism and better adjustment. In contrast, the two studies for which biculturalism scores could not be distinguished from higher or lower scores and provided no supplementary information reported null associations between biculturalism and adjustment. These findings exemplify the importance of specificity regarding ways in which biculturalism scores are calculated and the interpretations that can be derived from different scoring methods.

Moving beyond scoring methods and considering the varied indicators of adjustment that were examined, our review indicated that positive associations between biculturalism and adjustment emerged relatively uniformly across studies focusing on physical health (i.e., 9 out of 11) and psychosocial health (i.e., 15 out of 21). Looking specifically at the indicators of physical health, we observed that seven studies focused on health-promotive behaviors (e.g., healthy diet; Wilson et al., 2018) and seven focused on perceptions of health (e.g., pregnancy beliefs; Laganá, 2003). Further, our review revealed a robust positive link of biculturalism with Latinos' health-promotive behaviors (i.e., 6 out of 7) and perceptions (i.e., 6 out of 7) with only a few studies ($n = 4$) documenting mixed findings (e.g., Shaull & Gramann, 1998). Of studies reporting mixed findings, the only two that found biculturalism to be linked to greater risk focused on sex perceptions (Contreras et al., 1996) and behaviors (Fraser et al., 1998). Because no other study focused on this domain of health, an important future direction will be to examine whether these findings replicate and, in fact, whether biculturalism (when measured as a balanced orientation) may be a risk factor for sex-related perceptions and behaviors.

Regarding indicators of psychosocial health, we observed that 15 studies focused on indicators of psychosocial adjustment (e.g., well-being) and 10 on indicators of psychosocial maladjustment (e.g., internalizing symptoms). We noted that commonly examined indicators of psychosocial *adjustment* included academic and social outcomes ($n = 6$; e.g., GPA; Fernandez-Barillas & Morrison, 1984), well-being ($n = 4$; e.g., self-esteem; Torres & Rollock, 2009), and family processes and functioning ($n = 3$; e.g., family cohesion; Miranda et al., 2000). Further, our review indicated that positive associations between biculturalism and psychosocial adjustment emerged across the majority of studies (i.e., 10 out of 15); however, several studies ($n = 8$) documented either null (e.g., Birman, 1998) or mixed findings (e.g., Wong & Quintana, 1987). It may be important, therefore, to examine whether Latinos' equal endorsement of specific cultural domains such as heritage and host values, identifications, attitudes, practices, beliefs, or knowledge may qualify the association between biculturalism and positive psychosocial health.

Moreover, the most examined indicator of psychosocial *maladjustment* was internalizing symptoms, emerging in 6 of the 10 studies. Among the 6 studies focusing on internalizing symptoms, most studies (i.e., 5 out of 6) provided evidence that higher biculturalism was associated with lower internalizing symptoms (e.g., lower depression; Miranda & Umhoefer, 1998). Perhaps a balanced orientation affords Latinos improved mental health by reducing conflict across demands associated with heritage and host orientations. Given the more consistent pattern between biculturalism and internalizing symptoms observed in the unidimensional approach (i.e., 1 null and 5 promotive findings) compared to the bidimensional approach (i.e., 8 null and 8 promotive findings), it is important to consider that some of the inconsistent findings may be due to increases in measurement error associated with scoring

procedures that are unique to the bidimensional approach (e.g., adding or subtracting heritage and host orientation subscales to derive biculturalism scores).

Within the unidimensional approach, eight studies focused on predictors of biculturalism. These studies predominantly examined the extent to which generational status or time lived in the U.S. related to the development of a balanced dual-cultural orientation. Findings revealed that both of these factors informed Latinos' dual-cultural orientations such that adolescents and adults who had spent more time or had been more exposed to heritage and host cultures tended to have more balanced dual-cultural orientations (e.g., Chiriboga, 2004; Nieri et al., 2011). Additionally, one study documented a link between contextual factors (i.e., places of language brokering) and the development of adolescents' biculturalism (Love & Buriel, 2007). These findings lend further support to the notion that examining degree of exposure to heritage and host cultures across different contexts is critical for understanding the development of biculturalism (e.g., Ward, & Geeraert, 2016).

Regarding demographics, this body of work largely captured the experiences of Latino adolescents and adults. Although 39% of studies did not specify the nativity status of participants, this work tended to focus on U.S.-born Latinos (Table 2). Further, 66% of these studies were conducted in states characterized as having a significant Latino presence over the course of the nation's history (i.e., Arizona, California, Florida, Texas, and New York), again suggesting that what we know about antecedents and consequents of biculturalism is based mostly on Latinos who are embedded in established immigrant communities where biculturalism is theorized to more easily emerge and to be most beneficial (Schwartz & Unger, 2010).

Dual-Cultural Adaptation Strategies Assessment

A small number of studies ($n = 3$) used a dual-cultural adaptation strategies approach and this work emerged only in the last five years. With this approach, separate response options were used to measure three of Berry's strategies (separation, integration, and assimilation); a higher number of responses in which participants specified *both* (e.g., "The holidays I celebrate are from both [cultures]") indicated a preference for the integration strategy relative to the other strategies, and this was coded as high biculturalism. Two of the three studies found positive associations with adjustment for those who scored high on biculturalism (Table 3). Specifically, higher biculturalism was associated with youth's healthy eating (Arandia et al., 2018) and parents' bicultural beliefs and practices (Roche et al., 2014). Mixed findings emerged, however, for all scoring approaches, and given the limited number of existing studies, it is difficult to draw conclusions regarding the utility of this operationalization for understanding correlates of biculturalism among Latinos. Notably, individuals do not hold the same degree of biculturalism across all cultural domains (e.g., values, identifications, attitudes, practices, beliefs, and knowledge) and may selectively endorse some domains versus others (Hong et al., 2003); thus, it is important to consider that by only summing responses in which participants indicated *both* to capture their level of biculturalism, this approach may have overlooked the fluidity associated with Latinos' biculturalism and may have somewhat restricted the number of participants identified as bicultural.

