ETHNIC IDENTITY AND STRESS APPRAISAL AS ACCULTURATIVE 
STRESS PROCESSES AMONG ARmenian americANS

By

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Abstract

ETHNIC IDENTITY AND STRESS APPRAISAL AS ACCULTURATIVE STRESS PROCESSES AMONG ARME\nNIAN AMERICANS

Tsolak Michael Kirakosyan

The current study examined the role of ethnic identity and stress appraisal as buffers of the relationship between acculturative stress and wellbeing in a national sample of Armenian American adults between eighteen and thirty-nine years old ($N = 159$; $62.89\%$ women, $32.08\%$ men; mean age = 25.59, $SD = 5.30$). Acculturative stress positively correlated with depressive symptoms, and negatively with self-esteem and positive stress appraisal. Stronger ethnic identity affirmation and belonging was related to less depressive symptoms, more positive stress appraisal, and greater self-esteem and life satisfaction. In hierarchical linear regression analyses, acculturative stress significantly predicted more depressive symptoms, though it was not predictive of self-esteem or life satisfaction. Two-way interaction effects were not detected between acculturative stress and either intervening variable (i.e., ethnic identity or stress appraisal). Furthermore, the two-way interaction between ethnic identity and stress appraisal did not significantly predict the link between acculturative stress and wellbeing, nor was the three-way interaction between the predictor and the intervening variables. The discussion reviews sociocultural characteristics of the study sample and the population as a whole that may have contributed to these results. Future directions for examining the cultural experiences...
of Armenian Americans prioritize the collection of representative samples and validation
of measures for use in this population.
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While these words are mine, it is the love and support provided by those around me that made them possible. My deepest gratitude to friends and family, people involved in outreach, and my committee. Special thanks to the encouragement, guidance, and wisdom shared by my advisor.

This is dedicated to the Armenian diaspora around the world and the continuation of our people for at least as many millennia as we have prospered thus far.
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Introduction

Armenians are an ancient ethnic group indigenous to the Southern Caucasus Mountains and Armenian Highlands in the Middle East. The United States holds the third largest population of Armenians in the world, preceded by the Republic of Armenia and Russia (Hakobyan, 2013). The U.S. Census Bureau’s American Community Survey estimates 483,366 Armenians in America (U.S. Census Bureau, 2011), while other sources estimate over 1.5 million nationwide (Obama, 2008) and 500,000 in Southern California alone (Papazian, 2000). The Los Angeles metropolitan area holds the largest and densest population of Armenian Americans, while other notable communities exist along the east coast, namely Massachusetts and New York (U.S. Census Bureau, 2000). Armenian migration to the U.S. was prompted by persecution and instability in and around their homeland (Papazian, 2000).

Historical Background of the Armenian Diaspora

In the 17th century, the westernmost region of historical Armenia (i.e., Western Armenia) was colonized by the Ottoman Turkish Empire (Bournoutian, 2006). Discriminatory policies and practices severely limited the liberties of Western Armenians, eventually resulting in civil unrest and small-scale rebellions (Bournoutian, 2006). Dissent was suppressed with state-sanctioned massacres of over 200,000 Armenian villagers around 1895 (Okoomian, 2002). In 1915, the Armenian Genocide began with the detainment and murder of thousands of Armenian intellectuals and
community leaders (Bournoutian, 2006). Over the next few years, the Turkish ruling elite ordered the systematic killing of about 1,500,000 Western Armenians, or nearly half of the total Armenian population at the time. Many escaped to the Republic of Armenia, other parts of the Middle East, and the Americas (Papazian, 2000).

Genocide survivors who fled to California, the Midwest, and New England were the first of three major waves of Armenian migration to the U.S. (Papazian, 2000). In the 1970’s, the second wave emerged from the Middle East amid political instability (Papazian, 2000). Diverse backgrounds included Genocide survivors who fled to Lebanon and members of centuries-old Armenian communities in Iran. The collapse of the Soviet Union backdropped the latest and largest wave of about 500,000 migrants from Armenia, Russia, and Azerbaijan who laid grounds to expansive enclaves in the Los Angeles area (Papazian, 2000). Small-scale immigration continues to this day. Despite varied histories, transnational members of the U.S. diaspora are connected by a shared sense of being Armenian.

**Armenian Americans**

Armenian identity is resilient among Armenian Americans (Bakalian, 2001). Cultural knowledge common to this sense of belonging (e.g., language, traditions, history) is passed down through strong family bonds, Armenian schools, ethnic enclaves, and the Armenian Apostolic Church (Yazedjian, 2008). For example, the common practice of teaching children about the Genocide drives a lifetime of collective experiences such as public remembrance events and advocacy against Genocide
denialism. Furthermore, the threat of eradication by the Genocide itself promotes a desire to perpetuate Armenian identity (Yazedjian, 2008). While such beliefs and practices distinguish Armenians from mainstream Americans, the difficulties associated with living between distinct cultures may be eased by the psychological aspects of Armenian identity (Papazyan, Bui, & Der-Karabetian, 2016; Yaralian, Der-Karabetian, & Martinez, 2009).
Ethnic identity is the multifaceted sense of belonging to an ethnic group that develops in conjunction with one’s overall sense of self (Phinney, 1993). Feeling positively about one’s ethnic group membership (i.e., ethnic identity affirmation and belonging) is linked to healthy outcomes (e.g., high self-esteem), especially among adolescents and young adults (Smith & Silva, 2011). This relationship is particularly salient amid stressors common to ethnic minorities (Phinney, 1993). For example, the link between acculturative stress and negative outcomes (e.g., depression) is ameliorated among individuals endorsing a highly positive sense of belonging to one’s ethnic group (Cheng, Hitter, Adams, & Williams, 2016; Iturbide, Raffaelli, & Carlo, 2009; Polanco-Roman & Miranda, 2013). Researchers have suggested that such an effect may also exist among Armenian Americans, though it has not been tested (Papazyan et al., 2016).

Psychological acculturation is the process through which members of ethnic groups retain the practices and attitudes of their heritage culture while adapting to those of the mainstream culture (Berry, 2006). Acculturative stress is derived from the ongoing experience of reconciling between the cultures, which can include pressures to conform to either one (Mena, Padilla, & Maldonado, 1987; Rodriguez, Myers, Bingham Mira, Flores, & Garcia-Hernandez, 2002). As with other forms of stress, it is associated with poor wellbeing such as lower life satisfaction among Armenian American women (Papazyan et al., 2016). Because acculturative stress is inherently due to belonging to an ethnic group, espousing strong feelings of ethnic identity affirmation and belonging may
serve as a buffer against negative outcomes. Furthermore, universal stress processes can also play a role in ameliorating the relationship between acculturative stress and developmental outcomes.

Stress appraisal is the subjective perception of a taxing stressor (e.g., acculturative stress) that ranges from manageably challenging to overwhelmingly threatening (Lazarus & Folkman, 1984). Positive stress appraisal (e.g., challenging) is associated with more effective management of the stressor and ultimately greater wellbeing. Furthermore, positive appraisal may buffer the stress-wellbeing link under highly stressful conditions (Klag & Bradley, 2004; Kobasa, 1979; Lazarus & Folkman, 1984; Pengilly & Dowd, 2000; Wiebe, 1991). The current study will test this effect in relation to acculturative stress as postulated by several theorists (Berry, 1992; Kuo, 2014; Williams & Berry, 1991). Furthermore, the novel interaction between stress appraisal and ethnic identity in predicting the link between acculturative stress and wellbeing will be explored.

**Identity Development**

Identity is a clear, continuous, and dynamic sense of self as an individual (Erikson, 1968) and social group member (Tajfel & Turner, 1979). Erikson’s (1968) psychosocial model of development views identity as a product of the bidirectional interplay between internal (e.g., psychological) and environmental (e.g., cultural) factors over the lifespan (Erikson, 1968). Infants internalize attitudes and behaviors from their caregivers as they learn to trust in others (ages 0-2) and autonomously navigate their environment (2-4). With a newfound sense of independence, children begin to recognize
themselves as unique beings. Limits of initiative are tested (5-8) and industriousness is
grown through skill building (9-12). During the adolescent period of identity versus role
confusion (13-19), the primary psychosocial challenge is to make sense of oneself as an
individual and group member using the traits developed up to this point. Marcia (1980)
expands on the multiple dimensions of identity development.

Exploration of identity alternatives and commitment to a clear sense of self
differentiate four identity statuses: diffusion, foreclosure, moratorium, and achievement
(Marcia, 1980). Diffusion and foreclosure are characterized by little to no exploration.
The former feels ambiguously about oneself while the latter makes commitments based
on the desires of others (e.g., parents). While foreclosure affords greater wellbeing,
commitments made via conformity are less stable than those formed through exploration
(Waterman, 1982).

Moratorium is a period of active and meaningful attempts to understand oneself
by exploring different social groups, ideologies, occupations, and other identity-relevant
information (Marcia, 1980). This status is associated with greater wellbeing than
foreclosure, despite the anxiety-provoking urge to resolve the identity crisis (Kroger &
Marcia, 2011). Identity achievement is reached when exploration results in autonomously
chosen commitments. Experiences, aspirations, and perceptions of oneself and others are
integrated into a clear, cohesive, and stable sense of self, which is associated with the
most optimal wellbeing (Marcia, 1980). Outcomes of the identity statuses can be
understood by their relationship to stress.
Identity development is inherently stressful because it involves engaging in novel experiences, observing responses from others, and adapting behaviors in the future (Erikson, 1968). During adolescence, autonomous exploration of diverse social situations builds the capacity to navigate novel stressors, especially amid high-stress conditions. For example, receiving information that conflicts with one’s identity often disrupts the unstable commitments of foreclosed individuals, who are then likely to experience diffusion or an identity crisis (Kroger & Marcia, 2011). On the other hand, identity achievers are better able to maintain their sense of self because they built the internal resources to deal with conflict during moratorium. Such identity-based stressors are common in the experiences of acculturating individuals (e.g., ethnic group members, immigrants) via the conflicts associated with retaining their heritage culture and adapting to mainstream society (Rodriguez et al., 2002).

**Acculturation and Acculturative Stress**

Acculturation occurs on societal (e.g., multiculturalism) and psychological levels (Berry, 2005); for the purposes of this study, this review focuses on the latter. Psychological acculturation is the ongoing process through which ethnic group members negotiate the balance between maintaining their heritage culture and participating in the mainstream culture (Berry, 2005). These dimensions differentiate acculturation strategies describing the varying ways individuals learn to navigate this psychosocial task.

Biculturalism is the ability to shift between institutions and/or social circles of both cultures with relative ease (Berry, 2005). This can be accomplished by combining
elements of the two or modifying behaviors to match the immediate cultural context (Schwartz & Unger, 2010). For example, individuals with ethnic first names often introduce themselves with Anglo versions (e.g., “George” instead of “Gagik”) in mainstream U.S. spaces to reduce experiences of discrimination (Zhao & Biernat, 2017). Bilingualism and language blending (e.g., Spanglish) are also common practices of biculturalism, though heritage language transmission is not always necessary. For example, the assimilationist policies in the U.S. during the mid-1900’s lead to a widespread lack of heritage language proficiency among U.S.-born children of the post-Genocide wave of Armenian immigrants (Bakalian, 2001). In response, Armenian American publications began to release bilingual versions to expand group norms by including non-Armenian speakers in the maintenance of their heritage culture.

