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# Reconsidering the “Acculturation Gap”: Mother-Adolescent Cultural Adaptation Mis/Matches and Positive Psychosocial Outcomes among Mexican-Origin Families

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## Abstract

Previous studies have linked parent-child cultural adaptation mismatches with adolescents’ maladjustment without addressing how intergenerational mis/matches are related to positive aspects of adolescent development and parental outcomes. Using data from 604 Mexican-origin families (adolescent sample:54%female,  $M_{age} = 12.41$ , range = 11 to 15), response surface analysis was conducted to investigate how mother-child mis/matches in cultural adaptation (acculturation, enculturation, English and Spanish proficiency) are associated with adolescents’ and mothers’ resilience and life meaning. Adolescents and mothers reported greater resilience and meaning when they matched at higher, versus lower, levels of acculturation, enculturation and English proficiency; adolescents reported more resilience when they were more acculturated than mothers. The findings provide a strengths-based understanding of parent-child cultural adaptation mis/matches and elucidate how Mexican-origin families thrive in the cultural adaptation process.

**Keywords** Cultural Adaptation · Positive Psychological Outcomes · Response Surface Analysis (RSA) · Acculturation Gaps · Mexican Immigrant Families

## Introduction

Cultural adaptation is a challenging process for Mexican-origin immigrant families, not only because parents and children experience cultural changes in their values and behaviors as they adjust to American culture (i.e., acculturation) and maintain their Mexican heritage culture (i.e., enculturation) (Schwartz et al., 2010), but more importantly, because parents and children often differ in their levels and rates of cultural adaptation. Substantial research on parent-child cultural adaptation mismatches (i.e., acculturation gap-distress model; Telzer et al., 2016) has suggested that

larger rifts in parent-child cultural adaptation are associated with greater child maladjustment and compromised family function. Nonetheless, these studies mainly focus on problematic aspects of youth adjustment (e.g., depressive symptoms), while neglecting positive aspects of adolescent development (e.g., resilience; Motti-Stefanidi, 2018). A more strengths-based approach could help researchers better understand the psychological resources that are vital for adolescents to thrive, particularly in the current political climate, where discrimination and racism are rife (Elias et al., 2021). In addition, two other limitations exist in the current literature: Past research (1) ignores how intergenerational mismatches are linked to the understudied area of *parental* positive psychosocial outcomes; and (2) has been unable to distinguish statistically different levels of parent-child *matches* from parent-child mismatches (See Telzer, 2010). Parents and adolescents with similarly high, versus low, levels of acculturation, for example, may experience different sets of cultural adaptation challenges and show disparate parent and child positive psychological outcomes. To provide a more comprehensive assessment of Mexican-origin parent and youth development, this study uses *response surface analysis* (RSA; Schönbrodt and

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Humberg (2018)) to investigate how parent-child matches and mismatches in cultural adaptation – including acculturation, enculturation, English and Spanish proficiency – may be differentially associated with two aspects of adolescents' and mothers' positive psychological outcomes: resilience and life meaning.

### Reconsidering the “Acculturation Gap”: Positive Psychological Outcomes

The acculturation gap-distress model (Szapocznik & Kurtines, 1993) posits that different rates of cultural adaptation between parents and their children manifest in parent-child cultural adaptation gaps, which are then associated with increased family conflicts and child maladjustment. Extensive research on the acculturation gap-distress model suggests that parent-child cultural adaptation mismatches in acculturation (e.g., American orientation and English language proficiency) and enculturation (e.g., Mexican cultural orientation and Spanish language proficiency) are linked with higher incidence of disrupted family functioning and negative impacts on adolescent development (Schwartz et al., 2010; Telzer, 2010). However, support for the acculturation gap-distress model has not been consistent (Telzer, 2010). One recent explanation for the pattern of inconsistent findings is the adaptive acculturation gap hypothesis (Telzer, 2010), which proposes that some kinds of parent-child acculturation mismatches may be beneficial for development (e.g., intergenerational mismatches that are common and normative among immigrant families, such as when youth are more acculturated than their parents). Relative to the more traditional perspective that cultural adaptation mismatches are “maladaptive” and detrimental to adolescent adjustment, more contemporary conceptualizations of “adaptive” parent-adolescent cultural adaptation mismatches suggest that some cultural adaptation mismatches may promote positive adolescent development (i.e., more positive psychological outcomes). However, clear distinctions between different types of parent-child cultural adaptation mismatches and their associations with developmental outcomes are lacking.

Critically, the bulk of research supporting the adaptive acculturative gap hypothesis has paid attention only to the associations between cultural adaptation mismatches and adolescent maladjustment (e.g., depression; Telzer, 2010) and there is less research examining associations between parent-child cultural adaptation gaps with indicators of adolescents' positive psychosocial outcomes. Guided by a deficit perspective, past studies have been interested in “what’s going wrong” (e.g., how parent-child cultural adaptation mismatches are linked to child maladjustment) and have tended to focus on risk and identifying ways to

diminish maladjustment, paying less attention to “what’s going right”. However, the absence of negatives does not necessarily signal the presence of positives. Thus, it is difficult to ascertain whether Mexican-origin youth who show less negative adjustment, for instance, would necessarily demonstrate improved developmental outcomes. Additionally, more recent researchers have advocated for strengths-based models that promote the understanding of positive development among young people (see the positive development approach) (Lerner, 2017). Positive development may be considered an asset and a type of resource to understand youth development, thriving and well-being (Urke et al., 2021). Given that Mexican-origin adolescents are often exposed to contextual stressors (e.g., racism and discrimination) and show greater burden in bearing developmental disparities compared to their White American counterparts (e.g., academic competence and mental health; Musu-Gillette et al., 2016; Piña-Watson et al., 2019), perhaps promoting positive development can build psychological strength for Mexican-origin adolescents, helping them overcome adversities and developmental challenges, and promoting their growth and well-being.

In addition, past studies have focused on adolescent psychosocial outcomes, ignoring the importance of parental outcomes. According to the family system model (Cox & Paley, 2003), families are systems of interdependent individuals who mutually influence one another. The interactive experiences between members of immigrant families (e.g., parent-child adaptation mismatches) may have tangible influences on both adolescents' and parents' psychosocial outcomes (Bacallao & Smokowski, 2007). Considering the dyadic feature of cultural adaptation mismatches, Mexican-origin parents as well as adolescents may demonstrate positive adjustment in the cultural adaptation process, as they simultaneously experience cultural adaptation mismatches as an integral unit. The current study draws upon the adaptive acculturation gap hypothesis, positive developmental approach, and the family system model, to examine how parent-child cultural adaptation mismatches may be linked with positive aspects of youth development and parental outcomes. Mother-adolescent (versus father-adolescent) dyads were the primary group for investigation here since maternal presence in the lives of adolescents might be more critical for development during early adolescence: mothers from Mexican immigrant families usually play a primary role in childrearing (Roosa et al., 2012), while fathers are usually away at work, providing financially for their families.

This study particularly focuses on resilience and life meaning among Mexican-origin adolescents and their mothers, as these constructs are widely perceived as desired resources that contribute to people’s well-being and psychological strength (Smokowski et al., 1999; Vela et al.,

2015). Resilience is defined as the ability to adapt and flourish in the face of adversity (Connor & Davidson, 2003). Additionally, resilience is an important construct related to successful integration to the U.S. for Mexican-origin youth and their parents (Suárez-Orozco et al., 2018). Mexican-origin immigrants with high levels of resilience are more likely to possess psychological assets that allow for better coping and management of integration stress (particularly in light of increasing exposure to discrimination, relatively harsh attitudes towards immigrants in the US, and other structural disadvantages of Mexican-origin populations) (Elias et al., 2021; Ortiz & Telles, 2012). Resilience may be construed as an important marker of Mexican-origin adolescents' and their mothers' sense of control, self-worth, and confidence (Connor & Davidson, 2003). Indeed, previous studies have demonstrated that higher levels of resilience are related to greater quality of life and more positive coping strategies, whereas lower levels of resilience are linked to worse psychological health (e.g., anxiety; Zolkoski & Bullock, 2012). Meaning in life refers to individuals' perceptions of personal existence and being, as well as their interpretations of their significance and purpose in life (Steger et al., 2006). Prior studies have shown that higher, as compared to lower, levels of life meaning are related to reduced risk of suicide and problematic behaviors, as well as higher levels of hope and subjective happiness, among Mexican-origin adolescents and their parents (Shelton et al., 2020; Vela et al., 2015). Life meaning may be construed as a key indicator of how well adolescents are doing, as life meaning is implicated alongside identity development, a critical developmental task that occurs during adolescence (Sim et al., 2019).