Summary Dual-Cultural Adaptation Approach

Taken together, findings from this extensive body of work relying on the overarching *dual-cultural adaptation* approach to study biculturalism suggest that developing strong and balanced dual-cultural orientations is an important correlate of the psychosocial (i.e., 42 out of 58; 72%) and physical (i.e., 25 out of 34; 73%) health of Latino adolescents and adults in the

U.S. This approach, however, was characterized by multiple operationalizations and scoring methods that qualified the interpretation of findings. Within this approach, some studies examined strong dual-cultural orientations ($n = 38$) whereas others investigated balanced orientations ($n = 46$). Additionally, operationalization seemed to also qualify the findings between biculturalism and some indicators of adjustment. For instance, the association between biculturalism and internalizing symptoms, the most frequently studied indicator of Latinos' psychosocial maladjustment (i.e., 22 of 29 studies), varied based on the operationalization used, such that studies relying on the bidimensional approach yielded more null findings (50%) compared to those relying on the unidimensional approach (17%). The fact that the assessment of biculturalism influenced the interpretation of findings and seemed to qualify its links with adjustment underscores the importance of clarity and specificity regarding the operationalization of biculturalism. Importantly, all studies within this approach focused on Latinos' endorsement of heritage and host cultural domains (e.g., values, identifications, attitudes, practices, beliefs, and knowledge). Overall, this work indicated that when biculturalism is assessed in a way that reflects strongly or equally endorsing both heritage and host cultural domains, links with Latinos' psychosocial and physical health emerge. This scholarship is important because the endorsement of dual-cultural orientations may serve as the basis for the development of other facets of biculturalism.

Regarding antecedents of dual-cultural orientations, this work provided support for the theoretical notion that through acculturation and enculturation processes, shaped by individual and contextual factors and characterized by affordances and demands associated with each culture (Nguyen & Benet-Martínez, 2007; Sam & Berry, 2006), Latinos come to endorse values, identifications, attitudes, practices, beliefs, and knowledge associated with each culture. Finally,

it is also worthy of note that a majority of the studies reflect the experiences of Latinos in the South or West regions of the U.S., and samples were less likely to include the experiences of Latinos in the Midwest or Northeast (with the exception of New York). Because the states most commonly included in these studies (e.g., California, Florida) represent traditional immigrant destinations, which tend to have established immigrant enclaves populated by specific Latino groups, these findings should be interpreted with attention to this demographic characteristic. Because the Latino population is growing and represents an increasingly large proportion of the population across all regions of the U.S. (U.S. Census Bureau, 2019), the field will benefit from an expansion of the Latino populations examined within specific regions.

Biculturalism and Adjustment with a Dual-Cultural Identity Approach

Turning to the *dual-cultural identity* approach, which focuses on capturing the processes through which individuals simultaneously but independently develop heritage and host *identities*, this operationalization emerged in the late 1990s and included only 8 of the 152 studies. Both continuous and categorical scoring procedures were used with this approach (Table 1). Six of the eight studies examined links with adjustment, and findings mostly supported positive associations between biculturalism and adjustment (Table 3). Specifically, when biculturalism was operationalized as independent development of heritage and host cultural identities, it was positively associated with better psychosocial and physical health including greater social competencies (e.g., leadership skills, Acevedo-Polakovich, Cousineau et al., 2014), better well-being (e.g., life satisfaction; Meca et al., 2017), and improved sleep (Moise et al., 2019). Biculturalism was not, however, associated with academic self-perceptions (e.g., Acevedo-Polakovich, Quirk et al., 2014) or health-promotive behaviors (Moise et al., 2019). Overall, findings from this small collection of studies are consistent with theoretical work emphasizing

the benefits associated with developing a bicultural sense of self (Padilla, 2006; Phinney & Devich-Navarro, 1997) and suggest that the concurrent development of heritage and host *identities* is positively associated with Latinos' adjustment.

This focus on identity, rather than cultural orientation, observed in the dual-cultural adaptation approach is unique in its emphasis on the *processes* through which individuals incorporate their sense of group membership vis-à-vis heritage and host cultures. Thus, this work investigates how heritage and host memberships inform individuals' identity rather than the extent to which individuals have endorsed cultural domains (e.g., values, identifications, attitudes, practices, beliefs, and knowledge) associated with each culture. As such, findings suggest that Latinos' active engagement in learning about their heritage and host memberships to achieve clarity on the role that each identity plays in how they define themselves, was a correlate of positive adjustment, which aligns with conceptual notions that *engaging in the processes* of ethnic-racial (Umaña-Taylor et al., 2014) and national identity (Martinez-Fuentes et al., 2020) development promotes adjustment. Additionally, with this approach, there was no evidence of links with maladjustment, suggesting that an examination of biculturalism as it relates to the process of identity formation may be a fruitful area of further research and possible intervention given its positive associations with adjustment and no evidence of increased maladjustment. Moreover, findings from this approach underscore the importance of considering how experiences with biculturalism are central to Latinos' identity development.

This body of work did not focus on antecedents of biculturalism. With respect to demographics, this scholarship tended to reflect the experiences of Latino *adolescents* (i.e., 5 of 8 studies; Table 2), which is consistent with developmental notions highlighting the salience of identity formation during this developmental period (Umaña-Taylor et al., 2014). It is important

to consider that some aspects of biculturalism may be more salient during different developmental periods and may precede the development of more advanced forms and facets of biculturalism; thus, focusing on how Latino adolescents simultaneously form a heritage identity and a host identity may be especially important for understanding biculturalism development and its role in Latinos' adjustment. Moreover, as with prior work reviewed, these studies exclusively focused on the experiences of Latinos in U.S. regions with an established Latino presence (i.e., California, Florida, and Texas). These environments may afford Latinos relatively more opportunities to form a clear understanding of what it means to be a member of the heritage and the host culture via easier access to events or experiences reflecting both cultural orientations (e.g., Fourth of July, Cinco de Mayo; English- and Spanish-speaking businesses). Further, in these contexts, incorporating heritage and host culture memberships into one's identity may be adaptive as Latinos likely negotiate day-to-day experiences in which either heritage or host identities are relevant or in which both identities may be simultaneously salient. On the other hand, contexts in which Latinos experience limited bicultural affordances and demands may not only reduce their opportunities to become bicultural but may also attenuate any adjustment-related benefit associated with the development of a bicultural identity (Schwartz & Unger, 2010).