Biculturalism is generally related to the most adaptive outcomes of the acculturation strategies, such as less stress, lower depression, and greater self-esteem among Armenian American adults (Berry, 2005; Vartan, 1996; Yaralian et al., 2009). However, this strategy is not always adaptive or accessible (Schwartz, Unger, Zamboanga, & Szapocznik, 2010).

Assimilation is the loss of heritage traditions in favor of mainstream practices and values (Berry, 2005). Immigrants in the U.S. may stop using their heritage language, fully adopt an Americanized name, and raise their children with little to no ethnic socialization. This strategy can, however, be sprinkled with biculturalism, as in the case of assimilated Italian-Americans who retain their traditional cuisine (Pintz, 2013). Though generally associated with poorer wellbeing than biculturalism, assimilation can
be advantageous where diversity is scant or frowned upon such as the American Midwest (Schwartz & Unger, 2010). Ethnic enclaves, on the other hand, can allow for the following strategy.

Separation is characterized by exclusive participation in the heritage culture with little to no contact with mainstream society, which can be voluntary or imposed by the dominant group (Berry, 2005). In the case of Muslim Arabs in the U.S., no differences in wellbeing are found between bicultural and separated individuals (Amer & Hovey, 2007). Intermixing with mainstream society is coupled with higher instances of discrimination, which likely cancels out the benefits of biculturalism, rendering separation an adaptive mode of acculturation. Unlike the mixed results of the strategies reviewed thus far, the following strategy, marginalization, seems to be universally associated with the greatest levels of stress and least adaptive outcomes (Berry, 2005).

Marginalization consists of alienation from both the heritage culture and mainstream society (Berry, 2005). Like separation, this can be caused by voluntary withdrawal or forced exclusion by both groups. Marginalization can be seen in individuals with more than one disempowered identity, such as queer immigrants (Fuks, Grant, Pelaéz, De Stefano, & Brown, 2018). Isolation from the host society based on ethnicity can be intensified by sexual identity-based discrimination, which can also isolate individuals from their heritage group. The difficulties of marginalization are associated with a lack of social support and other related coping resources. For example, queer Muslim immigrants may be isolated from religious institutions, thereby reducing their access to the protective effects of religiosity (Amer & Hovey, 2007). While the
challenges associated with acculturation clearly vary by strategy, as well as other factors discussed later, the process is inherently stressful to all acculturating individuals.

Acculturative stress is the ongoing reconciliation of the heritage and mainstream cultures that include attitudinal, familial, social, and environmental conflicts (Mena et al., 1987). Taxing attitudes such as thoughts and feelings about being separated from one’s friends, family, and heritage culture are prevalent among recent immigrants who left behind their country of origin. Familial conflicts surface when personal values and aspirations associated with the host country conflict with the traditional expectations of one’s family. For example, intermarriage among Armenian Americans can incite vocal opposition from family members who view such actions as a threat to the continuation of their culture (Jendian, 2009). Social and environmental strains, on the other hand, arise from relations with members of the host country (Mena et al., 1987). These include social isolation, language difficulties resulting in communication challenges, interpersonal prejudice (e.g., being judged for practicing heritage customs), and structural discrimination (e.g., being denied a job seemingly on the basis of ethnicity).

Acculturative stress is related to poor wellbeing (e.g., low life satisfaction among Armenian American women), though the presentation and severity of its effects vary across generational status (Papazyan et al., 2016; Rodriguez et al., 2002).

Recent immigrants, especially older ones who underwent Erikson’s (1968) identity versus role confusion prior to contact, are likely to experience conflicts with members of the mainstream culture such as being pressured to assimilate (Rodriguez et al., 2002). Conversely, children of immigrants undergo identity development in the host
country. Thus, they tend to adopt more characteristics of the mainstream group and drift away from heritage customs. Therefore, they are more likely to experience conflicts with members of their own ethnic group, including their family (e.g., pressure to retain heritage culture). For example, when the children of Armenian immigrants in the U.S. assimilate more readily than their parents, intergenerational conflicts (e.g., language barriers) arise resulting in strained parent-child relationships and mutual feelings of isolation (California Department of Mental Health, 2013). The intensity of acculturative stress also varies across ethnic groups based on the degree of similarity to the mainstream culture (Berry, 1992).

Congruence with the Christian religious norms of the dominant group in the U.S. is advantageous for immigrants, especially in post-9/11 society where anti-Muslim sentiment is rampant (Bakalian, 2002; Tehranian, 2008). Amer and Hovey (2007) found that biculturalism is associated with adaptive wellbeing among Christian Arab Americans as predicted by Berry (2005). In contrast, Muslim Arab participation in mainstream U.S. society is linked to greater acculturative stress (e.g., religious discrimination), which washes out the benefits of biculturalism. Armenians’ Eastern Orthodox practices are not fully aligned with the dominant forms of Christianity in the U.S., though they induce less scrutiny than other religions (Amer & Hovey, 2007). While anti-Muslim discrimination can contribute to the acculturative stress of Armenians via broader anti-Middle Eastern attitudes (Tehranian, 2008), ethnic Armenians from Muslim-dominated countries may stand to benefit from this diasporic history in other ways.
A history of acculturation prior to the U.S. may give Armenian American immigrants from the diaspora (e.g., Iranian Armenians) an advantage over those from the Republic of Armenia (i.e., Hyastancis) where they are the dominant ethnic group (Pintz, 2013). For example, Armenian communities in Turkey and Iran have widely endorsed biculturalism for centuries despite minority status, lacking congruence with the mainstream religion, and even violent persecution (e.g., Armenian Genocide). Thus, individual and intergenerational experiences with acculturation may teach diasporic Armenian Americans greater skills for managing acculturative stress and adopting bicultural practices. Support for this notion comes from the higher incidence of anxiety among Hyastancis compared to Armenians from other Middle Eastern countries (Vartan, 1996). That being said, this study did not measure acculturative stress or detect group differences in rates of biculturalism. Furthermore, the heightened anxiety could be accounted for by Hyastancis’ significantly lower income than their counterparts from other countries. Nonetheless, lessons learned from experiences of acculturative stress in other societies may aid individuals navigating new host countries, especially since acculturation is an inherently dynamic process.

Far from static, acculturation is ongoing and marked by readaptations to contextual changes. The historical shifts in attitudes toward Muslims, Arabs, and the Middle East post-9/11 in the U.S. came with new acculturative challenges for individuals with these identities (Tehranian, 2008). Racialization as White weakened, physical features became demonized, and pride in one’s familial nation of origin became a potential source of stress. Furthermore, this racial othering has been coupled with a lack
of recognition from the U.S. government, thus barring Middle Eastern people from civil rights granted to other racial minorities (Tehranian, 2008). The most violent forms of discrimination generally target Middle Eastern Americans of Muslim faith, yet Armenians and other Christian Middle Eastern groups still face challenges associated with this shift. Furthermore, while some adaptations can be long-term, others shift with everyday changes in context (Berry, 2005). A prime example is the previously-mentioned acculturative experience of assessing one’s immediate context to decide whether using one’s ethnic name is safe (Zhao & Biernat, 2017). Such historical and everyday changes render acculturation and its associated stresses never-ending. Thus, the survival of oppressed cultures over time emphasizes the role of protective factors.

Due to centuries of acculturative stress imposed upon Armenians, it is important to study the psychological factors that may have bolstered the preservation of their ethnic identity. Among other ethnic groups (e.g., Mexican Americans), special attention has been paid to ethnic identity as a buffer of acculturative stress since both are inherently related to ethnic group membership. Of particular interest are acculturating individuals’ subjective feelings toward their heritage group (Cheng et al., 2016; Iturbide et al., 2009; Neblett, Rivas-Drake, & Umaña-Taylor, 2012; Polanco-Roman & Miranda, 2013).

Ethnic Identity

Ethnic identity is the multidimensional sense of belonging and connection to one’s ethnic group (Phinney, 1993; Tajfel & Turner, 1979). As a part of Erikson’s (1968) identity versus role confusion, ethnic identity development is influenced by psychosocial
factors (e.g., access to cultural resources, family socialization) and takes place in three stages: unexamined, moratorium, and achievement (Knight, Bernal, Cota, Garza, & Ocampo, 1993; Phinney, 1993; Yazedjian, 2008). Unexamined ethnic identity is adopted from the opinions of others (e.g., family) and typical during childhood. If unexamined during adolescence or adulthood, outcomes include diffusion (e.g., lack of interest in one’s ethnicity) or foreclosure (e.g., views of one’s ethnicity based on conformity). While foreclosed individuals can still feel a strong sense of belonging and connection to their group, such commitments can be unstable. Thus, meaningful exploration is key to forming a stable sense of self in relation to one’s ethnic group (Phinney, 1993).

Moratorium is the autonomous exploration of the heritage culture that can take place gradually or be induced by an identity-based stressor (e.g., acculturative stress). During this period, Armenian Americans may attend church, participate in Genocide recognition activism, and examine traditional values such as familism (Yazedjian, 2008). The final stage of achievement is reached when exploration develops into resolution, which is a meaningful and clear sense of belonging to one’s ethnic group usually accompanied by ethnic identity affirmation, or positive attitudes and feelings such as group pride (Phinney, 1993).

Ethnic identity affirmation and belonging is a stress buffer, which is a psychological resource associated with a reduction in the negative relationship between perceived stress and wellbeing (Shelton et al., 2006). This function is particularly salient when the stress is related to ethnic group membership (Cheng et al., 2016; Iturbide et al., 2009; Polanco-Roman & Miranda, 2013; Neblett et al., 2012; Romero & Roberts, 2003).
For example, at low levels of acculturative stress, Mexican American women with high ethnic identity affirmation and belonging report fewer depressive symptoms than their counterparts who feel less affirmed and connected (Iturbide et al., 2009). Two other studies with ethnically diverse samples found this relationship at high levels of acculturative stress (Cheng et al., 2016; Polanco-Roman & Miranda, 2013). Papazyan and colleagues (2016) postulated that the role of ethnic identity as a buffer is replicable among Armenian Americans (Papazyan et al., 2016).

The mechanisms underlying this protective effect may be linked to the relationship between ethnic identity affirmation and belonging and heightened self-esteem (Phinney, 1993; Tajfel & Turner, 1979). Positive evaluation of one’s ethnic group membership and overall self-worth reduces susceptibility to others’ evaluations, such as those characterizing acculturative stress. Furthermore, factors universal to the stress process introduce another potential buffer.

**Stress Appraisal**

Stress is the psychosocial product of environmental stimuli (e.g., acculturative stress) being perceived as taxing, harmful, and exceeding one’s ability to cope (Lazarus & Folkman, 1984). Once a stressor is detected, co-occurring stress appraisals give it more meaning. Primary appraisals (i.e., threat, challenge, centrality) assess the dangers and manageability of the stressor itself, which are reciprocally informed by the secondary appraisal of behavioral or psychological coping resources within one’s reach. Positive stress appraisal reevaluates the situation as a challenging and manageable opportunity.
that may even lead to growth. Associated feelings include confidence and optimism.