### **Mother-Child Cultural Adaptation Mismatches and Positive Psychosocial Outcomes**

Although existing work has demonstrated how Mexican-origin mothers' cultural adaptation might be associated with their own and their children's psychological well-being (Calzada et al., 2009; Sun et al., 2020), few studies have directly linked mother-child cultural adaptation mismatches to positive psychosocial outcomes. Mexican-origin adolescents may show higher levels of resilience and life meaning when they are more acculturated, or more proficient in English, than their mothers (adolescent > mother). This pattern of mother-adolescent cultural adaptation mismatch is more intuitive, common and normative (Telzer, 2010) and is likely related to greater levels of adolescent and maternal resilience and life meaning. More acculturated and/or more English proficient adolescents frequently assist their less acculturated and/or less English proficient parents

with navigating cultural adaptation challenges (Bacallao & Smokowski, 2007); over time, such adolescents may acquire adaptive coping skills and problem-solving strategies that help them overcome their cultural adaptation-related adversities, leading to spillover improvements in their resilience and well-being (Lau et al., 2005). For instance, a qualitative study suggested that Mexican-origin immigrants showed improvements in their resilience as they acquired skills such as positive reframing and open-mindedness, and learned how to make sense of their adversities (Buckingham & Brodsky, 2015). Relatedly, prior research demonstrates that Mexican-origin adolescent language brokers (i.e., adolescent children who translate for their families) develop a deeper sense of life meaning, which contributes to a more coherent sense of identity (Sim et al., 2019), providing indirect support for the notion that inter-generational mismatches in English proficiency are related to increased life meaning for adolescents.

Conversely, Mexican-origin adolescents may have lower levels of resilience and life meaning when they are more enculturated, or more proficient in Spanish, than their mothers (adolescent > mother). This form of mother-child cultural adaptation mismatch is often overlooked in the literature (Telzer, 2010) and may occur when immigrant parents have been in the US for a long time. Importantly, some research with immigrant families in the U.S. (albeit immigrants not of Mexican origin) has demonstrated that adolescents who are more enculturated than their parents report (1) higher levels of cultural identity conflicts, (2) lower levels of perceived acceptance from their host culture, and (3) lower levels of perceived belonging (Atzaba-Poria & Pike, 2007; Telzer, 2010). This particular type of mismatch might be an obstacle to adolescents' positive development, which may undermine their resilience and life meaning.

For their part, Mexican-origin mothers are likely to show higher levels of resilience and life meaning when they are more acculturated, or more proficient in English, than their adolescent children (mother > adolescent). Although this pattern of mother-child cultural adaptation mismatch may not be intuitive, as mentioned in the preceding paragraph, when parents have been in the US for a long time, they may be more acculturated than their children. Prior studies have found that mothers who are more acculturated, and/or more proficient in English than their children, demonstrate greater parenting effectiveness and greater involvement in their children's daily life and education (Martinez et al., 2009). Mothers with higher levels of English proficiency than their adolescents are in a better position to relate to their children's viewpoints and can competently express their concerns in English to their children (Tseng & Fuligni, 2000). Thus, mothers who are more acculturated or proficient in English than their adolescents may relate better with their children, and derive a greater sense of purpose, which may

spill over and increase mothers' own levels of resilience and life meaning.

In addition, mothers may also show higher levels of resilience and life meaning when they are more enculturated, or more proficient in Spanish, than their adolescent children (mother > adolescent). This pattern of mother-adolescent cultural adaptation mismatch is perhaps similar to mismatches where adolescents are more acculturated or more English proficient than their mothers, as they are likely more intuitive and common (Telzer, 2010). Mexican-origin families advocate for ethnic pride and the education of cultural values and good morals (Knight et al., 2011; Umaña-Taylor & Yazedjian, 2006). Mexican-origin mothers who are more, as compared to less, enculturated than their children are better situated to educate their children about their heritage culture and values, given their more intimate cultural knowledge, which might evoke feelings of meaning in mothers. For instance, Umaña-Taylor and Yazedjian (2006) found that Mexican-origin mothers viewed familial ethnic socialization as personally meaningful and important, as it gave them the opportunity to enrich their children's cultural knowledge.

### Mother-Child Cultural Adaptation Matches and Positive Psychosocial Outcomes

The current study also explored how mother-child matches in cultural adaptation are related to resilience and life meaning for mothers and adolescents. Parent-child matches at different levels of cultural adaptation have often been ignored in prior studies, as researchers adopt statistical methods (i.e., difference scores, or interaction approach) that are unable to extricate parent-child matches at different levels of matching (Telzer, 2010). However, the story of the "acculturation gap-distress model" will not be complete without considering parent-child matches at different levels. Parent-child cultural adaptation matches at different levels are a crucial aspect to consider, as doing so may reveal whether different levels of similarity in cultural adaptation between parents and adolescents are related to positive outcomes. Moreover, such an examination can provide nuanced implications for family intervention programs aiming to facilitate both parent and child cultural adaptation simultaneously.

The general assumption is that the opposite of a mismatch is a match, even though matches can occur at different levels (e.g., high-high; mid-mid; low-low) and these different levels of matching may have varying impacts on both adolescent and maternal positive psychological outcomes (Sun et al., 2020). Thus, parent-adolescent matches can be conceptualized at three levels (e.g., high-high: mothers' high levels of acculturation match adolescents' high levels of acculturation; mid-mid: mothers' medium

levels of acculturation match adolescents' medium levels of acculturation; low-low: mothers' low levels of acculturation match adolescents' low levels of acculturation) to see how they may relate to different levels of positive outcomes among parents and adolescents. For instance, it is not hard to imagine three pairs of Mexican-origin mother-child dyads, sharing high, medium, and low levels of acculturation and English proficiency, respectively. Relative to the mid-mid and low-low dyads, the high-high dyad likely shows better family functioning and positive adjustment (i.e., resilience and life meaning), as high levels of acculturation and English proficiency can foster personal development, buffer against adverse outcomes, and benefit mothers' and adolescents' adaptation to American society (Schwartz et al., 2010). Yet it is also possible that low-low mother-adolescent dyads can band together to overcome cultural adaptation-related challenges, since it has been argued that people identify more strongly with their discriminated-against ingroups as a coping mechanism, as ingroup membership provides psychological shelter from outgroup hostility (see literature on rejection-identification hypothesis; Giamo et al., 2012). Perhaps, then, mid-mid mother-adolescent dyads may show the worst outcomes when compared to both high-high and low-low dyads (i.e., a curvilinear association).

It is also possible that mother-child enculturation and Spanish proficiency matching at high, versus low, levels may be related to higher levels of adolescent and maternal resilience and life meaning. This is because Mexican culture underscores the importance of the family unit, and emphasizes beliefs and behaviors related to respect and contribution to the family (Telzer et al., 2016). When family members share similarly high endorsement of Mexican values (e.g., family obligation) and behavioral norms (e.g., Spanish proficiency), these common beliefs and values may be particularly useful for increasing solidarity within the family (Chapin, 2015). Mexican-origin mothers and their children who share high, versus low, levels of enculturation receive mutual support that facilitates coping with cultural adaptation challenges, which may help maintain and build up their resilience and life meaning. Indeed, support from the family, and having someone in the family with whom to communicate about problems, are promotive of Mexican-origin families' resilience (Chapin, 2015). Additionally, researchers have demonstrated that Spanish proficiency is highly valued amongst the Mexican-origin ethnic enclave, and high levels of Spanish proficiency may be indicative of one's social capital, which may be channeled to deriving purpose and support from other Mexican-origin immigrants in the community. Perhaps mothers and adolescents who share high, versus low, levels of Spanish proficiency can tap into these extended social networks outside of the family and build up resilience and life meaning.