Biculturalism and Adjustment with a Bicultural Identity Integration Approach

The bicultural identity integration approach, which focuses on how individuals affectively and cognitively synthesize or form intersections across heritage and host identities, emerged in the late 2000s and includes only 11 of the 152 studies. This evolving approach was characterized by categorical and continuous scoring approaches, although continuous scoring was most common. Further, some studies relied on a total scale score and other studies on scores

for each subscale component, namely blendedness (i.e., degree of overlap vs. dissociation between heritage and host identities) and harmony (i.e., degree of compatibility vs. opposition between heritage and host identities; Table 1). Generally, findings from the seven studies that examined links with adjustment suggested a positive association between bicultural identity integration and Latinos' psychosocial and physical health (71% of studies; Table 3). Within the three studies that relied on an overall scale score, findings indicated that higher bicultural identity integration was associated with better psychosocial health (e.g., higher self-esteem; Schwartz et al., 2015) but was not linked to physical health (i.e., alcohol abuse; Venegas et al., 2012). Additionally, the four studies using scores for specific subscale components suggested that each component may be uniquely related to Latinos' psychosocial and physical health. For instance, an exclusive focus on blendedness indicated its positive link with greater self-perception overlap across heritage and host identities (Miramontez et al., 2008). The concurrent examination of both components revealed that higher harmony but not blendedness was associated with lower perceived stress (e.g., Cano et al., 2021) and lower cortisol levels (Yim et al., 2019). Further, daily fluctuations in blendedness were associated with increases in internalizing symptoms but were not related to changes in well-being. No links were found for daily fluctuations in harmony with well-being and internalizing symptoms (Schwartz et al., 2019).

Consistent with theoretical work highlighting the importance of focusing on individual differences in their bicultural experiences and in the ways in which individuals may seek to resolve tensions and organize their bicultural identity (Benet-Martínez & Haritatos, 2005; Phinney & Devich-Navarro, 1997), findings from this work indicated that the extent to which Latinos perceive their heritage and host cultural identities to be integrated versus fragmented is

an important correlate of their adjustment. Notably, results underscore the importance of examining different components of biculturalism and suggest that affective (e.g., harmony) versus cognitive-behavioral (e.g., blendedness) components may qualify the association between biculturalism and adjustment. Additionally, findings suggest that having a stable and highly integrated bicultural identity may be most adaptive. This growing body of work extends scholarship relying on dual-cultural adaptation and dual-cultural identity operationalizations by underscoring the significance of Latinos' efforts to synthesize and integrate across heritage and host cultural identities. Given the importance of bicultural identity integration for Latinos' adjustment, future work should continue to examine the development of dual-cultural orientations (assessed by the dual-cultural adaptation approach) and dual-cultural identities (measured by the dual-cultural identity approach) but also the ways in which individuals integrate those dual-cultural orientations and identities.

Turning to the five studies that examined the development and antecedents of biculturalism within this approach, findings indicated that both individual and contextual factors informed the extent to which Latinos integrated their heritage and host identities. For instance, adults who reported higher personal acceptance from other (non-Latino) Americans (Wiley, 2013) and adolescents who reported greater heritage and host identities (Schwartz et al., 2015) reported greater bicultural identity integration. A positive association between family adaptability and bicultural identity integration was also documented (Smokowski & Bacallao, 2009). Further, having concurrently learned English and Spanish was linked to higher blendedness above and beyond generational status in a college sample (Nguyen & Ahmappanah, 2014). These findings complement those from the dual-cultural adaption approach by

underscoring the importance of exposure to heritage and host cultures and also identifying contexts that support individuals in the integration of their heritage and host identities.

Regarding demographic characteristics, these studies included both foreign-born and U.S.-born Latinos, but samples tended to focus predominantly on one or the other. We observed no differences in patterns of findings based on the nativity of the sample; thus, bicultural identity integration appears to be an important correlate of adjustment for Latinos from first and subsequent immigrant generations. In addition, most studies focused on young adult populations (i.e., 9 of 11 studies), and 6 of these focused on college-attending young adults. Because the formation of heritage and host identities is especially salient during adolescence, it will be important to investigate the extent to which bicultural identity integration is a salient and adaptive construct during this developmental period. Finally, consistent with all other approaches, findings largely represented the experiences of Latinos living in regions of the U.S. that have had a long history of a Latino presence (i.e., Arizona, California, Florida, and New York).

Biculturalism and Adjustment with a Bicultural Competence Approach

The final approach, which emerged in this past decade, focused on bicultural competence or individuals' ability to jointly access, integrate, and switch between heritage and host cultural frames of reference. Nine studies used this operationalization, which was characterized exclusively by a continuous scoring method. Some studies relied on a total scale score and other studies used subscale scores (Table 1). Six of the nine studies examined associations with adjustment, and all found bicultural competence was positively linked to psychosocial and physical health (Table 3). Among the three studies that used an overall score, higher bicultural competence was associated with greater well-being (e.g., positive self-evaluations; Carlo et al.,

2016), higher HIV treatment adherence (Robbins et al., 2012), and lower depressive symptoms (Carrera & Wei, 2014). Among the four studies examining subscale scores, findings indicated that each component may be uniquely related to Latinos' psychosocial and physical health. For instance, higher social groundedness (i.e., sense of being grounded via social networks) but not role repertoire (i.e., heritage and host culturally situated role repertoires) was associated with lower alcohol use (Cano et al., 2020) and with lower perceived stress (Cano et al., 2021). Across all subscale components, findings revealed that higher positive attitudes toward heritage and host groups, Spanish and English communication ability, and social groundedness were associated with lower depressive symptoms. There were no links with depressive symptoms, however, for one's beliefs about functioning effectively in heritage and host cultures, knowledge of cultural beliefs and values, or role repertoire (Carrera & Wei, 2014). Last, higher bicultural facility (i.e., facility negotiating bicultural demands) but not comfort (i.e., comfort negotiating bicultural demands) was associated with decreases in externalizing symptoms. However, neither bicultural facility nor comfort were associated with internalizing symptoms (Safa et al., 2018).