Negative appraisal exacerbates the perception of an overwhelmingly harmful threat with anxiety and hopelessness, especially when secondary appraisal assesses a lack of coping resources. Heightened stress is linked to poor wellbeing, though appraising it positively may act as a buffer of this relationship.

Investigations into the moderating role of appraisals in the stress-wellbeing link has focused on hardiness, which is a personality style that predisposes individuals to view taxing stimuli as challenging, manageable, and compatible with one’s commitments (Kobasa, 1979). Thus, this review will discuss hardiness as a type of appraisal that mostly overlaps with the conceptual definition by Lazarus and Folkman (1984), save for the commitment component. Under high stress conditions (e.g., major life events), hardiness is associated with a reduced link between stress and poor wellbeing when compared to individuals predisposed to perceive threat (Klag & Bradley, 2004; Kobasa, 1979; Pengilly & Dowd, 2000; Wiebe, 1991). By extension, positive appraisals of specific stressors, as opposed to trait-like predispositions as in hardiness, may also exhibit this effect. For example, several theorists have suggested this association exists in relation to acculturative stress, though empirical studies have yet to confirm this (Berry, 1992; Kuo, 2014; Williams & Berry, 1991).

The mechanism behind this effect is partially understood by the functional and psychological aspects of the bidirectional link between stress appraisal and coping. For example, positive stress appraisal is related to more effective coping resources, indicating a realistic appraisal of a heightened ability to deal with stress (Lazarus & Folkman,
1984). However, unrealistic appraisals can also influence the stress process, such as when a coping response is believed to be inactional despite being within one’s capacity. That being said, specific interactions between stress appraisal and psychological coping resources are not well understood. For example, both theoretical discussions and empirical evidence are lacking on the interaction between acculturative stress appraisal and ethnic identity affirmation and belonging.

The buffer effect exhibited by these psychological resources may interact to further ameliorate the stress-wellbeing relationship. It stands to reason that if ethnic identity affirmation and belonging and positive stress appraisal are related to a reduced link between stress and poor wellbeing, they may work together to produce buffering effects above and beyond either one on its own. Furthermore, while distinct, these variables are certainly connected to one another since ethnic identity affirmation and belonging is a psychological coping resource that is likely assessed during secondary appraisal of acculturative stress. Therefore, the current study explored this novel interaction.

**Proposed Study**

Mechanisms associated with the link between acculturative stress and poor wellbeing are understudied among Armenian Americans. Members of other ethnic groups benefit from a stress buffer role of ethnic identity affirmation and belonging, the replicability of which was tested among Armenian Americans (Cheng et al., 2016; Iturbide et al., 2009; Papazyan et al., 2016; Polanco-Roman & Miranda, 2013).
Furthermore, trait-like positive stress appraisal (i.e., hardiness) shares a similar buffering role in relation to other stressors (Kobasa, 1979), though previous research has not examined appraisals of specific environmental stimuli. Thus, the potential ameliorating effect of positive acculturative stress appraisal was examined. Lastly, the current study explored the novel interaction between these two stress buffers (i.e., ethnic identity and stress appraisal).

**Hypotheses.** Based on previous findings and gaps in the literature, the following hypotheses were tested using acculturative stress as a predictor, ethnic identity and stress appraisal as intervening variables, and self-esteem, life satisfaction, and depressive symptoms as outcomes.

1. Acculturative stress is negatively associated with wellbeing, specifically low self-esteem and life satisfaction, and high depressive symptoms.

2. Ethnic identity affirmation and belonging will ameliorate the relationship between acculturative stress and wellbeing. At high levels of acculturative stress, individuals with high ethnic identity affirmation and belonging will experience significantly greater wellbeing (i.e., higher self-esteem and life satisfaction, lower depressive symptoms) than those reporting low levels of ethnic identity.

3. Positive stress appraisal will similarly mitigate the stress-wellbeing link. At high levels of acculturative stress, participants who positively appraise stress will report significantly greater wellbeing than those using negative appraisal.

To explore the novel interaction between acculturative stress, ethnic identity, and stress appraisal in predicting wellbeing, the following hypothesis was formulated:
4. The relationship between acculturative stress and wellbeing will look different when ethnic identity and stress appraisal work together. Specifically, at high levels of acculturative stress, the stress-wellbeing link will be weakest among participants reporting both high ethnic identity affirmation and belonging and positive stress appraisal. The link will be stronger among those with buffering levels of only one of the moderators, and strongest among participants with both low levels of affirmation and belonging and negative stress appraisal.
Method

Participants

The target population for this study was self-identified Armenians 18 to 39 with at least one Armenian-identified parent in the following metropolitan areas: Los Angeles County, San Francisco Bay Area, New York City, and Boston. The originally-intended age range of 18 through 29 was opened up to anyone 18 and over to account for the initially low response rate. However, analyses excluded participants 40 and over due to sixteen outliers and significant group differences (see Table 1), leaving a total of 159 participants. The average age of the analytic sample was 25.59 years old. The majority of participants were women (62.9%), heterosexual (74.2%), college educated (70.8%), earned an income above $50,000 (62.8%), and were born in the U.S. (67.9%).

Table 1. Comparison of Age Group Differences

<table>
<thead>
<tr>
<th>Variable</th>
<th>Under 40</th>
<th>40 and Over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (Standard Deviation)</td>
<td>Mean (Standard Deviation)</td>
</tr>
<tr>
<td>Acculturative Stress</td>
<td>1.33 (0.81)</td>
<td>0.86 (0.78)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.98 (0.60)</td>
<td>3.35 (0.48)</td>
</tr>
<tr>
<td>Life Satisfaction</td>
<td>4.58 (1.41)</td>
<td>5.28 (1.40)</td>
</tr>
<tr>
<td>Depression</td>
<td>1.88 (0.60)</td>
<td>1.49 (0.53)</td>
</tr>
</tbody>
</table>

Note. Participant Ns ranged from 143 to 159 under 40 and 75 to 80 over 40, depending on the variable. All mean differences presented are significantly different ($p < .001$).
Recruitment. Participants were recruited using volunteer and snowball sampling due to the specificity of the ethnic group. The researcher contacted community groups (e.g., Armenian Students Association), social media pages (e.g., Armenian Artists), and Armenian Apostolic churches to request assistance with publicity. They were given printable and digital varieties of the same flyer containing a general study summary, project branding (i.e., “Armenian Cultural Experiences Project”), eligibility requirements, a survey link, raffle details, and contact information for the researcher (see Appendix A). These were shared through social media, email lists, and physical bulletin boards. At the end of the debrief form, participants were asked to share the survey with friends and family (see Appendix B). Participants were compensated by being entered into a raffle to win one of three Amazon gift cards valued at $15, $20, and $25. After data collection, three randomly chosen participants were sent the gift cards.

Procedure

The study consisted of a thirty minute online self-report survey on Qualtrics. Participants gave their consent before the questionnaire (see Appendix C). They were able to opt out by closing the window at any time. To enter the raffle, identifiable information (e.g., email address) was provided by most participants. For confidentiality, this information was stored on a secure hard drive and will be destroyed one year after data collection is completed.

The survey began with demographics (see Appendix D). The remaining measures were randomized, with the exception of the Stress Appraisal Measure Revised. This scale
always followed the Multidimensional Acculturative Stress Inventory for methodological reasons explained in the measurements section below (Rodriguez et al., 2002; Roesch & Rowley, 2005).

Participants were debriefed at the end of the survey. The debrief form included contact information for Armenian organizations (e.g., Armenian General Benevolent Union) and national mental health services (e.g., Armenian American Mental Health Association, SAMHSA’s National Helpline). IRB approval was obtained prior to data collection.

Measures

Demographics. Participants specified age (in years), gender (0 = woman; 1 = man; 2 = non-binary/non-conforming; 3 = not listed, fill-in), sexual identity (0 = heterosexual/straight, 1 = gay or lesbian, 2 = bisexual, 3 = not listed, fill-in), and highest degree completed (0 = some high school, 1 = high school, 2 = some college, 3 = college, 4 = graduate school). Familial annual household income was given using the following scale based on previous research: less than $10,000, $10,001 - $15,000, $15,001 - $25,000, $25,001 - $50,000, $50,001 - $75,000, $75,001 - $100,000, more than $100,000 (Diemer, Mistry, Wadsworth, López, & Reimers, 2012). Participants also provided where they were born as well as where their parents and grandparents were born. Participants born in another country were asked to report their length of residence in the U.S.

Ethnic identity. The Multigroup Ethnic Identity Measure’s affirmation, belonging, and commitment subscale is a 7-item survey assessing the strength and
positivity of one’s identification with an ethnic group (Phinney, 1992). This component of ethnic identity has the most support as a stress buffer (Neblett et al., 2012). The items (e.g., I am happy I am a member of the group I belong to) are rated on a 4-point scale (1 = does not describe me at all, 4 = describes me very well) where higher scores indicate higher levels of ethnic identity affirmation and belonging. The subscale has good internal consistency in this sample (α = .93) and it has been validated among multiethnic young adults (Phinney, 1992).

**Acculturative stress.** The Multidimensional Acculturative Stress Inventory’s pressure to assimilate and pressure to retain heritage culture subscales are an 11-item measure of frequency and general stressfulness of acculturation-related experiences over the past 3 months. Two additional subscales used to assess the pressures of learning English and Armenian were excluded because the sample experienced significantly lower language pressure stress. Initially intended for Mexican Americans, the entire scale was adapted for Armenian Americans by appropriately replacing ethnic and linguistic designations. The items (e.g., It bothers me when people pressure me to assimilate to the American ways of doing things) are rated on a 6-point scale (0 = does not apply, 1 = not at all stressful, 5 = extremely stressful). Participants indicated whether they have experienced a stressor followed by its subjective stressfulness where higher scores reflect higher experiences of stress.

The scale has good internal consistency (α = .82) in this sample and test-retest reliability among Mexican American adults (r = .71; Rodriguez et al., 2002). Construct validity is supported by appropriate associations between acculturative stress and salient
social demographics (Rodriguez et al., 2002). For example, immigrants tend to experience more pressure to retain heritage as their time in the U.S. increases.

**Stress appraisal.** The Stress Appraisal Measure - Revised is a 19-item measure of perceptions of general stress using four subscales: challenge, threat, centrality, and resources (Roesch & Rowley, 2005). While it has not been used for acculturative stress, it has been adapted for other situational stressors such as lung cancer diagnosis (Chambers et al., 2015). This scale always followed the acculturative stress measure, because participants were asked to consider their appraisal of the acculturative stressors they experienced (Rodriguez, et al., 2002). Participants rate how well each statement (e.g., *I have the ability to overcome this kind of stress*) describes their feelings on a 5-point scale (0 = not at all, 4 = very well). Negative statements are reverse-scored so that higher scores indicate positive appraisal (challenge/manageable). Internal consistency in this sample was good (α = .89) and prior research supports its validity (Roesch & Rowley, 2005).