## Current Study

To provide insight into why some immigrant families thrive when faced with adversity, the current study explored whether parent-adolescent cultural adaptation mis/matches are associated with mothers' and adolescents' positive psychosocial outcomes from a strengths-based perspective. In this study, adolescents' and mothers' cultural orientations (i.e., acculturation and enculturation) and language competence (i.e., English and Spanish proficiency) were included, as they are commonly used indicators of cultural adaptation among immigrant families. Using response surface analysis (RSA), the current study aimed to address two research questions with a sample of Mexican-origin mother-adolescent dyads. First, whether different levels of matching between adolescents and their mothers (i.e., high-high versus mid-mid versus low-low) in the four cultural adaptation domains (i.e., acculturation, enculturation, English and Spanish proficiency) were associated with adolescents' and their mothers' resilience and life meaning. Second, whether mother-adolescent mismatches, and the directionality of these mismatches (i.e., adolescent > mother; adolescent < mother), in four cultural adaptation domains were related to their positive psychosocial outcomes. Accordingly, two hypotheses were proposed. For matched dyads, adolescents and mothers who matched at high, versus mid and low, levels of cultural adaptation would show higher levels of resilience and life meaning (Hypothesis 1). For mismatched dyads, adolescents who were more acculturated, and more proficient in English, than their mothers would show higher levels of resilience and life meaning; adolescents who were more enculturated, and more proficient in Spanish, than their mothers would show lower levels of resilience and life meaning. Additionally, mothers who were more acculturated or more enculturated, and more proficient in English or Spanish, than their children would show higher levels of resilience and life meaning (Hypothesis 2).

## Method

### Participants

Data for the current study were obtained from a longitudinal dataset of 604 Mexican American families ( $N_{\text{adolescents}} = 604$ ,  $N_{\text{mothers}} = 596$ ) recruited in Texas from 2012 to 2015. The current study focused on the cross-sectional associations between mother-adolescent cultural adaptation mis/matches and positive psychosocial outcomes at one wave. Study procedures were approved by the Institutional Review Board at the University of Texas at Austin. Participating adolescents ( $M_{\text{age}} = 12.92$  years,  $SD = 0.92$ ,  $N_{\text{girls}} = 328$ ) were in middle school (i.e., grade 6–8). Around 75%

of adolescents ( $N = 455$ ) were US-born, whereas 99% of mothers were Mexico-born. The range of the mean annual family income was from \$20,001–\$30,000, and the mean level of maternal education was middle/junior high school.

### Procedure

Target families were recruited via public records, school presentations, and community outreach. A family visit was scheduled for families who decided to participate. Family consent was provided by parents, and informed assent was obtained for adolescents during the family visit. Bilingual interviewers administered the questionnaires in English and Spanish, read questions aloud to participants, and recorded participants' responses on a laptop computer. Families received \$60 as compensation.

### Measures

#### Cultural Orientation

Participants responded to 10 items about acculturation and 10 items about enculturation using the Vancouver Index of Acculturation (VIA; Ryder et al., 2000). The measure used a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item for acculturation is "I often follow traditions of the US culture," while a sample item for enculturation is "I often follow traditions of the Mexican culture." Higher mean scores reflected higher levels of acculturation and enculturation (adolescents:  $\alpha_{\text{acculturation}} = 0.86$  and  $\alpha_{\text{enculturation}} = 0.89$ ; mothers:  $\alpha_{\text{acculturation}} = 0.83$  and  $\alpha_{\text{enculturation}} = 0.88$ ).

#### Language Proficiency

Participants reported how proficient they were in Spanish and English on understanding, speaking, reading, and writing. The 3-item measure used a five-point Likert scale (1 = *not well* to 5 = *extremely well*). Higher mean scores indicated higher language proficiency (adolescents:  $\alpha_{\text{English}} = 0.80$  and  $\alpha_{\text{Spanish}} = 0.83$ ; mothers:  $\alpha_{\text{English}} = 0.80$  and  $\alpha_{\text{Spanish}} = 0.90$ ).

#### Resilience

Sense of resilience was measured by 3 items adopted from the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Items are "I can deal with whatever comes," "I tend to bounce back after illness or hardship," and "I am not easily discouraged by failure." Higher mean scores indicated greater resilience ( $\alpha_{\text{adolescents}} = 0.64$ ;  $\alpha_{\text{mothers}} = 0.75$ ). Confirmatory factor analyses were

conducted to assess the psychometric properties of the scale with participating adolescents and mothers. The model fits for the sample of Mexican-origin adolescents and mothers were perfect because the model was just identified with only three items. The factor loadings of the three items ranged from 0.56 to 0.74,  $p < 0.001$ . In addition, prior studies have validated this scale for use with Mexican-origin families (Kim et al., 2018; Yan et al., 2022).

### Life Meaning

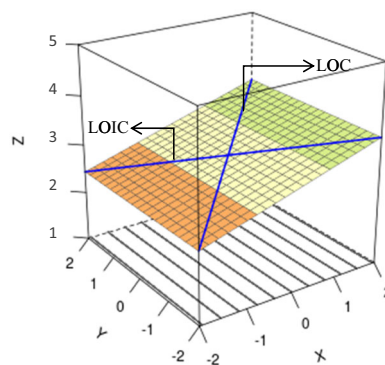
Sense of life meaning was assessed through three items adopted from the Meaning in Life Questionnaire (Steger et al., 2006) on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item is “My life has a clear sense of purpose.” Higher mean scores indicated greater life meaning ( $\alpha_{\text{adolescents}} = 0.87$ ;  $\alpha_{\text{mothers}} = 0.84$ ). These three items were selected based on relatively high item-scale correlations and good face validity. In addition, the subset measure of the three items has been validated for use with Mexican-origin families (Hou et al., 2018; Kim et al., 2018).

### Analysis Plan

All analyses were conducted using polynomial regression with response surface analysis (RSA; Barranti et al., 2017) in R 3.6.2 (R Development Core Team, 2019). RSA is an advanced methodology designed to explore how mis/matches of dyadic predictors are associated with an outcome of interest (Barranti et al., 2017). It is a methodological improvement compared to conventional approaches used to calculate mismatches (and provides an opportunity to examine matches), and the RSA technique has been applied to Mexican-origin populations recently (Sim et al., 2021). As RSA requires data for each mother-adolescent pair, missing values were handled using pairwise deletion. All analyses were conducted in two steps. First, grand mean centering was used to center the two dyadic predictors, ensuring that the dyadic predictors had a common zero point. Second, polynomial regression models were analyzed to examine the associations between mother-adolescent cultural adaptation mis/matches with adolescent and maternal positive psychosocial outcomes. In each model, the data were fitted based on the equation (Shanock et al., 2010)

$$Z = b_0 + b_1A + b_2M + b_3AM + b_4A^2 + b_5M^2 + e$$

where Z represents adolescent or mother positive psychosocial outcomes, A (adolescent-reported) and M (mother-reported) refer to participants' self-reported cultural adaptation variables, while  $A^2$  and  $M^2$  are the quadratic terms formulated by squaring cultural adaptation variables separately reported by adolescents and mothers. AM refers



**Fig. 1** An Example of Response Surface Plot. Note. X = adolescents' cultural adaptation. Y = mothers' cultural adaptation. Z = adolescents'/mothers' positive psychosocial outcomes. X and Y were centered at the midpoint of the scale. LOC = the line of congruence; LOIC = the line of incongruence

to an interaction term formed by multiplying adolescent-reported and mother-reported cultural adaptation variables;  $b_0$  is the constant, and  $b_1$ – $b_5$  are the unstandardized coefficients for A, M, AM,  $A^2$  and  $M^2$ . Third, based on the coefficients of polynomial regression, response surface plots were generated (see Fig. 1) to display the three-dimensional relationship between mother-adolescent cultural adaptation indicators and adolescent or maternal positive psychological outcomes.