Consistent with theoretical notions highlighting the benefits associated with individuals' cognitive, behavioral, and affective abilities to alternate between cultural systems (Hong et al., 2000; LaFromboise et al., 1993), findings indicated that Latinos' perceived ability to switch between heritage and host cultural demands consistently emerged as a correlate of their positive adjustment. Complementing findings from the bicultural identity integration approach, these findings underscore the importance of examining different components of biculturalism and provide additional evidence for ways in which affective (e.g., comfort) versus cognitive-behavioral (e.g., facility) components may qualify the association between biculturalism and adjustment. This nascent body of work extends scholarship relying on dual-cultural adaptation,

dual-cultural identity, and bicultural identity integration operationalizations by emphasizing the significance of Latinos' development of affective, cognitive, and behavioral competencies enabling them to *jointly negotiate* demands associated with heritage and host cultural systems. Given the importance of bicultural competence for Latinos' adjustment, future work should examine the development of dual-cultural orientations and identities (measured by the dual-cultural adaptation and dual-cultural identity approaches, respectively) and the integration of those dual-cultural orientations and identities (assessed by the bicultural identity integration approach) in conjunction with the development of competencies enabling individuals to access, organize, and negotiate those orientations and identities. Additionally, biculturalism promotion efforts would benefit from providing Latinos with tools, strategies, and opportunities to practice competencies to adaptively negotiate heritage and host demands.

Among the three studies that examined the development and antecedents of biculturalism within this approach, both individual and contextual factors informed Latinos' bicultural competence development. For instance, English language use and heritage identity development were associated with higher levels of bicultural competence whereas dual-cultural adaptation stressors (e.g., pressures to speak English or Spanish) were associated with lower levels of adolescents and adults' bicultural competence (Basilio et al., 2014). Moreover, the family context seemed to provide both early affordances (e.g., exposure to cultural values and socialization experiences) and demands (e.g., pressures associated with competing values) that informed late adolescents' development of bicultural competence (Safa et al., 2020a, 2020b). Consistent with theoretical notions (White et al., 2018), these findings illustrate that a given context may simultaneously promote and inhibit the development of biculturalism, and that

affordances and demands may at times act as promoting factors and other times as inhibiting factors.

With respect to demographic features, studies within this approach have predominantly focused on U.S.-born Latinos with only one study including approximately an equal proportion of U.S.-born and foreign-born Latino participants (Table 2). Although bicultural competence is theorized to be positively associated with adjustment for all individuals exposed to two cultures (LaFromboise et al., 1993), it will be important to further examine the extent to which the different experiences associated with being U.S.-born versus foreign-born may influence associations with adjustment. For instance, U.S.-born Latinos may concurrently develop heritage culture competencies with family members and host culture competencies with friends across U.S. contexts. On the other hand, foreign-born Latinos may develop heritage culture competencies in their country of birth and subsequently develop host culture competencies upon immigration to the U.S. The differences in timing of these experiences and in their simultaneous versus compartmentalized nature may influence the components of bicultural competence that are most adaptive for U.S.-born versus foreign-born Latinos. Of note, studies focused on adolescent ($n = 5$) and young adult ($n = 3$) samples suggest that the development of bicultural competencies may be especially salient and adaptive during these two developmental periods. Finally, consistent with all other approaches, results largely represent the experiences of Latinos living in regions of the U.S. that have had a long history of a Latino presence (i.e., Arizona, Florida, and New York). Thus, the extent to which bicultural competence emerges and is a correlate of adjustment for Latinos residing in regions with scarce bicultural affordances and demands remains an important area for future research.

Biculturalism and Adjustment: Insights from Qualitative Studies

The qualitative studies that emerged in this review focused on capturing the complexity, depth, and variability associated with individuals' biculturalism including dual-cultural orientations and identities, and bicultural strategies and competencies. Among the 152 studies, 16 relied exclusively on qualitative assessments of biculturalism. Three of these examined associations with adjustment, and all suggested positive links between biculturalism and Latinos' academic success. For instance, Latinas reflected on the extent to which balancing conflict between and within heritage and host cultures across different contexts and communities, integrating and synthesizing across cultures, and developing bicultural competence (e.g., switching between Spanish and English; alternating between heritage and host attitudes, practices, and values) had helped them to perform well in college (Bernal, 2001). Additionally, Latinos who chose a bicultural label to describe their identity expressed more fluidity about their exposure and endorsement of heritage and host cultures and demonstrated greater academic achievement in high school (Zarate et al., 2005). Last, those who developed and maintained a bicultural support system involving members from heritage and host cultures reported performing better academically in a nursing program (Taxis, 2006). Together with the quantitative work, these findings suggest that biculturalism is especially adaptive when Latinos learn to balance and create intersections across heritage and host orientations and to develop competencies to respond to bicultural demands.