**Self-esteem.** The Rosenberg Self-Esteem Scale is a 10-item measure of cognitive self-evaluation (Rosenberg, 1965). The items (e.g., *On the whole, I am satisfied with myself and I wish I could have more respect for myself*) are rated on a 4-point scale (1 = strongly disagree; 4 = strongly agree) with higher scores indicating more positive self-esteem. Excellent internal consistency was found in this sample (α = .90).

**Life satisfaction.** The Satisfaction with Life Scale is a 5-item measure of general life satisfaction as an aspect of wellbeing (Diener, Emmons, Larsen, & Griffin, 1985). The items (e.g., *The conditions in my life are excellent*) are rated on a 7-point scale (1 =
strongly disagree, 7 = strongly agree) with higher scores indicating greater life satisfaction. Good internal consistency was found in this sample ($\alpha = .89$).

Depression. The Center for Epidemiological Studies Depression Scale negative affect subscale is a 16-item measure of the severity of depressive symptomology with some evidence of validity among Armenian community samples (Kazarian, 2009; Radloff, 1977). The 4-item positive wellbeing factor from the original scale was excluded for cultural equivalence as these items tend to artificially inflate depression scores among Armenians (Kazarian, 2009). The items (e.g., I thought my life has been a failure) are rated on a 4-point scale measuring the frequency of symptoms over the past week ($0 = rarely or none of the time [less than 1 day], 4 = most or all of the time [5-7 days]$) with higher scores indicating more depressive symptoms. This sample had excellent internal consistency ($\alpha = .91$).
Results

Preliminary Analyses

The dataset was examined and prepared prior to hypothesis testing. For all items, univariate statistics were calculated including but not limited to means, standard deviations, skewness, and kurtosis. While all variables were normal (i.e., skewness and kurtosis below 2) and the measures were reliable (i.e., $\alpha > .70$), other problems described below (i.e., age group differences and outliers) were detected and addressed before conducting descriptive analyses. Negatively worded survey items were reverse scored, which was followed by assessments of scale means and reliabilities, categorical variable totals, item-level frequencies, and normality.

Negligible variance was found in the English language competence subscale of the Multidimensional Acculturative Stress Inventory ($M = 0.28, SD = 0.41$). Both language subscales were dropped to maintain the original scale’s balance between stressors related to assimilation and heritage culture retention. Additional data cleaning addressed the original sample’s wide age range.

When age was plotted against each study variable, eight to sixteen outliers were identified among older participants in the original sample’s age range of 18 to 88 years old ($N = 244$). Furthermore, an independent samples t-test found that participants forty and above reported significantly less acculturative stress ($t(222) = 4.10, p < .001, d = 0.59$) and depression ($t(222) = 4.87, p < .001, d = 0.69$), and greater self-esteem ($t(230) = 4.92, p < .001, d = 0.67$), and lower acculturative conflict ($t(230) = 4.92, p < .001, d = 0.67$).
-4.84, \( p < .001, d = 0.68 \) and life satisfaction (\( t(230) = -3.58, p < .001, d = 0.50 \))

compared to their counterparts under forty (see Table 1). In consideration of these results,
as well as previous research revealing a greater association between ethnic identity and
wellbeing among young adults when compared to people over 40 (Smith & Silva, 2011),
the analytical sample was limited to participants under the age of 40 (\( N = 159 \)).

One-way between subjects ANOVAs examined subgroup differences in gender (4
levels), sexual identity (4 levels), level of schooling completed (5 levels), and familial
household income (7 levels) linked to acculturative stress, self-esteem, life satisfaction,
and depressive symptoms. Significant differences were found within sexual identity
groups (i.e., bisexual, gay/lesbian, heterosexual, not listed) in relation to self-esteem (\( F(3, 148) = 3.46, p = .02, \) partial \( \eta^2 = .07 \)), life satisfaction (\( F(3, 150) = 3.01, p = .03, \) partial
\( \eta^2 = .06 \)), and depression (\( F(3, 145) = 4.29, p = .01, \) partial \( \eta^2 = .08 \)). Tukey multiple
comparison tests detected two significant results: heterosexuals reported higher life
satisfaction than gay/lesbian participants (\( p = .04 \)) and less depression than bisexual
participants (\( p = .01 \); see Table 2). Filled-in sexual identities were combined into one
subgroup (i.e., not listed), which did not exhibit differences from the other groups. Due to
the inconsistency of these results, sexual identity was not considered as a covariate for
hypothesis testing.

Demographic information and group means of study variables are found in Table
2, while descriptive statistics, bivariate correlations, and scale alphas are found in Table
3. Acculturative stress correlated positively with depressive symptoms (\( p < .001 \)), and
negatively with stress appraisal (\( p < .001 \)) and self-esteem (\( p = .01 \)); however, it was not
linked to life satisfaction. Ethnic identity affirmation and belonging correlated negatively with depression \( (p = .01) \), and positively with stress appraisal \( (p < .001) \), self-esteem \( (p = .002) \), and life satisfaction \( (p = .004) \). Age was positively related to self-esteem \( (p = .04) \) and negatively to ethnic identity \( (p = .01) \).

Due to these associations, age was tested as a control variable in all regression models. Age did not contribute to models predicting life satisfaction and depression, though it did contribute to self-esteem \( (p = .05) \). Thus, it was only retained as a covariate in models predicting the latter.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels</th>
<th>Percent (%)</th>
<th>AS</th>
<th>SE</th>
<th>LS</th>
<th>DS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Gender</td>
<td>Women</td>
<td>62.89</td>
<td>1.36 (0.79)</td>
<td>2.97 (0.59)</td>
<td>4.66 (1.50)</td>
<td>1.88 (0.61)</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>32.08</td>
<td>1.22 (0.84)</td>
<td>3.05 (0.60)</td>
<td>4.45 (1.39)</td>
<td>1.84 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Nonbinary</td>
<td>3.77</td>
<td>1.73 (1.00)</td>
<td>2.42 (0.65)</td>
<td>3.87 (1.09)</td>
<td>2.40 (0.54)</td>
</tr>
<tr>
<td></td>
<td>Not listed</td>
<td>1.26</td>
<td>1.04 (0.84)</td>
<td>2.95 (0.21)</td>
<td>5.40 (0.85)</td>
<td>1.41 (0.31)</td>
</tr>
<tr>
<td>Sexuality</td>
<td>Straight</td>
<td>74.21</td>
<td>1.33 (0.86)</td>
<td>3.07 (0.61)</td>
<td>4.74 (1.47)</td>
<td>1.78 (0.57)</td>
</tr>
<tr>
<td></td>
<td>Gay/lesbian</td>
<td>10.06</td>
<td>1.17 (0.79)</td>
<td>2.72 (0.54)</td>
<td>3.76 (0.93)</td>
<td>2.03 (0.61)</td>
</tr>
<tr>
<td></td>
<td>Bisexual</td>
<td>11.32</td>
<td>1.32 (0.55)</td>
<td>2.70 (0.48)</td>
<td>4.16 (1.15)</td>
<td>2.27 (0.60)</td>
</tr>
<tr>
<td></td>
<td>Not listed</td>
<td>4.40</td>
<td>1.65 (0.62)</td>
<td>2.77 (0.53)</td>
<td>4.74 (1.36)</td>
<td>2.07 (0.75)</td>
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<tr>
<td>Education Level</td>
<td>Some high school</td>
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<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>5.70</td>
<td>0.92 (0.57)</td>
<td>3.08 (0.80)</td>
<td>5.09 (1.85)</td>
<td>1.55 (0.58)</td>
</tr>
<tr>
<td></td>
<td>Some college</td>
<td>23.42</td>
<td>1.39 (0.92)</td>
<td>2.80 (0.59)</td>
<td>4.50 (1.28)</td>
<td>2.03 (0.59)</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>44.94</td>
<td>1.35 (0.80)</td>
<td>3.00 (0.58)</td>
<td>4.36 (1.47)</td>
<td>1.85 (0.57)</td>
</tr>
<tr>
<td></td>
<td>Graduate school</td>
<td>25.95</td>
<td>1.31 (0.77)</td>
<td>3.07 (0.60)</td>
<td>4.91 (1.29)</td>
<td>1.86 (0.67)</td>
</tr>
<tr>
<td>Income</td>
<td>$10,000 or less</td>
<td>2.56</td>
<td>1.27 (1.16)</td>
<td>2.90 (0.84)</td>
<td>3.40 (0.28)</td>
<td>2.72 (0.49)</td>
</tr>
<tr>
<td></td>
<td>$10,001-$15,000</td>
<td>3.21</td>
<td>0.93 (0.67)</td>
<td>3.22 (0.83)</td>
<td>4.84 (1.83)</td>
<td>1.68 (0.71)</td>
</tr>
<tr>
<td></td>
<td>$15,001-$25,000</td>
<td>10.26</td>
<td>1.41 (0.81)</td>
<td>2.76 (0.45)</td>
<td>3.80 (0.94)</td>
<td>1.98 (0.43)</td>
</tr>
<tr>
<td></td>
<td>$25,001-$50,000</td>
<td>21.15</td>
<td>1.61 (0.92)</td>
<td>2.89 (0.53)</td>
<td>4.10 (1.59)</td>
<td>2.08 (0.64)</td>
</tr>
<tr>
<td></td>
<td>$50,001-$75,000</td>
<td>19.87</td>
<td>1.21 (0.80)</td>
<td>3.10 (0.58)</td>
<td>4.66 (1.26)</td>
<td>1.83 (0.54)</td>
</tr>
<tr>
<td></td>
<td>$75,001-$100,000</td>
<td>16.03</td>
<td>1.23 (0.72)</td>
<td>2.88 (0.63)</td>
<td>4.86 (1.26)</td>
<td>1.82 (0.64)</td>
</tr>
<tr>
<td></td>
<td>Over $100,000</td>
<td>26.92</td>
<td>1.26 (0.79)</td>
<td>3.11 (0.58)</td>
<td>5.09 (1.30)</td>
<td>1.67 (0.53)</td>
</tr>
<tr>
<td>Nativity Status</td>
<td>Born in U.S.</td>
<td>67.92</td>
<td>1.31 (0.81)</td>
<td>2.93 (0.65)</td>
<td>4.70 (1.42)</td>
<td>1.94 (0.65)</td>
</tr>
<tr>
<td></td>
<td>Born outside U.S.</td>
<td>32.08</td>
<td>1.36 (0.84)</td>
<td>3.07 (0.47)</td>
<td>4.31 (1.37)</td>
<td>1.75 (0.48)</td>
</tr>
</tbody>
</table>

*Note.* Variables presented are acculturative stress (AS), self-esteem (SE), life satisfaction (LS), and depressive symptoms (DS). *a b* Denote significant group different (p < .05).
Table 3. Descriptive Statistics, Intercorrelations, and Scale Alphas