RSA generates lines of congruence (LOC) and incongruence (LOIC) (see Fig. 1) and four associated coefficients ( $a_1$ – $a_4$ ) that correspond to the slopes and curvature of the LOC and LOIC (2 for each line). The  $a_1$  and  $a_2$  coefficients estimate the linear slope and curvature along the LOC, addressing our first research question (i.e., whether mother-child matching at high, versus mid and low, levels of cultural adaptation is associated with higher levels of adolescents' and/or mothers' positive psychosocial outcomes). Specifically, the  $a_1$  indicates whether higher or lower levels of psychosocial outcomes are observed at high-high, versus low-low, mother-adolescent matches. The  $a_2$  indicates whether higher or lower levels of positive psychosocial outcomes are observed for mid-mid mother-adolescent matches as compared to both high-high and low-low mother-adolescent matches (i.e., whether there are curvilinear associations, such that high-high and low-low matched pairs show better/worse outcomes than mid-mid matched pairs). The  $a_3$  and  $a_4$  coefficients estimate the linear slope and curvature along the LOIC, addressing our second research question (i.e., whether mother-adolescent mismatches in cultural adaptation are associated with adolescents' and mothers' positive psychosocial outcomes). Specifically,  $a_3$  indicates whether higher or lower levels of psychosocial outcomes are observed for mother-adolescent mismatches in one direction (e.g., adolescent > mother) than mother-adolescent mismatches in the other direction (e.g.,

adolescent < mother). The  $a_4$  indicates whether higher or lower levels of psychosocial outcomes are observed for mother-adolescent mismatches than matches (Barranti et al., 2017). Adolescents' age, nativity, and gender, along with mothers' age and education, were included as covariates.

A total of 16 RSA models were conducted in the current study for all combinations of 4 cultural adaptation domains (acculturation, enculturation, English and Spanish proficiency), 2 positive psychosocial outcomes (resilience and life meaning), and 2 family members (mother, adolescent). Given that a total of 16 models were conducted, to correct for multiple model testing and be more conservative in the interpretation of the findings, two criteria were utilized to account for the false discovery rate: (1) a p-value cutoff at 0.01 was adopted, and (2) Benjamini-Hochberg correction was applied to all models in order to account for multiple comparisons (Benjamini & Hochberg, 1995). There were two research questions in the study, with the first relating to mother-adolescent matches in cultural adaptation and the second concerning mismatches in mother-adolescent cultural adaptation. Thus, significant models for mother-adolescent matching are presented first, followed by any significant models for mother-adolescent mismatching. This order also follows the numerical order of RSA's  $a_1$  to  $a_4$  coefficients (i.e.,  $a_1$  and  $a_2$  examine matches;  $a_3$  and  $a_4$  examine mismatches). Additionally, significant adolescent models are presented first, followed by any significant mother models, to highlight how mother-adolescent cultural adaptation mis/matches were uniquely associated with mothers' positive psychological outcomes.

## Results

### Preliminary Analyses

The descriptive information and correlations among the study variables are presented in Table 1. In general, for both

adolescents and their mothers, cultural adaptation (in all four indicators) was positively associated with their own resilience and life meaning. The results showed that adolescents' and mothers' levels of acculturation ( $r = 0.14$ ;  $p = 0.001$ ) were positively correlated; similarly, adolescents' and mothers' levels of English proficiency ( $r = 0.14$ ;  $p = 0.001$ ) were positively correlated, which may suggest greater incidence of mother-adolescent matching in these domains. Adolescents' and mothers' enculturation and Spanish proficiency were not significantly related, which may reveal larger mother-adolescent mismatches in these domains.

### Mother-Adolescent Mis/matches and Adolescents' Positive Psychosocial Outcomes

First, RSA analyses tested whether mother-adolescent cultural adaptation matches, and mismatches, were related to adolescents' positive psychological outcomes. The results of the polynomial regression analyses and responses surface analyses for adolescents' psychological outcomes are presented in the upper panel of Table 2. In general, significant models for the associations between mother-adolescent mismatch and match in acculturation, enculturation and Spanish proficiency and adolescents' positive outcomes were observed, whereas no significant relationship was found for English proficiency.

### Acculturation

For acculturation, the significant linear effects of the LOC were observed for adolescent resilience ( $a_{1resilience} = 0.368$ ,  $p < 0.001$ ) and life meaning ( $a_{1life\ meaning} = 0.378$ ,  $p < 0.001$ ). These results are evident in Fig. 2A (resilience) and 2B, D, F (life meaning), where the pronounced linear effects of the LOC in the surface plot (downward sloping from back to front) were observed. The findings revealed that adolescents were more resilient and reported higher levels of life meaning when they matched with their mothers at

**Table 1** Means, Standard Deviations and Correlations among Adolescent- and Mother-Reported Study Variables

	1	2	3	4	5	6	Mean	SD	N
1. Acculturation	0.14**	0.18**	0.07	-0.07	0.21**	0.17**	3.88	0.59	604
2. Enculturation	0.49**	<b>0.03</b>	-0.02	0.12**	0.16**	0.15**	3.74	0.50	604
3. English proficiency	0.16**	0.05	<b>0.14**</b>	0.14**	0.13**	0.05	4.20	0.67	604
4. Spanish proficiency	0.13**	0.31**	0.07	<b>0.04</b>	0.11*	0.19**	3.56	0.86	604
5. Resilience	0.25**	0.28**	0.16**	0.18**	<b>0.07</b>	0.55**	3.51	0.65	604
6. Life meaning	0.23**	0.28**	0.11**	0.18**	0.44**	<b>-0.03</b>	3.73	0.77	604
Mean	3.37	4.14	1.56	4.08	3.86	4.15	-	-	-
SD	0.60	0.56	0.72	0.84	0.70	0.65	-	-	-
N	596	596	594	596	594	595	-	-	-

Note: Statistics below the diagonal are for adolescents' report; statistics above the diagonal are for mother's report. Bolded values along the diagonal represent the correlations between adolescents and their mothers  
\* $p < 0.05$ , \*\* $p < 0.01$



**Table 2** Dyadic Polynomial Regression Coefficients and Response Surface Parameters of Adolescent-Reported and Mother-Reported Cultural Adaptation Indicators in Predicting Positive Psychosocial Outcomes

	Acculturation		Enculturation		English Proficiency		Spanish Proficiency	
	Resilience	Life meaning	Resilience	Life meaning	Resilience	Life meaning	Resilience	Life meaning
<b>Adolescent-reported positive psychosocial outcomes</b>								
<i>Polynomial regression coefficients</i>								
b1—adolescent report	<b>0.343***</b>	<b>0.355***</b>	<b>0.321***</b>	<b>0.418***</b>	0.081	0.375*	<b>0.154***</b>	<b>0.199***</b>
b2—mother report	0.025	0.024	−0.061	−0.011	0.117	−0.133	0.037	−0.016
b3—adolescent report <sup>2</sup>	0.070	0.128	−0.021	0.046	−0.056	0.088	0.032	0.030
b4—adolescent × mother report	−0.018	0.090	0.003	0.077	−0.001	−0.059	0.002	0.028
b5—mother report <sup>2</sup>	−0.001	0.025	−0.037	−0.030	0.025	−0.015	−0.032	−0.035
<i>Response surface parameters</i>								
a1 – slope along LOC (x = y)	<b>0.368***</b>	<b>0.378***</b>	<b>0.260***</b>	<b>0.407***</b>	0.198	0.242	<b>0.191***</b>	<b>0.183**</b>
a2 – curvature along LOC (x = y)	0.050	0.243*	−0.055	0.094	−0.033	0.015	0.002	0.023
a3 – slope along LOIC (x = −y)	<b>0.319***</b>	<b>0.331***</b>	<b>0.382***</b>	<b>0.430***</b>	−0.035	0.508	0.117*	<b>0.215**</b>
a4 – curvature along LOIC (x = −y)	−0.089	−0.013	−0.013	0.001	0.080	−0.161	−0.061	−0.037
<b>Mother-reported positive psychosocial outcomes</b>								
<i>Polynomial regression coefficients</i>								
b1—adolescent report	−0.043	−0.024	−0.079	−0.055	0.041	0.221	0.006	0.022
b2—mother report	<b>0.336***</b>	<b>0.249***</b>	<b>0.196***</b>	<b>0.163***</b>	0.265*	−0.114	0.069	<b>0.129***</b>
b3—adolescent report <sup>2</sup>	−0.137	0.082	0.045	0.011	−0.028	0.075	0.017	0.026
b4—adolescent × mother report	0.049	0.070	0.013	−0.017	0.028	−0.009	0.017	0.008
b5—mother report <sup>2</sup>	<b>0.148**</b>	0.120*	<b>0.227***</b>	<b>0.226***</b>	0.088*	−0.010	0.016	0.020
<i>Response surface parameters</i>								
a1 – slope along LOC (x = y)	<b>0.293***</b>	<b>0.225**</b>	0.117	0.107	0.306*	0.107	0.076	<b>0.151**</b>
a2 – curvature along LOC (x = y)	0.060	<b>0.271**</b>	<b>0.284**</b>	0.221*	0.087	0.055	0.049	0.054
a3 – slope along LOIC (x = −y)	<b>−0.379***</b>	<b>−0.273**</b>	<b>−0.276***</b>	<b>−0.218**</b>	−0.223	0.336	−0.063	−0.107
a4 – curvature along LOIC(x = −y)	0.334*	0.108	0.195	0.199	0.144	−0.095	0.016	0.003

