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Family-Peer Incongruence in Cultural Socialization and Adolescent Adjustment

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Family-Peer Incongruence in Cultural Socialization and Adolescent Adjustment

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Dedication

This dissertation is dedicated to my parents, who inspired and supported my adventure far away from home.

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Using a sample of 8th graders, the current study explored cultural socialization practices by families and peers, and investigated the link between family-peer incongruence in cultural socialization and adolescent adjustment. On average, peers engaged in less heritage cultural socialization but similar levels of mainstream cultural socialization than did youth's families. Incongruence in family and peer cultural socialization was associated with poor socioemotional and academic adjustment only when peers performed greater cultural socialization (either the heritage or mainstream culture) than their parents. The link between incongruence and socioemotional stress can be explained in part by adolescents' feelings of being caught between their families and peers. The detriments of feelings of being caught on school outcomes were buffered by adolescents' active coping and withdrawal, peer support, and similar feelings of being caught shared in the peer network.

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Family-Peer Incongruence in Cultural Socialization and Adolescent Adjustment

"Caught between two worlds" is a common portrait of racial/ethnic minority youth living between their heritage cultures and the mainstream American culture (Benet-Martínez & Haritatos, 2005). Whereas parents of minority youth strive to preserve their heritage culture in the younger generation, youth's peers and the larger society practice the mainstream American culture. Extant literature has explored minority youth's abilities in navigating multiple cultural contexts (e.g., biculturalism, race/ethnic identity; LaFromboise, Coleman, & Gerton, 1993; Phinney, 1990), yet few studies have examined the different cultural socialization settings in which adolescents reside. For example, even though parents' cultural socialization practices in race/ethic minority families have been studied extensively in the literature, little is known about those of the larger society or, more specifically, young people's peer groups. Even less is known about the extent to which cultural contexts are incongruent between racial/ethnic minority families and peer groups and how such incongruence promotes or compromises adolescent adjustment. Examining these issues will help uncover a significant aspect of racial/ethnic minority adolescents' daily lives and reveal adaptive patterns of family and peer cultural contexts for future interventions.

Family and Peer Cultural Socialization

The current study focuses on a salient cultural aspect in two major settings for racial/ethnic minority adolescents, namely cultural socialization by families and peers (Barber & Olsen, 1997; Hughes et al., 2006). Cultural socialization refers to the developmental processes through which children learn about histories and traditions of a culture, acquire cultural beliefs and values, and develop positive attitudes towards that culture (Hughes et al., 2006; Rotheram &

Phinney, 1987). It is recognized as an important process that enables children to adjust to a society characterized by racial/ethnic and cultural diversity (Hughes et al., 2006). The current literature mainly focuses on one specific form of cultural socialization – parents' racial/ethnic cultural socialization. Little attention has been paid to cultural socialization by other important agents (e.g., peers) or how various socialization settings interact with each other to influence adolescent adjustment. Examining cultural socialization from multiple agents is important because such intersection may better capture the increasingly complex environments of adolescent development, particularly for adolescents of color (Bronfenbrenner, 1979). In this section, I will first review existing studies on family and peer cultural socialization, respectively. I will then summarize studies that compare these two processes and highlight the need for more comprehensive quantitative studies on the family-peer incongruence in cultural socialization.

Family cultural socialization. Cultural socialization is a key component of parenting in racial/ethnic minority families (Hughes et al., 2006). Parents purposefully and explicitly teach children about their heritage culture and encourage children to respect their cultural background (i.e., overt socialization; Umaña-Taylor & Fine, 2004). They also implicitly do so by involving adolescents in daily activities related to their heritage culture (i.e., covert socialization; Umaña-Taylor & Fine, 2004). Specific examples include preparing food of one's heritage culture, and attending festivals, concerts, plays and other events that represent one's heritage culture (Hughes & Chen, 1997; Umaña-Taylor & Fine, 2004).