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Acculturative stress</td>
<td>-.05</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Ethnic identity</td>
<td>-.21*</td>
<td>-.12</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4. Stress appraisal</td>
<td>-.11</td>
<td>-.38**</td>
<td>.41**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>5. Depression</td>
<td>-.15</td>
<td>.36**</td>
<td>-.23**</td>
<td>-.58**</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Self-esteem</td>
<td>-.17*</td>
<td>-.22**</td>
<td>.25**</td>
<td>.54**</td>
<td>-.68**</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>7. Life satisfaction</td>
<td>-.01</td>
<td>-.15</td>
<td>.24**</td>
<td>.55**</td>
<td>-.60**</td>
<td>.59**</td>
<td>—</td>
</tr>
<tr>
<td>M (or %)</td>
<td>25.59</td>
<td>1.33</td>
<td>3.34</td>
<td>3.72</td>
<td>1.88</td>
<td>3.00</td>
<td>4.60</td>
</tr>
<tr>
<td>SD</td>
<td>5.30</td>
<td>0.81</td>
<td>0.61</td>
<td>0.67</td>
<td>0.60</td>
<td>0.60</td>
<td>1.41</td>
</tr>
<tr>
<td>Scale alphas</td>
<td>.82</td>
<td>.93</td>
<td>.89</td>
<td>.91</td>
<td>.91</td>
<td>.89</td>
<td></td>
</tr>
</tbody>
</table>

Note. Participant Ns ranged from 143 to 159, depending on the variable.  
* p < .05. ** p < .01.
Hierarchical Regression Models

Twelve hierarchical regression models were conducted to test five pathways in predicting three outcomes (i.e., self-esteem, life satisfaction, depressive symptoms) from acculturative stress, ethnic identity, and stress appraisal. To reduce type I error due to the number of models, all regressions were interpreted with a Bonferroni $p$-value adjustment ($p < .004$). Regression assumptions were either met (i.e., linearity, normality of residuals, multicollinearity) or addressed if not met. Mahalanobis distance was used to identify individuals extreme on two or more variables. Four outliers total were removed across two models predicting self-esteem (i.e., three from ethnic identity as a moderator [Model 1], one from the three-way interaction [Model 10]). Unequal error variance among data points were corrected in all models predicting life satisfaction and depression with heteroskedasticity consistent standard errors (i.e., HC0) in the RLM Procedure macro\(^1\) for SPSS (Darlington & Hayes, 2017). Additionally, nonessential collinearity was reduced by centering interacting variables and age was included as a covariate for predicting self-esteem.

**Age as a covariate.** The primary step for all models predicting self-esteem (i.e., Models 1, 4, 7, 10) was age, which exhibited a non-significant direct effect ($\beta = .17, p = .05$). The variables added in the proceeding steps were the same as those of the remaining

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\(^1\) The Regression Analyses and Linear Models macro provides additional features for estimating linear regression models, such as heteroskedasticity consistent inference.
outcomes. Thus, the structure of all models will be described simultaneously from acculturative stress as Step 1, while assuming the inclusion of age in models predicting self-esteem.

**Direct effects of acculturative stress.** Step 1 across all models was the direct effect of acculturative stress. More acculturative stress significantly predicted more depressive symptoms ($p < .001$). Acculturative stress was not predictive of self-esteem ($p = .01$) or life satisfaction ($p = .06$).

**Two-way interactions.** Models 1 through 6 (see Tables 4 and 5) tested the two-way interaction between acculturative stress and one of the moderators (i.e., ethnic identity, stress appraisal). Step 2 was the respective moderator and Step 3 was its interaction with acculturative stress. No interaction effects were found with ethnic identity as the intervening variable for depressive symptoms ($p = .80$), self-esteem ($p = .99$), or life satisfaction ($p = .87$). Similarly, stress appraisal did not interact with acculturative stress to predict depressive symptoms ($p = .77$), self-esteem ($p = .97$), or life satisfaction ($p = .60$). However, direct effects were detected across moderators.

In the final models with ethnic identity, acculturative stress was positively predictive of depression ($p < .001$) and the moderator was positively predictive of self-esteem ($p < .001$). In the models examining stress appraisal, the moderator was positively predictive of self-esteem ($p < .001$) and life satisfaction ($p < .001$) and negatively related to depression ($p < .001$).

**Interaction between moderators.** Models 7 through 9 (see Table 6) tested the interaction between ethnic identity and stress appraisal as a moderator of the relationship
between acculturative stress and wellbeing. Step 2 included the direct effects of ethnic identity and stress appraisal and Step 3 was the interaction between them. Interaction effects were not found in relation to depressive symptoms ($p = .77$), self-esteem ($p = .51$), or life satisfaction ($p = .05$). Direct effects were detected for stress appraisal, which positively predicted self-esteem ($p < .001$) and life satisfaction ($p < .001$), and negatively predicted depressive symptoms ($p < .001$).

**Three-way interaction.** Models 10 through 12 (see Tables 7, 8, and 9) examined the three-way interaction between acculturative stress, ethnic identity, and stress appraisal by building upon the previously described steps for Models 7 through 9. Steps 4 and 5 included the two-way interactions of acculturative stress with ethnic identity and stress appraisal, respectively. Step 6 was the three-way interaction between acculturative stress and both moderators. The three-way interactions were not predictive of depressive symptoms ($p = .33$), self-esteem ($p = .55$), or life satisfaction ($p = .06$). The direct effect of stress appraisal positively predicted self-esteem ($p < .001$) and life satisfaction ($p < .001$), and negatively predicted depression ($p < .001$).
Table 4. Regressions Predicting Wellbeing From Acculturative Stress (AS) and Ethnic Identity (EI)

**Self-Esteem (Model 1)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>-.21&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.17&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.17&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>EI</td>
<td>.27&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.27&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>AS × EI</td>
<td></td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.08</td>
<td>.14</td>
<td>.14</td>
</tr>
<tr>
<td>$F$</td>
<td>6.10</td>
<td>7.39</td>
<td>5.50</td>
</tr>
<tr>
<td>$R^2$ change</td>
<td>.08</td>
<td>.07</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note.* Regressions controlled for age. Standardized regression weights are reported. Final model $N$ was 140.  
<sup>a</sup> $p < .05$, significant without Bonferroni adjustment.  
<sup>b</sup> $p < .004$, significant with Bonferroni adjustment.

**Life Satisfaction (Model 2)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>-.15</td>
<td>-.11</td>
<td>-.11</td>
</tr>
<tr>
<td>EI</td>
<td>.21&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.22&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>AS × EI</td>
<td></td>
<td></td>
<td>-.01</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.02</td>
<td>.07</td>
<td>.07</td>
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<tr>
<td>$F$</td>
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<tr>
<td>$R^2$ change</td>
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<td>.05</td>
<td>.00</td>
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</table>

*Note.* Standardized regression weights are reported. Final model $N$ was 125.  
<sup>a</sup> $p < .05$, significant without Bonferroni adjustment.

**Depression (Model 3)**

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.33&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.33&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>EI</td>
<td>-.19&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.19&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>AS × EI</td>
<td></td>
<td></td>
<td>-.02</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.13</td>
<td>.16</td>
<td>.16</td>
</tr>
<tr>
<td>$F$</td>
<td>23.42</td>
<td>15.08</td>
<td>10.09</td>
</tr>
<tr>
<td>$R^2$ change</td>
<td>.13</td>
<td>.03</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note.* Standardized regression weights are reported. Final model $N$ was 123.  
<sup>a</sup> $p < .05$, significant without Bonferroni adjustment.  
<sup>b</sup> $p < .004$, significant with Bonferroni adjustment.
Table 5. Regressions Predicting Wellbeing From Acculturative Stress (AS) and Stress Appraisal (SA)

**Self-Esteem (Model 4)**

<table>
<thead>
<tr>
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</tr>
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<tbody>
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<td>.01</td>
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<td>SA</td>
<td>.57b</td>
<td>.57b</td>
<td>.00</td>
</tr>
<tr>
<td>AS × SA</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.08</td>
<td>.35</td>
<td>.35</td>
</tr>
<tr>
<td>$F$</td>
<td>6.10</td>
<td>26.17</td>
<td>19.49</td>
</tr>
<tr>
<td>$R^2$ change</td>
<td>.08</td>
<td>.28</td>
<td>.00</td>
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</tbody>
</table>

*Note.* Regressions controlled for age. Standardized regression weights are reported. Final model N was 147.

a $p < .05$, significant without Bonferroni adjustment.
b $p < .004$, significant with Bonferroni adjustment.

**Life Satisfaction (Model 5)**

<table>
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<th>Variable</th>
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<th>Step 3</th>
</tr>
</thead>
<tbody>
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<td>.08</td>
<td>.07</td>
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<tr>
<td>SA</td>
<td>.58b</td>
<td>.59b</td>
<td>.04</td>
</tr>
<tr>
<td>AS × SA</td>
<td>.02</td>
<td>.31</td>
<td>.31</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.02</td>
<td>.29</td>
<td>.00</td>
</tr>
<tr>
<td>$F$</td>
<td>3.49</td>
<td>27.11</td>
<td>19.80</td>
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*Note.* Standardized regression weights are reported. Final model N was 135.

b $p < .004$, significant with Bonferroni adjustment.

**Depression (Model 6)**

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<td>.16a</td>
</tr>
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<td>SA</td>
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<td>-.02</td>
</tr>
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<td>AS × SA</td>
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<td>.36</td>
<td>.36</td>
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<tr>
<td>$R^2$</td>
<td>.13</td>
<td>.03</td>
<td>.00</td>
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<tr>
<td>$F$</td>
<td>23.42</td>
<td>33.65</td>
<td>10.09</td>
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</table>

*Note.* Standardized regression weights are reported. Final model N was 129.

a $p < .05$, significant without Bonferroni adjustment.
b $p < .004$, significant with Bonferroni adjustment.
Table 6. Regressions Predicting Wellbeing From Acculturative Stress (AS) and the Interaction Between Ethnic Identity (EI) and Stress Appraisal (SA)

### Self-Esteem (Model 7)

<table>
<thead>
<tr>
<th>Variable</th>
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</tr>
</thead>
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<td>.01</td>
</tr>
<tr>
<td>EI</td>
<td>.08</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>.55&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.54&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>EI × SA</td>
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<td></td>
<td>.05</td>
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<tr>
<td>$R^2$</td>
<td>.08</td>
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<td>.36</td>
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<tr>
<td>$R^2$ change</td>
<td>.08</td>
<td>.19</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note.* Regressions controlled for age. Standardized regression weights are reported. Final model $N$ was 143.  
<sup>a</sup> $p < .05$, significant without Bonferroni adjustment.  
<sup>b</sup> $p < .004$, significant with Bonferroni adjustment.

### Life Satisfaction (Model 8)

<table>
<thead>
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<th>Step 3</th>
</tr>
</thead>
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<td>.08</td>
</tr>
<tr>
<td>EI</td>
<td>-.01</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>.60&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.59&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>EI × SA</td>
<td></td>
<td></td>
<td>.14</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.02</td>
<td>.32</td>
<td>.34</td>
</tr>
<tr>
<td>$R^2$ change</td>
<td>.02</td>
<td>.30</td>
<td>.02</td>
</tr>
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*Note.* Standardized regression weights are reported. Final model $N$ was 125.  
<sup>b</sup> $p < .004$, significant with Bonferroni adjustment.