Note. Unstandardized coefficients are presented. Adolescents' age, nativity, gender and mothers' age and education were controlled for in all analyses. Significant coefficients ( $a_1$ – $a_4$ ) of the response surface analysis passing the Benjamini-Hochberg procedure which were applied to account for multiple comparisons are bolded

\* $p < 0.05$ ; \*\* $p < 0.01$ , \*\*\* $p < 0.001$

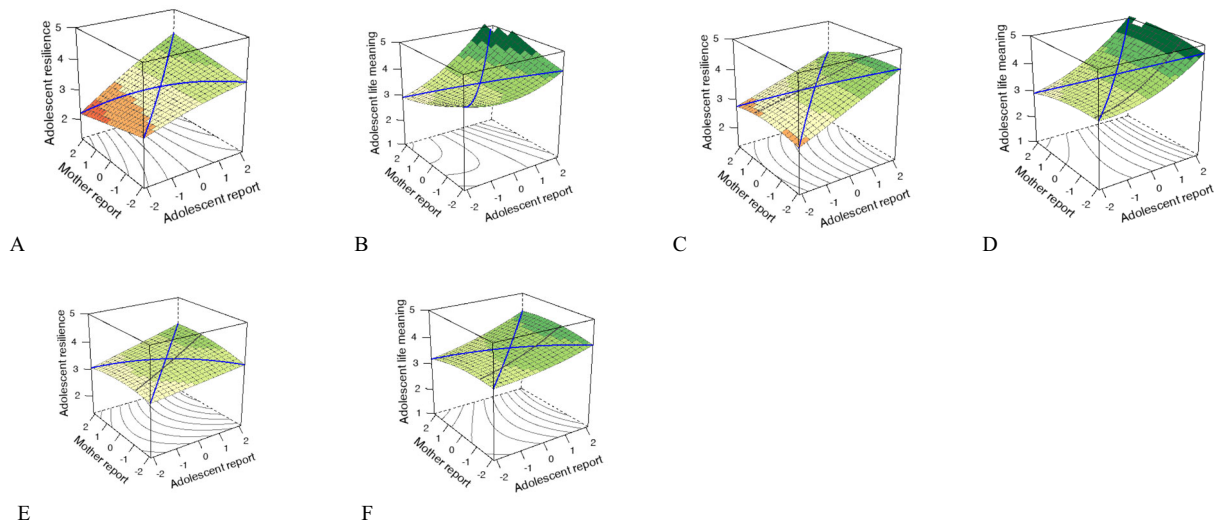
high, versus low, levels of acculturation. That is, matching with mothers at higher levels of acculturation (high-high) is more promotive of adolescent positive psychosocial outcomes than matching with mothers at lower levels of acculturation (low-low).

Moving from adolescent-mother matches to mismatches, the linear effects of the LOIC were observed for adolescent resilience ( $a_{3resilience} = 0.319$ ,  $p < 0.001$ ) and life meaning ( $a_{3life\ meaning} = 0.331$ ,  $p < 0.001$ ). The findings are evident again in Fig. 2A (resilience) and 2B (life meaning), where the linear effects of the LOIC (upward sloping from left to right) were observed. The findings reveal that adolescents were more resilient and reported higher levels of life meaning when they reported higher, as compared to lower, levels of acculturation than their mothers. That is, mother-adolescent mismatches in acculturation (adolescent > mother) are associated with better adolescent positive psychosocial outcomes than the converse (mother > adolescent).

## Enculturation

The significant linear effects of the LOC were observed for adolescent resilience ( $a_{1resilience} = 0.260$ ,  $p < 0.001$ ) and life meaning ( $a_{1life\ meaning} = 0.407$ ,  $p < 0.001$ ). These results are evident in Fig. 2C (resilience) and Fig. 2 (life meaning), where the pronounced linear effects of the LOC in the surface plot (downward sloping from back to front) were observed. The findings revealed that adolescents were more resilient and reported higher levels of life meaning when they matched with their mothers at high, versus low, levels of acculturation. That is, matching with mothers at higher levels of enculturation (high-high) is more promotive of adolescent positive psychosocial outcomes than matching with mothers at lower levels of enculturation (low-low).

Moving from adolescent-mother matches to mismatches, the linear effects of the LOIC were observed for adolescent resilience ( $a_{3resilience} = 0.382$ ,  $p < 0.001$ ) and life meaning



**Fig. 2** Response Surface Plots for the Polynomial Regression of Cultural Adaption Predicting Adolescents' and Their Mothers' Positive Psychosocial Outcomes. A. Acculturation – Adolescent Resilience. B. Acculturation – Adolescent Life Meaning. C. Enculturation

– Adolescent Resilience. D. Enculturation – Adolescent Life meaning. E. Spanish Proficiency – Adolescent Resilience. F. Spanish Proficiency – Adolescent Life Meaning

( $a_{3life\ meaning} = 0.430, p < 0.001$ ). The findings are evident again in Fig. 2C (resilience) and 2D (life meaning), where the linear effects of the LOIC (upward sloping from left to right) were observed. The findings reveal that adolescents were more resilient and reported higher levels of life meaning when they reported higher, as compared to lower, levels of enculturation than their mothers. That is, mother-adolescent mismatches in enculturation (adolescent > mother) are associated with better adolescent positive psychosocial outcomes than the converse (mother > adolescent).

### Spanish Proficiency

The significant linear effects of the LOC were observed for adolescent resilience ( $a_{1resilience} = 0.191, p < 0.001$ ) and life meaning ( $a_{1life\ meaning} = 0.183, p = 0.003$ ). These results are evident in Fig. 2E (resilience) and Fig. 2 (life meaning), where the pronounced linear effects of the LOC in the surface plot (downward sloping from back to front) were observed. The findings revealed that adolescents were more resilient and reported higher levels of life meaning when they matched with their mothers at high, versus low, levels of Spanish proficiency. That is, matching with mothers at higher levels of Spanish proficiency (high-high) is more promotive of adolescent positive psychosocial outcomes than matching with mothers at lower levels of Spanish proficiency (low-low).