Unlike the quantitative approaches, most qualitative studies (i.e., 13 of 16 studies) focused on the development and antecedents of biculturalism. Findings highlighted the importance of supportive contexts that value the development of biculturalism and afford Latinos opportunities for biculturalism to emerge. Furthermore, findings suggested that biculturalism is perceived as a collective experience (e.g., Jones et al., 1999; Weisman, 2001). For instance,

within the family, parents may teach children about the heritage culture and parents may learn through children about the host culture. Thus, the development of biculturalism is embedded within family dynamics and practices (e.g., Parra-Cardona et al., 2016, 2018; Perreira et al., 2006). Similarly, supportive spouses and extended family networks may help adults to develop and maintain bicultural families (Vasquez, 2014). Outside the family, educational institutions have played an important role through teaching policies such as bilingual education and by fostering supportive environments among students and staff (e.g., Newcomer, 2019). Across contexts, meeting demands associated with a specific culture sets into motion Latinos' endorsement and integration of cultural domains from both heritage and host cultures and consequently the development of competencies to respond to those demands, such as needing to speak Spanish at church and English at school (e.g., Bacallao & Smokowski, 2009; Ceballos, 2012). Importantly, changes in contexts and life circumstances may prompt reformulation of one's bicultural identity and experience over one's lifespan (Torres et al., 2012). Findings from these qualitative studies aligned with theory suggesting that individual and contextual factors shape bicultural affordances and demands, which inform the development of biculturalism (e.g., Garcia Coll et al., 1996; Motti-Stefanidi et al., 2012).

Notably, and consistent with the method, this body of work relied on smaller samples (mean sample size = 32.9), and its in-depth method illustrated the diversity of Latinos' experiences with biculturalism. For instance, evidence of blended versus compartmentalized bicultural identities and of alternating between identities and orientations across contexts emerged from individuals' narratives and collages (e.g., Comello & Kelly, 2012; Phinney & Devich-Navarro, 1997). Moreover, Latinos' diverse experiences learning English and Spanish were captured, and bilingualism emerged as an important domain of biculturalism across those

studies (i.e., 9 of 13 studies). These findings underscore the importance of methodological diversity to the study of biculturalism to capture the variability within the Latino population and the extent to which this variability informs antecedents and consequents of biculturalism.

Regarding demographics, although 31% of studies did not indicate the nativity status of participants, this work tended to consist of samples that were predominantly foreign-born or U.S.-born. Furthermore, findings reflected the experiences of adolescent (i.e., 6 of 16 studies) or adult (i.e., 7 of 16 studies) populations. Finally, consistent with all prior work reviewed, most studies focused on Latinos living in regions of the U.S. that have had a long history of a Latino presence (i.e., Arizona, California, and Texas). Given that a unique strength of qualitative studies is capturing the complexity, depth, and variability within a population, the field would benefit from more qualitative studies focused on Latinos from other age groups and living in new immigrant destinations of the U.S.

Longitudinal Trajectories of Biculturalism

We now turn our attention to the few studies ($n = 4$) that emerged in which biculturalism was examined longitudinally. Although one study (i.e., Szabo et al., 2020) assessed biculturalism over time, analyses were limited to testing psychometric properties of the BIIS-2 scale (e.g., longitudinal measurement invariance), thus providing limited insights on developmental trajectories or change over time. The remaining three studies each focused on a distinct developmental period (i.e., early adolescence, middle adolescence, and college-attending young adults) and emerged across the different conceptualizations and operationalizations of biculturalism. Generally, findings from these studies provide no evidence of age-graded developmental trajectories of biculturalism, but suggest that significant variability may exist in profiles of dual-cultural orientations and in individuals' mean levels of bicultural identity

integration; furthermore, findings point to components of bicultural identity integration reflecting a dynamic process over time.

In terms of developmental trajectories, Matsunaga et al. (2010) identified four profiles of dual-cultural orientations among a sample of U.S. Mexican-origin adolescents. They followed their sample for 18 months during early adolescence and findings from latent transition analyses indicated that a majority of the youth stayed in the same profile over the course of the study – suggesting a high degree of stability in biculturalism profiles during early adolescence. Similar findings emerged in a study examining latent growth trajectories of bicultural identity integration across a two-and-a-half-year period, during middle adolescence, among recently arrived (i.e., within 5 years) U.S. Latino youth (Schwartz et al., 2015). These studies focused on different developmental periods (i.e., early vs. middle adolescence), different facets of biculturalism (i.e., dual-cultural orientations vs. bicultural identity integration), and represent only two convenience samples, making it impossible to draw conclusions regarding developmental trajectories. Thus, future work should examine whether these findings replicate and if perhaps changes in biculturalism during early and middle adolescence are more context-dependent rather than following trends of age-graded change. For example, recently immigrated youth negotiate multiple demands upon their arrival to the host country (Bacallao & Smokowski, 2009), and this adaptation to lifestyle and behaviors of the host culture may introduce significant variability into these trajectories as a function of immigration status.

In the third study, a sample of U.S. Latino college students was followed over a 12-day period, with assessments once per day, and findings highlighted the dynamic nature of blendedness and harmony informing young adults' bicultural identity integration (Schwartz et al., 2019). Data from this daily diary study demonstrated that within person fluctuations in

blendedness significantly predicted subsequent fluctuations in harmony, and vice versa – thus suggesting a dynamic interplay among components of bicultural identity integration. These findings may hint at a cascade effect whereby the development of one of the components may promote the development of other components of biculturalism during young adulthood. However, given the short-term nature of the study, few insights are provided about developmental trajectories of these components of biculturalism across this developmental period. Further, no insights can be drawn on whether a similar sequential developmental progression may be present during adolescence and both of these point to important directions for future research.

Together, these findings suggest that biculturalism may be a day-to-day dynamic process, and that the degree and form in which Latinos endorse and organize their heritage and host orientations and identities may remain largely stable during the early and middle adolescent years. However, further research is needed to determine whether these findings replicate with other samples and to identify processes that set into motion the development of biculturalism (Safa et al., 2020a, 2020b). It is possible that developmental changes in biculturalism begin to emerge at later developmental periods, such as during late adolescence when individuals are making educational and/or work transitions, or in specific contexts in which their ability to simultaneously negotiate bicultural demands becomes particularly consequential for their adaptation and adjustment. We know almost nothing about the *developmental* trajectories of biculturalism among U.S. Latinos; thus, this is perhaps one of the most important avenues for future research in this area.