### Depression (Model 9)

<table>
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<th>Step 3</th>
</tr>
</thead>
<tbody>
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<td>.16&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.16&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>EI</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>-.53&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.53&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
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<tr>
<td>EI × SA</td>
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<td></td>
<td>.02</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.13</td>
<td>.36</td>
<td>.36</td>
</tr>
<tr>
<td>$R^2$ change</td>
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<td>.00</td>
</tr>
</tbody>
</table>

*Note.* Standardized regression weights are reported. Final model $N$ was 123.  
<sup>a</sup> $p < .05$, significant without Bonferroni adjustment.  
<sup>b</sup> $p < .004$, significant with Bonferroni adjustment.
Table 7. Model 10: Regressions Predicting Self-Esteem From the Three-way Interaction Between Acculturative Stress (AS), Ethnic Identity (EI), and Stress Appraisal (SA)

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.01</td>
<td>.00</td>
<td>.00</td>
<td>-.00</td>
</tr>
<tr>
<td>EI</td>
<td>.08</td>
<td>.09</td>
<td>.09</td>
<td>.09</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>.55&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.54&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.54&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.54&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.55&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>EI × SA</td>
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<td>.05</td>
<td>.04</td>
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<td></td>
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<tr>
<td>AS × EI</td>
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<td>-.02</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS × SA</td>
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<td>.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS × EI × SA</td>
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<td></td>
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</tr>
<tr>
<td>R²</td>
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<td>.36</td>
<td>.36</td>
<td>.36</td>
<td>.36</td>
</tr>
<tr>
<td>F</td>
<td>6.10</td>
<td>19.06</td>
<td>15.27</td>
<td>12.64</td>
<td>10.78</td>
<td>9.43</td>
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<td>.00</td>
</tr>
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</table>

Note. Regressions were controlled for age. Standardized regression weights are reported. N = 143.
<sup>a</sup> p < .05, significant without Bonferroni adjustment.  
<sup>b</sup> p < .004, significant with Bonferroni adjustment.
Table 8. Model 11: Regressions Predicting Life Satisfaction From the Three-way Interaction Between Acculturative Stress (AS), Ethnic Identity (EI), and Stress Appraisal (SA)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>-.15</td>
<td>.09</td>
<td>.08</td>
<td>.09</td>
<td>.09</td>
<td>.06</td>
</tr>
<tr>
<td>EI</td>
<td>-.01</td>
<td>.01</td>
<td>.02</td>
<td>.02</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>.60(^b)</td>
<td>.59(^b)</td>
<td>.59(^b)</td>
<td>.59(^b)</td>
<td>.61(^b)</td>
<td></td>
</tr>
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<td>EI × SA</td>
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<td>.15</td>
<td>.15</td>
<td>.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS × EI</td>
<td>.02</td>
<td>.03</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS × SA</td>
<td>-.01</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS × EI × SA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.12</td>
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<td>(R^2)</td>
<td>.02</td>
<td>.32</td>
<td>.34</td>
<td>.34</td>
<td>.34</td>
<td>.35</td>
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<tr>
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<td>18.49</td>
<td>17.77</td>
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<td>12.35</td>
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<td>.02</td>
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<td>.00</td>
<td>.01</td>
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</table>

Note. Standardized regression weights are reported. \(N = 125\).
\(^a\) \(p < .05\), significant without Bonferroni adjustment. \(^b\) \(p < .004\), significant with Bonferroni adjustment.
Table 9. Model 12: Regressions Predicting Depressive Symptoms From the Three-way Interaction Between Acculturative Stress (AS), Ethnic Identity (EI), and Stress Appraisal (SA)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1</th>
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<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
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<tbody>
<tr>
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<td>.16&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.16&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.16&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.16&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.17&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>EI</td>
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<td>.02</td>
<td>.03</td>
<td>.03</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>-.53&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.53&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.53&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.53&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.54&lt;sup&gt;b&lt;/sup&gt;</td>
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</tr>
<tr>
<td>EI × SA</td>
<td>.02</td>
<td>.03</td>
<td>.02</td>
<td>.04</td>
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<td></td>
</tr>
<tr>
<td>AS × EI</td>
<td></td>
<td>.02</td>
<td>.03</td>
<td>.01</td>
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<td></td>
</tr>
<tr>
<td>AS × SA</td>
<td></td>
<td></td>
<td>-.02</td>
<td>-.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS × EI × SA</td>
<td></td>
<td></td>
<td></td>
<td>-.06</td>
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<td></td>
</tr>
<tr>
<td>( R^2 )</td>
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<td>.36</td>
<td>.36</td>
<td>.36</td>
<td>.36</td>
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<td>( F )</td>
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<td>10.19</td>
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<td>( R^2 ) change</td>
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<td>.23</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
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</table>

Note. Standardized regression weights are reported. \( N = 123 \).
<sup>a</sup> \( p < .05 \), significant without Bonferroni adjustment. <sup>b</sup> \( p < .004 \), significant with Bonferroni adjustment
Discussion

The purpose of this study was to examine the relationship between acculturative stress and psychological wellbeing in Armenian Americans with ethnic identity and stress appraisal as moderators of that association. Ethnic identity affirmation and belonging buffers the negative outcomes linked to acculturative stress in ethnically diverse samples (Cheng et al., 2016; Iturbide et al., 2009; Neblett et al., 2012; Polanco-Roman & Miranda, 2013; Romero & Roberts, 2003; Shelton et al., 2006). The current study replicated this line of research with Armenian Americans, an understudied population in psychology. Another moderator, positive stress appraisal, ameliorates the relationship between high levels of specific (e.g., workplace) or general life stressors and poor wellbeing (Klag & Bradley, 2004; Kobasa, 1979; Lazarus & Folkman, 1984; Pengilly & Dowd, 2000; Wiebe, 1991). The current study tested this relationship in the context of acculturative stress, which may be considered a general life stressor for diverse populations. Additionally, the moderating effects of the novel interaction between ethnic identity and stress appraisal was explored, as well as the three-way interaction between these variables and acculturative stress. The following results were gathered.

More acculturative stress was significantly linked to more depressive symptoms, though it was not predictive of self-esteem or life satisfaction. An interaction between acculturative stress and ethnic identity was not found, indicating the lack of a moderating relationship at low or high levels of the stressor. The interaction between acculturative stress and its appraisal was similarly unable to buffer negative outcomes. Likewise, the
interaction between ethnic identity and stress appraisal did not exhibit a moderating effect, nor did the three-way interaction between the stressor and both intervening variables. Explanations of the lack of these relationships are related to the study sample and possibly broader sociocultural considerations of the population.

**Acculturative Stress as a Predictor of Wellbeing**

Acculturative stress has been linked to poor wellbeing across diverse populations in the U.S., including Armenian Americans (Rodriguez et al., 2002; Papazyan et al., 2016). In the current study, this was only found in association with depressive symptoms. While the negative link to self-esteem would have been significant without the p-value adjustment, the expected relationship with life satisfaction was absent either way. This may be attributed to the unrepresentative nature of the sample.

Participants reported generally mid to high levels of educational attainment and household income, both of which are protective against stress (Assari & Bazargan, 2019; Sareen, Afifi, McMillan, & Asmundson, 2011). Additionally, most participants had strong English language skills, which limits language-based stressors. The association of the sample with Armenian American organizations indicated that they are involved in efforts to retain their heritage culture, thus minimizing stress from their own ethnic group. All in all, these sample characteristics likely influenced participants’ generally low levels of acculturative stress with minimal variance, which could have inhibited the detection of the hypothesized effects. Characteristics of the population as a whole could have also contributed to the null results.
Bakalian (2001) argues that identification with privileged racial and religious social identities of the U.S. (i.e., White, Christian) grants Armenians greater access to mainstream society as well as autonomy in retaining their heritage culture. Therefore, this congruence with the dominant group systematically mitigates acculturative stress for Armenian Americans (Amer & Hovey, 2007). Even individuals who experience prejudice due to perceptions of incongruence (e.g., not passing as White, being mistaken as Muslim) are protected by these characteristics.

Prototypical Middle Easterners (i.e., Islamic Arabs, Persians, and Turks) experience the bulk of anti-Middle Eastern discrimination, especially that which infringes on civil rights (e.g., illegal detainment), due to stereotypes associating their faith with terrorism (Tehranian, 2008). Not only are Christian subgroups less structurally discriminated against, they can also distance themselves from Middle Eastern identity to avoid interpersonal prejudice, even when they are classified as so by others (Tajfel & Turner, 1979). Armenian Americans can emphasize their religious standing and proximity to Europe, both geographically and culturally. In fact, these characteristics granted Armenians access to the legal privileges of White identity earlier than other Middle Eastern groups (Okoomian, 2002). Thus, reestablishing congruence with the dominant group in the U.S. reduces the likelihood of acculturative stress (Amer & Hovey, 2007). These characteristics can also explain the near-universal positive feelings of ethnic group membership in this sample.
Ethnic Identity as a Moderator

Ethnic identity affirmation and belonging can mitigate negative outcomes related to cultural stress across diverse groups (Cheng et al., 2016; Iturbide et al., 2009; Polanco-Roman & Miranda, 2013), though this effect was not found in the current study. Like acculturative stress, homogenous levels of strong ethnic identity were found, which limited the ability to capture distinct groups. This could be a sample characteristic due to biased sampling techniques via Armenian American institutions (e.g., community groups). The aforementioned privileges associated with this group’s social identities in the U.S. could also allow them systematically greater access to maintain and express pride in their ethnic identity, thus affording individuals across this group generally high levels of affirmation and belonging (Bakalian, 2001). Thus, examination of other cultural features that may act as buffers of acculturative stress is warranted.

Among Armenian Americans, acculturative stress may be more strongly associated with different aspects of ethnic identity. For example, ethnic identity salience describes the awareness given to one’s ethnicity, which is positively associated with greater wellbeing (Douglass, Wang, & Yip, 2016). Additionally, moderate to high salience bolsters the relationship between overall ethnic identity and positive wellbeing, which could have played a role in the current sample (Yip & Fuligni, 2002). Another unexamined dimension is ethnic identity exploration, which describes direct participation in activities and events related to one’s ethnic group (Syed et al., 2013). Active exploration is related to a clearer overall sense of self, more stable identity commitments,
and greater wellbeing. Affirmation and belonging do not necessitate a period of moratorium, because foreclosed individuals can adopt these attitudes from others. Thus, the stability drawn from ethnic identity commitments made after exploration (i.e., achievement) may be more protective than the instability characterizing foreclosure. However, this was not examined in the current study. While these dimensions of ethnic identity are worth examining, special focus may be paid to one that is culturally-specific.

Ethnic orientation describes the strength of beliefs and feelings that are unique to an ethnic group (Der-Karabetian, Berberian, & Der-Boghossian, 2007). Armenian ethnic orientation addresses feelings of connection to Armenian communities, their country of origin, the Armenian Genocide, and various other values (Der-Karabetian et al., 2007; Yaralian et al., 2009). This dimension has been linked to several indicators of wellbeing among Armenian Americans. Even more, authors of a previous study suggested that ethnic orientation may instead exhibit a moderating relationship with acculturative stress (Papazyan et al., 2016). In addition to feeling connected with one’s own ethnic group, participation in the mainstream culture (i.e., biculturalism) may also buffer stress.