Moving from adolescent-mother matches to mismatches, the linear effects of the LOIC were observed for adolescent life meaning ( $a_{3life\ meaning} = 0.215, p = 0.001$ ). The findings are evident in Fig. 2 (life meaning), where the linear effects

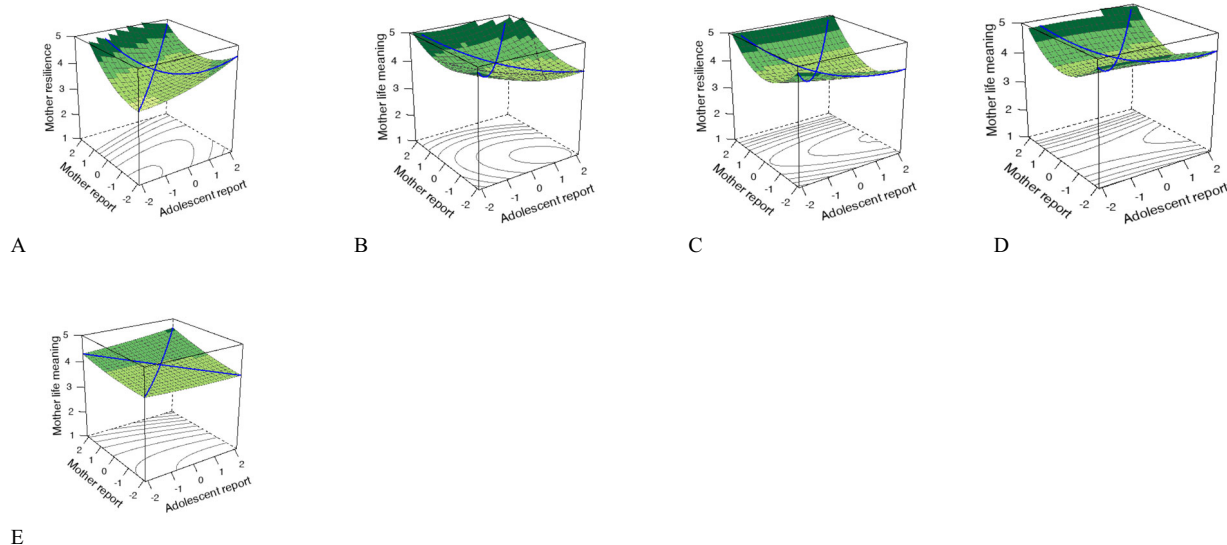
of the LOIC (upward sloping from left to right) were observed. The findings reveal that adolescents were more resilient and reported higher levels of life meaning when they reported higher, as compared to lower, levels of Spanish proficiency than their mothers. That is, mother-adolescent mismatches in Spanish proficiency (adolescent > mother) are associated with better adolescent positive psychosocial outcomes, at least in life meaning, than the converse (mother > adolescent).

### Mother-Adolescent Mis/matches and Mothers' Positive Psychosocial Outcomes

Next, RSA analyses examined whether mother-adolescent cultural adaptation matches, and mismatches, were associated with mothers' resilience and life meaning. The results of the polynomial regression analyses and responses surface analyses for mothers' positive psychological outcomes are presented in the lower panel of Table 2. Similarly to the results of adolescents' positive psychosocial outcomes, significant models for the associations between mother-adolescent mismatch and match in acculturation, enculturation and Spanish proficiency and mothers' positive outcomes were observed, whereas no significant relationship was found for English proficiency.

### Acculturation

The significant linear effects of the LOC were observed for mother resilience ( $a_{1resilience} = 0.293, p < 0.001$ ) and life meaning ( $a_{1life\ meaning} = 0.225, p = 0.002$ ). These results are



**Fig. 3** Response Surface Plots for the Polynomial Regression of Cultural Adaption Predicting Mothers' Positive Psychosocial Outcomes. A. Acculturation – Mother Resilience. B. Acculturation –

Mother Life Meaning. C. Enculturation – Mother Resilience. D. Enculturation –Mother Life Meaning. E. Spanish Proficiency – Mother Life Meaning

evident in Fig. 3A (resilience) and 3B, D (life meaning), where the pronounced linear effects of the LOC in the surface plot (downward sloping from back to front) were observed. In addition, there was a significant curvilinear effect of the LOC for mother life meaning ( $a_{2life\ meaning} = 0.271$ ,  $p = 0.009$ ). From Fig. 3B, it can be observed that there was a curvilinear pattern, such that a curvature was observed from the midpoint to high levels, but there was a flatter plane between matches at moderate and matches at low levels. For resilience, the findings revealed that mothers were more resilient when they matched with their adolescents at high, versus low, levels of acculturation. That is, matching with adolescents on higher levels of acculturation (high-high) is more promotive of mothers' positive psychosocial outcomes than matching with adolescents at lower levels of acculturation (low-low). For life meaning, the findings revealed that mothers reported more life meaning when they matched with their adolescents at high, versus moderate and low, levels of acculturation; there was no difference in life meaning for mothers who matched with their adolescents at moderate or low levels of acculturation. That is, matching with adolescents on higher levels of acculturation (high-high) is more promotive of mothers' positive psychosocial outcomes than matching with adolescents at moderate or lower levels of acculturation (mid-mid and low-low).

As for adolescent-mother mismatches, the linear effects of the LOIC were observed for mother resilience ( $a_{3resilience} = -0.379$ ,  $p < 0.001$ ) and life meaning ( $a_{3life\ meaning} = -0.273$ ,  $p = 0.001$ ). The findings are evident again in Fig. 3A (resilience) and Fig. 3 (life meaning), where the linear effects of

the LOIC (upward sloping from left to right) were observed. The findings reveal that mothers were more resilient and reported higher levels of life meaning when they reported higher, as compared to lower, levels of acculturation than their adolescents. That is, mother-adolescent mismatches in acculturation (mother > adolescent) are associated with better positive psychosocial outcomes for mothers than the converse (adolescent > mother)

### Enculturation

The significant curvilinear effects of LOC were observed for mother resilience ( $a_{2resilience} = 0.284$ ,  $p = 0.006$ ). This association is visible in Fig. 3C (resilience), where the convex u-shape (from front to back) of the LOC was observed. The findings suggest that mothers reported higher levels of positive outcomes when they were matched at either high or low levels of enculturation with their adolescents, as compared to mothers who matched at moderate levels of enculturation with their adolescents. That is, matching with adolescents on higher or lower levels of enculturation (high-high and low-low) is more promotive of mothers' positive psychosocial outcomes than matching with adolescents at moderate levels of enculturation (mid-mid).

As for adolescent-mother mismatches, the linear effects of the LOIC were observed for mother resilience ( $a_{3resilience} = -0.276$ ,  $p < 0.001$ ) and life meaning ( $a_{3life\ meaning} = -0.218$ ,  $p = 0.004$ ). The findings are evident again in Fig. 3C (resilience) and Fig. 3 (life meaning), where the linear effects of the LOIC (upward sloping from left to right) were observed. The findings revealed that mothers

were more resilient and reported higher levels of life meaning when they reported higher, as compared to lower, levels of acculturation than their adolescents. That is, mother-adolescent mismatches in enculturation (mother > adolescent) are associated with more positive psychosocial outcomes for mothers than the converse (adolescent > mother).

### Spanish Proficiency

The significant linear effects of the LOC were observed for mother life meaning ( $d_{life\ meaning} = 0.151, p = 0.004$ ). This is visible in Fig. 3E, where the pronounced linear effects of the LOC in the surface plot (downward sloping from back to front) were observed. The findings revealed that mothers reported higher levels of life meaning when they matched with their adolescents at high, versus low, levels of Spanish proficiency. That is, matching with adolescents at higher levels of Spanish proficiency (high-high) is more promotive of mothers' positive psychosocial outcomes than matching with adolescents at lower levels of Spanish proficiency (low-low).

## Discussion

Interdependence between members of immigrant families has a tangible influence on immigrants' psychosocial outcomes (Bacallao & Smokowski, 2007). Extensive research on intergenerational cultural adaptation mismatches has demonstrated that parent-child mismatches in cultural adaptation are linked with immigrant adolescents' maladjustment; however, studies have thus far overlooked the correlates of cultural adaptation mismatches with adolescents' positive psychosocial outcomes. Additionally, there is little knowledge about how intergenerational mis/matches are related to immigrant mothers' positive psychosocial outcomes; and cultural adaptation matches (as compared to mismatches) are understudied. To address these issues, the present study used response surface analysis to examine the associations between mother-child mis/matches in four cultural adaptation domains (i.e., acculturation, enculturation, English and Spanish proficiency) and their links with Mexican-origin adolescents' and their mothers' positive psychological outcomes (i.e., life meaning and resilience).