Conclusions and Direction for Future Research

Taken together, our findings provide robust evidence for biculturalism as an important correlate of the psychosocial and physical health of Latinos in the U.S. Out of 109 studies examining links with adjustment, a significant majority (78%) provided evidence supporting a positive association between biculturalism and adjustment, regardless of conceptualization and operationalization of the construct. By including multiple approaches to the study of biculturalism (i.e., dual-cultural adaptation, dual-cultural identities, bicultural identity integration, bicultural competence) and diverse study designs (i.e., quantitative, qualitative), this comprehensive review captured the variability in the degree and form in which Latinos internalize heritage and host cultural systems and in the extent to which they develop strategies and competencies to successfully respond to specific cultural cues and demands from each of the two cultures.

Our review suggested that multiple aspects of biculturalism can contribute to Latinos' positive adjustment. Thus, it highlighted the importance of focusing on different facets of the construct to gain a more comprehensive understanding of the role of biculturalism in Latinos' psychosocial and physical health. Most of the studies reviewed, however, relied on the dual-cultural adaptation approach compared to the other approaches. Findings from the studies that did not rely on this approach tended to suggest that biculturalism is most adaptive when Latinos not only develop orientations to the heritage and host cultures (assessed by the dual-cultural adaptation approach) but also achieve clarity regarding memberships in those cultural systems (measured by the dual-cultural identity approach) and develop strategies (assessed by the bicultural identity integration approach) and competencies (measured by the bicultural competence approach) to integrate and negotiate across heritage and host cultural frames of reference. The dual-cultural adaptation approach assesses the degree to which Latinos have

endorsed domains associated with heritage and host cultures; however, this approach does not capture the form (e.g., blended or compartmentalized) in which this internalization has occurred or the competencies they have developed to match demands arising from these cultural frameworks (e.g., facility in competing with teammates and cooperating with siblings). Hence, an important future direction will be to expand research beyond a focus on the dual-cultural adaptation approach and toward other facets of biculturalism, such as bicultural identity integration and bicultural competence. An increased focus on these approaches can provide a more nuanced understanding of the aspects of biculturalism that may be especially adaptive for Latinos' adjustment.

Notably the various operationalizations reviewed not only vary on the facet of the construct studied but were characterized by diverse scoring methods that influence the interpretation of findings in a given study. For instance, within the dual-cultural adaptation approach, biculturalism could either be operationalized as a balanced endorsement of heritage and host cultures or as strong endorsement of both cultures. If operationalized as a balanced endorsement, findings that show a positive biculturalism-adjustment link mean that Latinos who demonstrate a relatively equal endorsement of both cultures (including lower and higher endorsements) are better adjusted; in contrast, if operationalized as a strong endorsement, positive biculturalism-adjustment findings indicate that individuals who hold stronger (but not necessarily equal) endorsement of both cultures are better adjusted. These nuances are critical for the conclusions that are ultimately drawn from this work and without attention to this level of specificity vis-à-vis Latinos' degree and form of endorsement, it is not possible to disentangle whether their extent of endorsement or their sense of balance across cultures is most consequential for their positive adjustment. As such, scholars should carefully consider this

conceptual and operationalization specificity to appropriately characterize the facet of biculturalism that is being studied and take this into consideration when interpreting findings and drawing conclusions regarding biculturalism.

Other than carefully assessing multiple aspects of the construct, our review highlighted the importance of specifying and expanding the demographic characteristics of the samples studied to capture meaningful variability within the Latino population. First, the developmental periods examined were limited to adolescents and adults (i.e., 149 of 152 studies). We know little about biculturalism in earlier developmental periods. Considering that the relative promoting or undermining effect of a given competency may vary across developmental time (White et al., 2018) and that early processes may promote or undermine the development of later competencies (Masten et al., 1995), an important direction for future research is to investigate antecedents and consequents of biculturalism during childhood. Further, we found only four studies that examined developmental trajectories of biculturalism (Matsunaga et al., 2010; Schwartz et al., 2015) or how biculturalism fluctuates across time and contexts (i.e., daily assessments, Schwartz et al., 2019; Szabo et al., 2020). The field will benefit from longitudinal investigations to uncover the fluid and dynamic nature of biculturalism and its developmental progression across the lifespan.

In addition to our limited understanding of biculturalism across developmental periods, the literature largely reflects the experiences of Latinos in the South or West regions of the U.S., and the states most commonly included represented traditional Latino immigrant destinations that may provide numerous affordances and demands for biculturalism to emerge and be adaptive. Given that the Latino population has been increasing across all regions of the U.S. (U.S. Census Bureau, 2019), future research in this area should reflect this variability and be

more inclusive of the Latino populations examined by drawing samples from areas of the U.S. that have not traditionally had a large representation of Latinos. Moreover, the unique experiences of Central or South American Latinos were largely absent from the studies included in this review, which represents another important direction for future research given that these populations continue to grow in the U.S. (U.S. Census Bureau, 2019) and have distinct immigrant histories and varied experiences with reception into the U.S. relative to other Latino populations (Rumbaut & Portes, 2006).

Finally, we identified a small number of studies ($n = 36$; 24%) focusing on the development and antecedents of biculturalism. Most of these studies relied on cross-sectional samples ($n = 29$) and highlighted the complex interplay between individual and contextual factors informing its development. Given the relevance of biculturalism for Latinos' positive adjustment and evidence that Latinos' biculturalism can be modified with intervention (Smokowski & Bacallao, 2009; Szapocznik et al., 1986), future work should consider examining mechanisms through which Latinos develop bicultural identities and competencies over time. Additionally, it will be important for the field to identify and study supportive, proximal contexts that value the development of biculturalism and afford Latinos opportunities for biculturalism to emerge (e.g., co-ethnic communities) even when local or national policies may not.