As previously discussed, biculturalism is systematically more accessible to Christian MENA groups than those of other religious backgrounds, thus indicating its potential as a viable stress buffer for Armenian Americans (Amer & Hovey, 2007; Berry, 2005). Furthermore, the link between biculturalism and positive wellbeing is related to greater access to coping resources from both cultures such as the well-established buffering effect of social support (Cohen & Wills, 1985; Nguyen & Benet-Martínez, 2013; Vartan, 1996). Having social circles in both the heritage and mainstream groups
would increase the likelihood of having higher social support, which would in turn aid with the management of various stressors. In summary, acculturation strategies and dimensions of ethnic identity not examined in this study may be psychological resources that bolster the management of acculturative stress among Armenian Americans. While cultural psychological factors are directly relevant to the stressor in question, processes universal to all types of stress can also play a role.

**Stress Appraisal as a Moderator**

Positive stress appraisal has been shown to ameliorate the poor outcomes linked to various types of stress (Klag & Bradley, 2004; Kobasa, 1979; Pengilly & Dowd, 2000; Wiebe, 1991). The current study tested this relationship in the context of acculturative stress, though the expected link was not found. As with acculturative stress and ethnic identity, stress appraisal had limited variability, thereby inhibiting the detection of distinct appraisal styles. Furthermore, a follow up study with this sample found a mediating relationship instead (Roberts, Aksionczyk, Kirakosyan, & Iturbide, 2019). Stress appraisal may be an underlying mechanism through which acculturative stress contributes to poor wellbeing, rather than a moderating variable. Previous research on overlapping but distinct cultural stressors (e.g., discrimination) had similar results (King, 2005; Noh, Kaspar, & Wickrama, 2007). Because appraisal is conceptually distinct from ethnic identity, the moderating relationship between these two variables was also examined.
**Interactions Between Ethnic Identity and Stress Appraisal**

The two-way interaction between high ethnic identity affirmation and belonging and positive stress appraisal was expected to be linked to the most adaptive outcomes associated with acculturative stress. Such an effect was not detected in the current study, nor was a three-way interaction effect between the moderators and acculturative stress. The ability to speculate about the theoretical implications of these results is hampered by statistical limitations. The lack of variance amongst all of these interacting variables restricts the creation of significantly distinct groups for comparison. Furthermore, a post-hoc power analysis using GPower version 3.1.9.3 indicated a power of 0.75, which was below the intended value of 0.80. This relationship must be tested with a larger sample size before drawing conclusions. Several additional limitations affected the current study.

**Limitations**

While due diligence was taken to follow the scientific method, limitations were nonetheless encountered. That is, theoretical limitations, sample characteristics, and measurement issues likely influenced the results.

**Theoretical limitations.** The current study examined a population with limited previous research addressing acculturation and ethnic identity. The lack of significant findings may suggest that the theoretical frameworks foundational to these concepts do not adequately explain the unique sociocultural circumstances of Armenian Americans. For example, the privileges attributed to this group’s White racial status set it apart from
the nonwhite groups that are more widely studied (e.g., Mexican Americans, Asian Americans). Furthermore, the paradoxical racial othering of Middle Eastern people is also unaddressed. Such novel and complex characteristics may influence the processes of acculturation and ethnic identity development, though more intricate models are necessary to test these nuanced relationships. While an intriguing argument, it is mostly speculative due to the unrepresentative nature of the sample.

Sample characteristics. While justified by a small population size and limited in-person access to Armenian Americans, convenience sampling (e.g., via student and professional groups) introduced bias toward well-educated English speakers with mid to high annual income levels. This was exacerbated by the lack of an Armenian language version of the survey. All participants completed high school, nearly half held a Bachelor’s degree, and about a quarter had a graduate degree. Furthermore, the annual income of about half the study participants was over $50,000, while a quarter earned at least $100,000. High socioeconomic status is a protective factor linked to greater wellbeing, which may wash out the impact of stress (Assari & Bazargan, 2019; Cohen & Wills, 1985; Sareen et al., 2011). Other sociocultural factors indicating favorable psychological adjustment in the volunteer sample included generally low acculturative stress, high ethnic identity affirmation and belonging, and access to social support groups. Representation of varied SES levels and cultural experiences would have increased external validity of the results. This study may also have benefited from narrowing the target population.
The national sample was diverse in cultural demographic variables. For example, two thirds of the participants were born in the U.S. with further heterogeneity was observed in generational status. Nativity status (i.e., born in the U.S. or out of the country) was not associated with the study variables, though it is nonetheless a qualitatively different experience that can be predictive of acculturative stress, ethnic identity, and wellbeing (Der-Karabetian et al., 2007; Salas-Wright, Kagotho, & Vaughn, 2014; Tillman & Weiss, 2009). Furthermore, some participants’ parents were born in the U.S., which limited representation of stressful immigrant experiences, such as parent-child language barriers (California Department of Mental Health, 2013). Regardless of generational status, diversity was also found in familial nation of origin.

Armenian American subgroups based on familial nation of origin may exhibit differences (Pintz, 2013; Tehranian, 2008; Vartan, 2006). Those who originate from Islamic-dominated countries may be less able to distance themselves from Middle Eastern identity and thus experience more racial discrimination (Tajfel & Turner, 1979; Tehranian, 2008). For example, personal anecdotes by Persian-Armenian author Tehranian (2008) emphasize differences in the treatment received when he introduces himself as Armenian (e.g., ethnic identity) as opposed to Persian (e.g., familial national identity). The former is more often met with friendliness, while the latter induces scrutiny and hostility (e.g., greater acculturative stress) especially in high-risk situations, such as airports where disidentification with the Muslim-dominated nation of origin is impossible due to its inclusion in passports. Conversely, other lines of research suggest that previous experiences with acculturation in other countries may reduce distress when undergoing
that process again in the U.S. (Pintz, 2013). Thus, narrowing the target population for certain variables (e.g., age, generational status, familial country of origin) may lend itself to the detection of effects that are not prevalent throughout the broader group and allow for comparisons between subgroups. However, before such research is conducted, measurement issues must be addressed.

**Measurement issues.** The researcher found scant studies testing the measurement validity and cross-cultural equivalence of study variable scales among Armenian Americans. Despite being statistically reliable, those assessing depressive symptoms, acculturative stress, and stress appraisal in particular were questionable. Evidence suggests that the Center for Epidemiological Studies Depression Scale (CES-D), a standardized measure for depression in U.S. community samples, works differently with Armenians. A factor analysis of the CES-D among an ethnic Armenian community sample in Lebanon resulted in two subscales: depression and an unexpected factor for positive wellbeing (Kazarian, 2009). Low reports of wellbeing inflated scores, indicating that the use of positively worded items may be inappropriate for this population.

Validation of the depression subset provided some support for its use with ethnic Armenians, albeit not necessarily those in the U.S. Furthermore, culturally-specific scales were not previously adapted for use with Armenians.

The Multicultural Acculturative Stress Inventory (MASI) established for Mexican Americans was adapted for Armenian Americans (i.e., “Mexican” was replaced with “Armenian”). A factor analysis of the adaptation highlighted poor goodness-of-fit with both the original 4-factor structure and a 5-factor structure extracted from an exploratory
factor analysis (Velasquez, Sosa-Rosales, Liscano, Kirakosyan, & Iturbide, 2019). This may be explained by differences in the interpretation of questions or the types of acculturative stress experienced altogether. For example, participants reported strong English language skills, which voided the use of the MASI’s English language pressure subscale, though this may have been a byproduct of the absence of an Armenian language version of the online survey. More broadly, it is possible that the unique social position of Armenian Americans and Middle Eastern people in general may influence the experience of unique acculturative stressors that are not adequately addressed in scales designed for other ethnic or racial groups. Furthermore, issues with the MASI carried over to the assessment of acculturative stress appraisal.

Originally validated by Roesch and Rowley (2005) to measure dispositional (e.g., trait-like) appraisals, the Stress Appraisal Measure - Revised (SAM-R) was adapted to assess the appraisal of the acculturative stressors presented in the MASI. The directions prompted respondents to refer to the stressors that they reported to be stressful. The items were slightly adjusted to maintain the focus on acculturative stress (i.e., *I have the ability to overcome stress* was changed to *I have the ability to overcome this kind of stress*). While the adaptation itself could have been problematic, judgments about the adapted SAM-R are difficult to make due to its attachment to the MASI adapted for Armenians. The validation of scales measuring the current study’s variables for use with Armenian Americans is a crucial prerequisite for higher quality research in the future.
Future Directions

The current study illuminated several methodological and theoretical factors that require consideration. One of the most relevant to the current study’s design is sample characteristics. A representative sample would have increased the external validity (i.e., generalizability) of the results. Furthermore, the hypothesized effects may have been detected if not for the low levels of acculturative stress and high socioeconomic status of this sample. In addition to representation, benefits may be gained from defining a more specific target population (e.g., narrower age range) since relationships between the study’s variables may be different across Armenian American subgroups. Refined sampling methods should first be used to validate scales with this population.

Widely-used cultural and wellbeing scales may not be capturing the experiences of Armenian Americans and other ethnic groups with similar social positions (Kazarian, 2009; Velasquez et al., 2019). Thus, cross-cultural measurement equivalence studies are imperative to ensure the validity of these scales with this population. Alternatively, new scales can be developed to assess unique aspects of Armenian American experiences, and possibly Middle Eastern people in the U.S. as a whole. Validated measures can also remedy the pitfalls of different studies using incomparable scales. If future research comes to suggest that preexisting scales are not valid for this population, their theoretical underpinnings may need to be assessed.

Armenians hold a unique position in U.S. society that may not be captured in current theory. Armenia Americans are identified as white through the legal system, yet
they are often racialized as a Middle Eastern ethnic minority and treated as so (Tehranian, 2008). Researchers may need to examine whether these experiences are explained by acculturation and ethnic identity development theories. Such studies may require eclectic research designs.

To better understand the experiences of Armenian Americans, future research can use longitudinal designs to examine developmental trends. For example, cultural experiences of this population likely shifted when the U.S. Senate officially recognized the occurrence of the Armenian Genocide (S. Res. 150, 2019). Such changes may also be detectable through qualitative research. In fact, individual and group interview designs have produced rich and meaningful data about Armenian American identity in the past (Yazedjian, 2008). Regardless of study design, future research can investigate variables related to wellbeing among other ethnic groups.

Many dimensions of cultural experiences have never been examined in this population. For example, discrimination was only tested in the current study in how it relates to acculturative stress (e.g., language proficiency, pressure to abandon heritage customs). However, discrimination can occur for several other reasons including merely being perceived as Middle Eastern. Furthermore, other variables may buffer on Armenian American experiences of ethnic minority stressors. These include aforementioned aspects of ethnic identity (i.e., salience, exploration, orientation), biculturalism, and social support.