The first research question concerned how intergenerational cultural adaptation matches are associated with positive psychosocial outcomes. Consistent with the first study hypothesis that adolescents and mothers who matched at high, versus low, levels of cultural adaptation would show higher levels of positive psychosocial outcomes, there was evidence that adolescents' resilience and life meaning were associated with intergenerational matches in cultural

adaptation. Specifically, adolescents showed higher levels of resilience and life meaning when they matched with their mothers at high, versus low, levels of acculturation, enculturation, and Spanish proficiency. For Spanish proficiency, it seems likely that greater matching would facilitate mother-child communication (given children's faster acquisition of the English language), helping children bond more with their mothers and learn coping skills from them, which has been linked with higher levels of resilience in Mexican-origin families (Buckingham & Brodsky, 2015). This positive exchange between mothers and their adolescent children can also confer a greater sense of purpose and improve adolescents' sense of meaning. For enculturation, high levels may be indicative of strong ethnic identity, which has been consistently associated with greater resilience and life meaning (Cardoso & Thompson, 2010; Kiang & Fuligni, 2010). Perhaps Mexican-origin adolescents benefit from having mothers who also possess a strong sense of ethnic identity through greater cultural learning, as mothers provide a secure base for adolescents to learn about their ethnic culture and deepen their ethnic identities (Davis et al., 2015).

With regard to findings for acculturation, high levels have been associated with better adjustment to the U.S., which can buffer against challenges experienced in the acculturation process (Schwartz et al., 2010). Further, adolescents who share high levels of acculturation with their mother may enjoy greater familial solidarity and interdependence, which can facilitate greater reliance on each other (Chapin, 2015). Stronger mother-child relationships may provide environments more conducive to personal growth and positive psychosocial development (i.e., resilience and life meaning). In fact, the results indicate a curvilinear pattern of associations for life meaning (although it is important to point out that this association for adolescents' life meaning was no longer significant after correcting for multiple model testing): adolescents and mothers also reported higher levels of life meaning when they matched at low, versus mid, levels of acculturation. As compared to high-high and mid-mid mother-adolescent matched pairs, low-low matched pairs likely experience different cultural adaptation challenges – and they are also possibly the group that may find it most difficult to adjust to American culture (Telzer, 2010). Nonetheless, adolescents and mothers with matching low levels of acculturation might be better able to relate to each other's cultural adaptation difficulties, bringing them a sense of family unity. Feeling united may help them overcome their challenges and promote their sense of purpose and meaning. This notion is somewhat consistent with the rejection-identification hypothesis (Giamo et al., 2012) – that members of marginalized groups may show better, as compared to more adverse, outcomes when they choose to identify

with their ingroup (which is being marginalized) than with the majority culture. Greater ingroup identification, or in this case greater bonding between Mexican-origin mothers and adolescents, may function as a coping mechanism that provides temporary relief and solace from outgroup hostility, or in this scenario, cultural adaptation challenges and difficulties (Giamo et al., 2012). Improved bonding may be one reason why Mexican-origin mothers and adolescents who share similarly low levels of acculturation have more positive psychological outcomes. As previous research seems to have missed these important nuances, given that it has focused on parent-child cultural adaptation mismatches, future research on parent-child cultural adaptation mismatch should account for parent-child cultural adaptation matches that occur at different levels of acculturation.

Moving from adolescents to mothers, findings that confirmed the first hypothesis were also observed. When examining the links between mother-adolescent cultural adaptation matches and mothers' positive psychosocial outcomes, there was strong evidence that intergenerational matches are indeed related to immigrant mothers' resilience and life meaning. Mexican-origin mothers showed higher levels of resilience and life meaning when they matched with their adolescent children at high, versus low, levels of acculturation, a finding that parallels the results concerning mother-adolescent acculturation matching and adolescents' resilience and life meaning. This finding may suggest that interdependence between mothers and their adolescent children is similarly beneficial for Mexican-origin adolescents and their mothers: just as adolescents who matched with their mothers showed higher levels of resilience and life meaning (for both high-high and low-low matched pairs), mothers who matched with their adolescent children were equally likely to show higher levels of resilience and meaning (for both high-high and low-low matched pairs).

Results also showed that mothers reported higher levels of resilience and life meaning (although the latter finding did not meet the Benjamini-Hochberg correction test) when they matched with their child at either high or low, versus medium, levels of enculturation. Considering that Mexican-origin females traditionally hold nurturing and caregiving roles in Mexican households (Davis et al., 2015), teaching and inculcating Mexican cultural values and morals likely evokes mothers' feelings of efficacy, sense of meaning, and resilience. Interestingly, from the RSA figure, it is clear that mothers in low-low matched enculturation pairs showed the highest levels of resilience, higher even than those who matched at high-high levels. Perhaps mothers with a low level of enculturation feel less attached to their country of origin (which may have been an impetus for their immigration in the first place) and may feel less conflicted and more psychologically at ease if their children also show low levels of enculturation. Thus, mothers who matched with

their children at low levels of enculturation might be more determined to succeed in the U.S., which may be related to their higher levels of resilience and life meaning. Evidently, more research is necessary to understand why mothers in low-low enculturation matched pairs might show more positive psychosocial outcomes. In addition, it is necessary to pay attention to the different types of cultural adaptation challenges and motivations experienced by immigrant families depending on the cultural adaptation domain they match on, and the different levels at which matches can occur.

Results from RSA also showed that mothers showed higher levels of life meaning when they matched with adolescents at high, versus low, levels of Spanish proficiency. As mentioned earlier, mothers who are well matched with their children on Spanish proficiency may enjoy better communication with their children, which can improve their ability to relate to their children (Tseng & Fuligni, 2000). Mexican-origin mothers who matched at high levels of Spanish proficiency with their children may also be more skillful at helping their children navigate cultural adaptation challenges, make sense of their cultural adaptation difficulties, and remain positive and open-minded, which may in turn be related to improvements in mothers' resilience (Buckingham & Brodsky, 2015).

The present study's second research question concerned whether intergenerational mismatches are linked with adolescents' and mothers' positive psychosocial outcomes. Consistent with the second hypothesis, that mother-adolescent cultural adaptation mismatch (adolescent > mother) is related to more positive outcomes (i.e., adaptive acculturation gap), Mexican-origin adolescents were more resilient and showed more life meaning when they were more acculturated, enculturated, and more proficient in Spanish (life meaning only) than their mother, compared to when they were less acculturated, enculturated, and proficient in Spanish than their mother. For acculturation, adolescents' resilience likely increases as they acquire resilience-building skills by assisting their less acculturated mothers with navigating the daily obstacles associated with adapting to American culture (Bacallao & Smokowski, 2007; Buckingham & Brodsky, 2015). In fact, some researchers have argued that parents perceived their highly acculturated children as assets, which might provide further evidence for the idea that acculturation mismatches (when adolescents > parents) are beneficial for immigrant families (Lau et al., 2005). Helping parents may also be promotive of greater positive psychological outcomes, as adolescents discern meaning and purpose from assisting their parents in navigating cultural adaptation-related challenges (Sim et al., 2019).

It is more difficult to explain why adolescents with greater enculturation or Spanish proficiency than their



mothers would show more positive psychological outcomes as compared to when the mismatch occurred in the opposite, more normative direction (mothers > adolescents). There has been some research on these patterns of mother-adolescent cultural adaptation mismatch, which typically show worse developmental outcomes (see Telzer, 2010 for a review). It is possible that present findings reveal that mother-adolescent cultural adaptation mismatches in the unexpected direction, with adolescents more enculturated and more proficient in Spanish than their mothers, are associated with greater adolescent resilience and life meaning. A more convincing argument, however, is that these findings underscore the importance of having high levels of cultural adaptation across different domains (i.e., acculturation, enculturation and Spanish proficiency). This perspective parallels the bicultural literature: A significant body of work has demonstrated that biculturals who show high levels of both Mexican and American orientations and are able to synthesize their Mexican heritage and their experience of the American mainstream culture, typically enjoy a whole host of positive outcomes including greater self-esteem, optimism, prosocial behaviors, and improved family function (Schwartz et al., 2015). The present study is limited, as RSA analyses do not allow researchers to include all cultural domains in the same analyses. Thus, it may be important for future work to examine, for example, how mother-child differences in biculturalism may be associated with resilience and life meaning to corroborate the findings of the current study.