In closing, our exclusive focus on U.S. Latinos enabled us to synthesize across a large body of literature. The inclusion of multiple approaches to the study of biculturalism illustrated some of the variability found within Latinos' experiences. This work extends theoretical (e.g., LaFromboise et al., 1993) and empirical (e.g., Nguyen & Benet-Martínez, 2013) work with diverse populations by providing evidence that biculturalism varies in its expression and is an important correlate of adjustment for Latinos. Additionally, we extend prior work by

underscoring the importance of measurement (Nguyen & Benet-Martínez, 2007, 2013) and highlighting ways in which the operationalization of biculturalism may qualify findings with adjustment. Finally, our review illustrates the numerous advances to the conceptualization and operationalization of biculturalism that scholars have made during the past four decades and draws attention to important limitations to overcome to move the field forward. As racial, ethnic, and cultural diversification continues to grow in the United States (U.S. Census Bureau, 2019) and other countries (United Nations, 2019), the study of biculturalism will continue to expand. It is our hope that this review will support advances in our understanding of antecedents and consequents of biculturalism in this future work.

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Table 1. Quantitative Assessment Details by Operationalization of Biculturalism ($n = 136$)

	Dual-Cultural Adaptation, $n = 108$			Dual-Cultural Identities, $n = 8$	Bicultural Identity Integration, $n = 11$	Bicultural Competence, $n = 9$
	Dual-Cultural Orientations (B), $n = 67$	Dual-Cultural Orientations (U), $n = 38$	Dual-Cultural Adaptation Strategies, $n = 3$			
Commonly used scales	ARSMA-II full or brief ($n = 23$) BIQ ($n = 17$) BAS ($n = 12$)	ARSMA-I ($n = 8$)	AHIMSA ($n = 2$) PANS ($n = 1$)	MEIM & AIM ($n = 3$)	BIIS-I ($n = 8$) BIIS-II ($n = 3$)	MABS ($n = 5$) BSES ($n = 3$)
Commonly used scoring methods	First, means were calculated for heritage and host orientation subscales; second, some biculturalism scores were calculated by computing a difference score ($n = 18$); scores close to zero represent higher biculturalism or by computing a summative score including sum scores ($n = 9$) or interaction terms ($n = 6$); higher scores represent higher biculturalism Continuous ($n = 19$) or categorical (i.e., cut-off scores $n = 30$, latent profiles or cluster analyses; $n = 10$) biculturalism scores used Some studies did not calculate a biculturalism score ($n = 8$)	Total scale means were calculated; middle scores represent higher biculturalism ($n = 28$) Some middle scores were recoded so higher scores represent higher biculturalism ($n = 10$) Continuous ($n = 12$) or categorical (i.e., cut-off scores; $n = 21$, latent profiles; $n = 5$) biculturalism scores used	Integration strategy subscale mean or sum was calculated; higher scores (compared to other strategies) represent higher biculturalism ($n = 3$) Continuous ($n = 2$) or categorical (i.e., latent profiles; $n = 1$) biculturalism scores used	First, means were calculated for heritage and host identity subscales; second, scores were treated as continuous by computing an interaction term ($n = 3$) or as categorical by using cut-off scores ($n = 1$) or latent profiles ($n = 2$) to derive biculturalism scores Some studies did not calculate a biculturalism score ($n = 2$)	Total scale ($n = 4$) or component (i.e., blendedness, harmony) subscales means ($n = 7$) were calculated; higher scores represent higher biculturalism Continuous ($n = 10$) or categorical (i.e., latent profiles; $n = 1$) biculturalism scores used	Total scale ($n = 6$) or component subscales (e.g., facility, comfort) means ($n = 5$) were calculated; higher scores represent higher biculturalism Continuous biculturalism scores used ($n = 9$)

Note. B = Bidimensional, U = Unidimensional. AHIMSA = Acculturation, Habits, and Interests Multicultural Scale for Adolescents; ARSMA-I = Acculturation Rating Scale for Mexican Americans-I; ARSMA-II = Acculturation Rating Scale for Mexican Americans-II; BAS = Bidimensional Assessment Scale; BIQ = Bicultural Involvement Scale; AIM = American Identity Measure; MEIM = Multigroup Ethnic Identity Measure; BIIS-I = Bicultural Identity Integration Scale-I; BIIS-II = Bicultural Identity Integration Scale-II; BSES = Bicultural Self-Efficacy Scale; MABS = Mexican American Biculturalism Scale; PANS = Pan Acculturation Scale.

Table 2. Study Conceptualization, Design, and Sample Characteristics by Operationalization of Biculturalism ($N = 152$)

Operationalization →	Total $N = 152$	Quantitative ($n = 136$)					Qualitative ($n = 16$)	
		Dual-Cultural Adaptation, $n = 108$			Dual-Cultural Identities, $n = 8$	Bicultural Identity Integration, $n = 11$	Bicultural Competence, $n = 9$	N/A
		Dual-Cultural Orientations (B), $n = 67$	Dual-Cultural Orientations (U), $n = 38$	Dual-Cultural Adaptation Strategies, $n = 3$				
Study design								
Cross-sectional	130	58	35	2	7	7	5	16
Longitudinal	22	9	3	1	1	4	4	0
Research aims^a								
Consequents of biculturalism	109	53 ^g	31	3	6 ⁱ	7	6	3
Development of biculturalism	36	7 ^h	8	0	0 ^j	5	3	13
Adjustment outcomes^a								
Psychosocial health ^b	76	35	21	2	5	6	4	3
Physical health ^c	39	22	11	1	1	2	2	0
Predictors of biculturalism^a								
Individual factors ^d	28	5	7	0	0	2	1	13
Contextual factors ^e	22	2	1	0	0	3	3	13
Publication year range	1980-2020	1980-2020	1980-2018	2014-2018	1997-2020	2008-2020	2012-2020	1997-2019
Geographical context^a								
West	70	24	19	1	3	7	7	9
Midwest	21	9	9	1	0	0	1	1
Northeast	17	8	6	1	0	1	1	0
South	67	32	16	2	6	5	2	4
Not specified	7	0	2	1	0	0	0	4
Sample size								
Mean	450.2	445.1	740.1	949.1	194.7	314.4	475.5	32.9
Range	3–6,359	36–1,773	23–6,359	182–1,368	31–416	87–836	17–801	3–112
Sample type^a								
Ethnoracial heterogeneous ^f	89	41	19	3	6	10	3	7
Ethnoracial homogeneous	60	26	15	0	2	2	6	9
Nationally representative sample	4	0	4	0	0	0	0	0
Ethnoracial group^a								
Only or predominantly Mexican	87	36	20	1	5	5	6	14
Only or predominantly Cuban	7	5	0	0	1	1	0	0
Only or predominantly Puerto Rican	7	5	1	0	0	0	1	0
Mexican	35	16	12	0	2	3	2	0
Caribbean	36	14	12	0	3	5	2	0