The goal of future research should first be to assess the validity and cross-cultural measurement equivalence of preexisting scales. If they are deemed unfit for Armenian
Americans, new scales need to be designed, which may require the use of qualitative research. Once suitable measures are identified, longitudinal designs with representative samples may elucidate developmental trends that are not captured in cross-sectional designs. Furthermore, other predictors and intervening variables may also provide insight into the cultural experiences of this population.
Conclusion

There is a lack of research investigating the psychosocial experiences of Armenian Americans. The current study tested the relationship between acculturative stress, ethnic identity, stress appraisal, and wellbeing in a national convenience sample of Armenian Americans. Resulted indicated that acculturative stress predicted depressive symptoms, though support was not found for the role of ethnic identity or appraisal as stress buffers individually or in conjunction. Additionally, several correlational relationships were found suggesting that ethnic identity and stress appraisal are indeed related to the cultural experiences of Armenian Americans. The results of this study can inform future research that can further explore the nature of these relationships.
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Appendices

Appendix A: Flyers

Seeking Armenians
Over 18 living in America with at least one Armenian parent

The Armenian Cultural Experiences (ACE) Project seeks to better understand both the beneficial and difficult cultural experiences of diasporic Armenians in America with a fully confidential 25 minute survey.

Access the survey with this case sensitive link on any device and enter to win an Amazon.com gift card:

bit.ly/aceproject

For more information, please contact: Tsolak Michael Kirakosyan, B.A.; Humboldt State University Psychology; tsolak.kirakosyan@humboldt.edu
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Appendix B: Debriefing Form

Thank you for participating in the present study concerning your cultural experiences as an Armenian American young adult. This questionnaire examined ethnic identity, stress, and wellbeing.

We understand that you may wish to speak with someone concerning stressors brought to light by this study. Therefore, we are providing you with contact information for national organizations. Please feel free to use the following resources available for you to contact:

Armenian General Benevolent Union 212-319-6383
www.agbu.org

Armenian American Mental Health Association www.aamhawest.org
www.aamhawest.org/links-and-resources

SAMHSA’s National Helpline 1-800-622-HELP (4357)
www.samhsa.gov

Please share this study’s weblink with any friends, family, or acquaintances that are eligible to participate in this study (18-29 year old Armenians living in America with at least one Armenian parent). We request that you not discuss the content with them until after they have had the opportunity to participate. Prior knowledge of questions asked during the study can invalidate the results. We greatly appreciate your cooperation.

Thanks again for your participation. If you have any questions regarding this study, please feel free to contact the researchers.

Tsolak Michael Kirakosyan, B.A.
Email: tmk178@humboldt.edu
Dr. Maria I. Iturbide, Ph.D, Assistant Professor
Email: maria.iturbide@humboldt.edu
Humboldt State University
Psychology Department
Appendix C: Informed Consent

Exploring the Link Between Acculturative Stress, Ethnic Identity, and Appraisal in Predicting Adjustment

Contacts: Tsolak Michael Kirakosyan, B.A. (tmk178@humboldt.edu, 323 875 4888), Dr. Maria I Iturbide, Ph.D (maria.iturbide@humboldt.edu, 707 826 4043)
Department of Psychology, Humboldt State University

Purpose of Project
You have been invited to participate in a research study investigating the link between stress, ethnic identity, stress appraisal, and wellbeing. To participate in this study, you must be an Armenian living in America with at least one full Armenian parent between the ages of 18-29.

Procedure
These procedures will be conducted online, powered by Qualtrics. You will be asked to complete questionnaires that will take about 25 minutes to complete.

Risks
The questionnaire will ask you a series of statements about cultural stress, ethnic identity, and psychological adjustment. Some of the questions may be uncomfortable for some people to answer. You may choose not to answer a question or opt out of the questionnaire. Additionally, your responses will be confidential.

Benefits
You will receive no immediate benefit from participation. The study may provide long-term benefits by better understanding experiences of Armenian Americans.

Confidentiality
Any identifiable information will be kept securely in a safe location and erased (a) after all raffle prizes have been redeemed or (b) one year after data collection is completed.

Compensation
You will be entered into a raffle to win one of three Amazon gift card valued at $25, $20, and $15. You can participate in the drawing even if you do not complete or participate in the study by asking the investigator to include you.

Opportunity to Ask Questions
If you have any questions about this research at any time, please call or email Tsolak Michael Kirakosyan, B.A. (tmk178@humboldt.edu, 323 875 4888) or Dr. Maria I. Iturbide, Ph.D, Assistant Professor (maria.iturbide@humboldt.edu, 707 826-4043). The researchers will answer any questions you have about this study.
If you have any concerns with this study or questions about your rights as a participant, contact the Institutional Review Board for the Protection of Human Subjects at irb@humboldt.edu or (707) 826-5165.

**Freedom to Withdraw**
I understand that my participation in this study is entirely voluntary and that I may decline to enter this study or may withdraw from it at any time without jeopardy. I understand that the investigator may terminate my participation in the study at any time.

**Consent to Participate**
Please print this informed consent form now and retain it for your future reference. If you agree to voluntarily participate in this research as described and are at least 18 years old, please check the box below to begin the online survey. Thank you for your participation in this research.

I have read and understand this consent information, and agree to participate in the questionnaire.

_____
Appendix D: Survey

DEMOGRAPHIC BACKGROUND

1. What is your age? ______________________

2. What is your gender?
   a) Man
   b) Woman
   c) Non-binary/Non-conforming
   d) Not listed: ______________________

3. Sexual Orientation: Which do you consider yourself to be?
   a) Heterosexual/Straight
   b) Gay or Lesbian
   c) Bisexual
   d) Not listed: ______________________

4. Where were you born? State or Country: ________________

5. If you were born outside the U.S., how long have you lived in the U.S.? ______ year(s)

6. Where was your father born? State or Country: ________________

7. Where were your father’s parents (your grandparents) born?
   7a. Grandfather: ____________________ (country)
   7b. Grandmother: _____________________(country)

8. Where was your mother born? State/Country: ________________

9. Where were your mother’s parents (your grandparents) born?
   9a. Grandfather: ____________________ (country)
   9b. Grandmother: _____________________(country)

10. What is the highest level of school that you have completed?
    a) Some high school
    b) High school
    c) Some college
    d) College
    e) Graduate school
11. What is your familial household income for the year? Consider all sources of income, including earnings, welfare cash assistance, child support alimonies, support from other members of your household who regularly contribute to your household, etc.

a) less than $10,000
b) $10,001 - $15,000
c) $15,001 - $25,000
d) $25,001 - $50,000
e) $50,001 - $75,000
f) $75,001 - $100,000
f) more than $100,000

MULTIGROUP ETHNIC IDENTITY MEASURE,
AFFIRMATION, BELONGING, AND COMMITMENT SUBSCALE

These questions are about being Armenian and how you feel about it or react to it. Indicate the degree to which you agree or disagree with each statement.

1 = strongly disagree  2 = disagree  3 = agree  4 = strongly agree

1. I have a clear sense of my ethnic background and what it means to me.
2. I am happy that I am a member of the ethnic group I belong to.
3. I have a strong sense of belonging to my own ethnic group.
4. I understand pretty well what my ethnic group membership means to me.
5. I have a lot of pride in my ethnic group.
6. I have a strong attachment toward my own ethnic group.
7. I feel good about my cultural or ethnic background.
MULTIDIMENSIONAL ACCULTURATIVE STRESS INVENTORY

Below is a list of situations related to being an Armenian person living in America that you may have experienced. Read each item carefully and first decide whether or not you have experienced that situation within the past 3 months. If you have experienced the situation during the past 3 months, check the circle that represents how stressful the situation has been for you. If you have not experienced the situation during the past 3 months check the circle under “Does not apply” and go to the next item.

0 = does not apply  1 = not at all  2 = a little  3 = somewhat  4 = very  5 = extremely stressful

English Competency Pressure
1. I don’t speak English or don’t speak it well.
2. I have been discriminated against because I have difficulty speaking English.
3. Since I don’t speak English well, people have treated me rudely or unfairly.
4. I feel pressure to learn English.
5. It bothers me that I speak English with an accent.
6. I have a hard time understanding others when they speak English.
7. I feel uncomfortable being around people who only speak English.

Armenian Competency Pressure
1. I don’t speak Armenian or don’t speak it well.
2. I feel uncomfortable being around people who only speak Armenian.
3. I feel pressure to learn Armenian.
4. I have a hard time understanding others when they speak Armenian.
5. Since I don’t speak Armenian well, people have treated me rudely or unfairly.
6. It bothers me when people assume that I speak Armenian.
7. I have been discriminated against because I have difficulty speaking Armenian.

Pressure Against Acculturation
1. I have had conflicts with others because I prefer some American customs over Armenian ones.
2. People look down upon me if I practice American customs.
3. I feel uncomfortable when others expect me to know the Armenian way of doing things.
4. I feel uncomfortable because my family members do not know the Armenian way of doing things.

Pressure to Acculturate
1. It bothers me when people pressure me to assimilate to the American ways of doing things.
2. It bothers me when people don’t respect my Armenian values.
3. Because of my cultural background, I have a hard time fitting in with Americans.
4. I feel uncomfortable when others expect me to know American ways of doing things.
5. I don’t feel accepted by Americans.
6. I feel uncomfortable when I have to choose between Armenian and American ways of doing things.
7. People look down upon me if I practice Armenian customs.

**STRESS APPRAISAL MEASURE - REVISED**

This questionnaire is concerned with your thoughts on the situations related to being an Armenian person living in America from the previous questionnaire that you rated as stressful. Please respond according to how you view those cultural stressors right now. Please answer all questions. There are no right or wrong answers. Answer each item by checking off how well the statement describes your thoughts and feelings on the following scale:

0 = not at all    1 = slightly    2 = moderately    3 = considerably    4 = very well

**Challenge**
1. I have the ability to overcome this kind of stress.
2. I can positively attack these stressful events.
3. I have what it takes to beat this kind of stress.
4. I am eager to tackle these problems.
5. I feel I can become stronger after experiencing this kind of stress.
6. I have the skills necessary to overcome this kind of stress.
7. I am excited about the potential outcome.

**Threat**
8. I perceive this kind of stress as threatening.
9. I feel totally helpless.
10. I feel anxious.
11. These stressors impact me greatly.
12. It is beyond my control.

**Centrality**
13. The outcome of these stressors is negative.
14. These stressful events have serious implications for my life.
15. This kind of stress has a negative impact on me.
16. There are long-term consequences as a result of this kind of stress.

**Resources**
17. There is someone I can turn to for help.
18. There is help available to me.
19. No one has the power to overcome this kind of stress.
ROSENBERG SELF-ESTEEM SCALE

Belong is a list of statements dealing with your general feelings about yourself. There are no right or wrong answers. Please indicate how strongly you agree or disagree with each statement.

1 = strongly disagree  2 = disagree  3 = agree  4 = strongly agree

1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I’m a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

SATISFACTION WITH LIFE SCALE

Below are five statements that you may agree or disagree with. Using the 1 - 7 scales below, indicate your agreement with each item.

1 = strongly disagree  2 = disagree  3 = slightly disagree  4 = neither agree nor disagree  5 = slightly agree  6 = agree  7 = strongly agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.
CENTER FOR EPIDEMIOLOGICAL STUDIES DEPRESSION SCALE

Indicate how often you have experienced the following items during the past week:

1 = rarely or none  2 = some or a little  3 = occasionally or a moderate  4 = most or all of
of the time       of the time       amount of time       the time
(less than 1 day) (1-2 days)       (3-4 days)       (5-7 days)

1. I was bothered by things that usually don’t bother me.
2. I did not feel like eating; my appetite was poor.
3. I feel that I could not shake off the blues even with help from my family or friends.
4. I felt I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get “going”.