Moving from adolescents to mothers, the findings are also in alignment with the second hypothesis, that mother-adolescent cultural adaptation mismatch (mother > adolescent) is related to more positive outcomes. Specifically, it was interesting that mothers also reported better positive psychological outcomes when they were more acculturated and enculturated than their adolescent children than when the mismatch occurred in the opposite direction. It may be possible that these results reflect the aforementioned role of biculturalism, such that bicultural mothers also demonstrate the best positive psychological outcomes (Schwartz et al., 2015) when they exhibit high levels of cultural adaptation across multiple domains. It is also possible that a unique phenomenon is observed here, in which Mexican-origin immigrants (regardless whether mother or child) show improvements in their positive psychological outcomes when they can contribute to their family in the ways made available to them. Specifically, for those with higher acculturation, mothers and adolescents alike may feel more resilient or able to derive purpose from helping their families navigate cultural adaptation challenges; for those with higher enculturation, it may be reaffirming and strengthening to each other's ethnic identity. Perhaps, this has to do with the Mexican cultural value of familism, and it

may be particularly salient for family members to offer assistance to their family members in need (Almeida et al., 2009). Importantly, this pattern was observed because the study measured both adolescents' and their mothers' outcomes. If the study had focused only on adolescents' outcomes (as is typical in previous research), it would not have been possible to discern this unique finding.

Additionally, different from what was expected with the second hypothesis, that mother-adolescent English proficiency mismatch may be related to both mothers' and adolescents' positive psychosocial outcomes, there were no significant links between cultural adaptation mismatches in English proficiency and adolescents' outcomes. It is worth noting that mismatches in English language proficiency have been frequently noted in extant literature (i.e., when adolescents > mothers); according to the adaptive acculturation gap hypothesis, then, we might expect adolescents with greater English proficiency than their mothers to also show high levels of positive psychosocial outcomes. However, a large body of research has suggested that translating for parents is associated with stress (e.g., Kam & Lazarevic, 2014). Thus, one possible explanation for the nonsignificant findings for English proficiency is that translating stress outweighs the benefits. In general, though, the present findings may be in line with existing postulations from some researchers that specific configurations of mother-child cultural adaptation mismatch may be viewed as normative – and violations to these normative intergenerational cultural adaptation patterns may be associated with worse psychosocial outcomes (Telzer, 2010). Critically, the present study provides empirical evidence that some types of mother-child cultural adaptation mismatches (adolescent > mother) may be more beneficial for adolescents' outcomes while others (mother > adolescent) are likely better for mothers' outcomes, at least for both acculturation and enculturation.

An important contribution of the current study is the focus on positive psychosocial well-being in adolescents and mothers from immigrant families. The bulk of extant research on acculturation has taken a deficit perspective that emphasizes Mexican-origin immigrants' risks, and the perils of intergenerational mismatches, even though some researchers have reported mixed findings (Telzer, 2010). This may explain why there is a burgeoning body of work on adaptive intergenerational mismatches, such as “normative” cultural adaptation mismatches (Telzer et al., 2016). Instead of focusing on how intergenerational cultural adaptation mismatches are associated with lower levels of negative outcomes, the present study adopts a different perspective, examining how intergenerational cultural adaptation mismatches are associated with Mexican-origin adolescents' and their mothers' positive psychosocial outcomes. Adopting a strengths perspective highlights areas of

flourishing in Mexican-origin immigrant families. This study is one of the first to focus on the relationship between mother-child cultural adaptation mis/matches and positive psychosocial outcomes, and it provides a fresh point of view in the intergenerational cultural adaptation mismatch literature. Based on the present findings, policymakers can adopt two-prong approaches that focus not only on alleviating risks, but also on developing programs that sustain and build upon Mexican-origin immigrants' successes. Understanding the protective factors that boost Mexican-origin families' psychosocial well-being may be just as important as understanding how to reduce their risks.

As the literature places a disproportionate emphasis on children's adjustment, another important strength of the current study is that it attends to parental outcomes when examining parent-child cultural adaptation mis/matches. The findings here suggest that the familial cultural adaptation process does not just go downstream (i.e., from parent to child) but is instead mutually influencing (i.e., both from parent to child and child to parent). In fact, there was a similar number of significant associations for mothers' and for adolescents' psychosocial well-being. Among these associations, there appeared to be more results for matching than for mismatching. Additionally, the results also showed many curvilinear associations, such that both high-high and low-low matched pairs showed more positive outcomes than mid-mid matched pairs. This finding may suggest that higher levels of cultural adaptation may be beneficial for promoting positive psychological outcomes; but it is possible that there is something unique about mother-child matching that relates to maternal positive psychosocial outcomes. For instance, the sense of interdependence and solidarity that mothers derive from matching with their children (regardless of whether this occurs at high or low levels) may build up mothers' resilience and life meaning. The usual focus on immigrant child outcomes is important for helping us understand immigrant youth maladjustment, but we should not lose sight of how immigration is a symbiotic process that implicates many members of the family. Future research on immigrant families may benefit from assessing parent outcomes. On a more practical level, scholars and policymakers may spearhead family-level integration programs that capitalize on the dyadic influence of parent-child relationships, such that improvements in Mexican-origin adolescents' cultural adaptation can benefit parents' psychosocial outcomes.

Despite the current study's merits, some limitations must be acknowledged. First, the study was cross-sectional in nature; thus, it was not possible to examine the temporal order of the associations between cultural adaptation mis/matches and adolescents' and mothers' positive psychosocial outcomes. Although there was access to longitudinal data, only the first wave of data was used because RSA requires a sufficient

number of datapoints. Future studies should incorporate a longitudinal design with a larger dataset to clarify the directionality, or potential bidirectionality, between cultural adaptation mis/matches and positive psychosocial outcomes. Relatedly, the current study focused on Mexican-origin immigrants because they are the largest group of immigrants in the U.S. (López et al., 2017); considering that the cultural adaptation-gap distress model has been applied to other immigrant populations (e.g., Asian American; Telzer, 2010), it may be important to replicate the present research with other groups of immigrants and examine whether the present results hold true. Additionally, dyadic RSA was used in the present study, as the goal of the work here was to understand how mis/matches are associated with Mexican-origin adolescents' and their parents' positive psychosocial well-being. However, each RSA model is limited to only one cultural adaptation domain, and is thus unable to account for how different patterns of intergenerational cultural adaptation may be linked to positive psychosocial outcomes simultaneously. Perhaps matches in one domain might be counteracted by mismatches in another domain, resulting in different outcomes. Future research adopting person-centered approaches may identify how different family-level cultural adaptation profiles are associated with adolescents' and their mothers' positive psychosocial outcomes.

## Conclusion

Despite extensive work on immigrant parent-child cultural adaptation mismatches and their links with adolescent maladjustment in extant literature, few studies have investigated how parent-child cultural adaptation mismatches are associated with both parents' and adolescents' positive psychological outcomes. Further, there is an absence of research that has clearly distinguished between different levels of parent-child matching (i.e., high-high, mid-mid, low-low). To address these gaps, the current study examined Mexican-origin mothers' and adolescents' cultural adaptation and showed that intergenerational mis/matches in cultural adaptation are differentially associated with Mexican-origin families' positive psychosocial outcomes. Matches between mothers and adolescents were generally associated with higher levels of both mothers' and adolescents' resilience and life meaning. Interestingly, it was noted that adolescents (mothers) reported more resilience and life meaning when they showed higher levels of cultural adaptation than mothers (adolescents). To better explain how Mexican-origin families adapt to immigration-related stressors and experience thriving and growth, perhaps the parent-child cultural adaptation gap literature would benefit from adopting a strengths perspective, and future researchers may include assessments of positive development. Additionally,

the study of intergenerational mis/matches in cultural adaptation is incomplete without including parental outcomes, along with a proper comparison of intergenerational mismatches versus different levels of matching. More research is needed to understand the mechanisms underlying the associations found in the present study.

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**Data Sharing Declaration** Data for this manuscript's data will not be deposited.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare no competing interests.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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## Appendix

### Mother/Adolescent Self-Report of Life Meaning

*How much do you agree with the following statements?*

1	Strongly disagree
2	Disagree
3	Neutral/Depends
4	Agree
5	Strongly agree

1. I understand my life's meaning
2. My life has a clear sense of purpose
3. I have a good sense of what makes my life meaningful

### Mother/Adolescent Self-Report of Resilience

*How much do you agree with the following statements?*

1	Strongly disagree
2	Disagree
3	Neutral/Depends
4	Agree
5	Strongly agree

1. I can deal with whatever comes
2. I tend to recover easily after an illness or hardship
3. I am not easily discouraged by failure

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