Central American	33	13	11	0	3	4	2	0
South American	32	12	11	0	3	4	2	0
Spaniards	6	2	3	0	0	1	0	0
Not specified	12	3	3	2	0	2	0	2
Nativity status								
Foreign-born and U.S.-born	22	14	4	1	1	0	1	1
Only or predominantly foreign-born	41	24	5	0	2	6	0	4
Only or predominantly U.S.-born	50	15	14	0	3	4	8	6
Not specified	39	14	15	2	2	1	0	5
Age group^a								
Childhood	3	1	1	1	0	0	0	0
Adolescence	64	29	13	3	5	3	5	6
Young adulthood	56	30	19	0	1	3	2	1
College sample	32	13	6	0	2	6	1	4
Adulthood	64	28	22	1	2	2	2	7
Gender^a								
Female and male	92	43	22	2	4	6	7	8
Only or predominantly female	51	22	10	1	4	5	1	8
Only or predominantly male	8	2	5	0	0	0	1	0

Note. B = Bidimensional, U = Unidimensional. ^aSum does not add up to total number of studies within each operationalization because some studies included multiple research aims, did not examine predictors or consequents, examined both types of outcomes or predictors, included multiple geographical regions, included multiple sample types, participants were from multiple ethnoracial backgrounds, focused on multiple age groups, or did not specify age group or gender.

^bPsychosocial health includes indicators such as academic engagement, life satisfaction, externalizing symptoms, and family conflict. ^cPhysical health includes indicators such as substance use, eating behaviors, physical activity, and sleep. ^dIndividual factors include constructs such as nativity status and language use.

^eContextual factors include constructs such as supportive networks and familial socialization. ^fRefers to diversity by national origin groups (e.g., Mexican, Venezuelan, Colombian). ^{gh}A total of 8 studies are not included in this count because a biculturalism score was not derived from the heritage and host orientations subscales. ^gTwo studies are not included in this count because it was not possible to isolate the effects of biculturalism and adjustment given that biculturalism was assessed in conjunction with other orientations (i.e., parenting or pregnancy beliefs). ^{ij}A total of 2 studies are not included in this count because a biculturalism score was not derived from the heritage and host identities subscales.

Table 3. Summary of Quantitative Findings Regarding Associations with Adjustment by Operationalization of Biculturalism ($n = 136$)

	Examined links with adjustment n (%)	Null findings n (%)	Promotive or protective: Positive outcomes n (%)	Risk factor: Negative outcomes n (%)	Mixed findings ^d n (%)
Dual-Cultural Adaptation, ($n = 108$)					
<i>Dual-Cultural Orientations Bidimensional, ($n = 67$)</i>					
Categorical ($n = 25$) ^a	24	11	22	5	11
Categorical-Difference ($n = 12$)	11	4	8	2	3
Continuous ($n = 19$) ^b	14	5	9	2	2
Continuous-Difference ($n = 5$)	4	2	2	--	--
<i>Dual-Cultural Orientations Unidimensional, ($n = 38$)</i>					
Categorical ($n = 26$)	21	9	17	1	6
Continuous-Middle ($n = 7$)	7	3	5	--	1
Continuous-Middle Recoded ($n = 5$)	3	1	2	1	1
<i>Dual-Cultural Adaptation Strategies, ($n = 3$)</i>					
Categorical ($n = 1$)	1	1	1	--	1
Continuous ($n = 2$)	2	2	1	--	1
Dual-Cultural Identity, ($n = 8$)					
Categorical ($n = 3$)	3	1	2	--	--
Continuous ($n = 4$) ^c	3	2	2	--	1
Bicultural Identity Integration, ($n = 11$)					
Categorical ($n = 1$)	1	--	1	--	--
Continuous ($n = 10$)	6	2	4	1	1
Bicultural Competence, ($n = 9$)					
Continuous ($n = 9$)	6	1	6	--	1
All Quantitative Studies, ($n = 136$)	106 (78%)	--	--	--	--
Among Quantitative Studies that examined links with adjustment	106 (100%)	44 (41%)	82 (77%)	12 (11%)	29 (27%)

Note. ^aTwo studies are not included in this count because it was not possible to isolate the effects of biculturalism and adjustment given that biculturalism was assessed in conjunction with other orientations (i.e., parenting or pregnancy beliefs). ^bFour studies are not included in this count because a biculturalism score was not derived from the heritage and host orientations subscales. ^cOne study is not included in this count because a biculturalism score was not derived from the heritage and host identities subscales. ^dStudies included in this column simultaneously found positive and null results, negative and null results, positive and negative results, or a combination of all three (positive, negative, and null). Qualitative studies ($n = 16$) were not included in this table due to its exclusive focus on quantitatively informed operationalizations; 3 of these 16 studies examined links with adjustment.