Parents' efforts to preserve and cultivate their heritage culture among the next generation, or heritage cultural socialization, occur commonly and frequently in minority families. It is considered by racial/ethnic minority parents as an important child-rearing goal (Hughes & Chen, 1997). In a nationally representative sample of African Americans, racial pride ranked as the

second most endorsed developmental goal that parents have for their children after education (Thornton, Chatters, Taylor, & Allen, 1990). The percentage of parents who reported socializing their children toward the heritage culture was typically above 60% in African American (Caughy, O'Campo, Randolph, & Nickerson, 2006; Hughes, 2003; Hughes & Chen, 1997; Phinney & Chavira, 1995), Latino (e.g., Mexico, Puerto Rico, Dominican; Hughes, 2003; Phinney & Chavira, 1995), and Asian American families (e.g., Chinese American, Japanese American; Phinney & Chavira, 1995).

Even though cultural socialization is often studied as socializing children to their heritage culture, mainstream cultural socialization is also practiced in racial/ethnic minority families (Boykin & Toms, 1985). Parents commonly expect their children to succeed in the mainstream society (Knafo & Schwartz, 2001; Lin & Fu, 1990), and they recognize the importance for their children to learn social norms and skills to function in the U.S. society (Cheah, Leung, & Zhou, 2013; Uttal & Han, 2011). Studies have documented parents' efforts in promoting their children's adaption to the mainstream culture. African American, Latino, and Asian American parents reported teaching children how to interact with other racial/ethnic groups (Phinney & Chavira, 1995), encouraging children to get involved in mainstream institutions especially schools (Stevenson, Cameron, Herrero-Taylor, & Davis, 2002), and conveying beliefs and values of the mainstream culture such as individualism and competition (Tyler, Boykin, Boelter, & Dillihunt, 2005; Tyler et al., 2008). However, few studies have systematically examined parents' efforts to transmit the traditions, customs, values, beliefs, and attitudes towards the mainstream American culture. The current study explored whether parents socialize their children toward the mainstream culture using similar approaches or to a similar extent as their heritage cultural socialization efforts.

Peer cultural socialization. In addition to families, friends and peers become important socializing agents for children as they enter adolescence. During adolescence, young people spend increasingly amounts of time with their peers and, consequently, their values, beliefs, and behaviors are more influenced by their peers (Brown & Larson, 2009). Peers socialize youth in a wide range of developmental domains, such as identity, education, and social relations (Brown & Larson, 2009). Like parents, peers exert their influence on adolescents both directly (e.g., peer pressure, behavioral reinforcement) and indirectly (e.g., behavioral display and structuring opportunities; Brown, Bakken, Ameringer, & Mahon, 2008).

A nascent body of studies suggests that peer socialization also occurs in adolescents' construction of their views on racial/ethnic groups. Both intraracial and interracial peer contacts have been shown to be associated with adolescents' racial/ethnic identity development (Phinney, Romero, Nava, & Huang, 2001; Umaña-Taylor, 2004; Yip, Seaton, & Sellers, 2010). In a sample of African American adolescents, Yip and colleagues (2010) found that those who reported more close friendships were more likely to report changes in their identity status over time than adolescents who had fewer friends regardless of friends' racial/ethnicity. Similarly, in a diverse sample of Latino, Asian American, and European American immigrant families, Phinney and colleagues (2001) showed that more interactions with same-race peers was associated with stronger racial/ethnic identity. These studies indicate that some socialization processes may occur in peer interactions that ultimately shaped adolescents' views of their race/ethnicity and belonging to their racial/ethnic groups.

Going beyond the simple account of peer contact, a recent study examined the specific activities in which adolescents explored their ethnic identity with peers, which closely maps onto peer cultural socialization (Kiang & Fuligni, 2008). In a diverse sample of Latino, Asian

American, and European American young adults, Kiang and Fuligni (2008) explored how often young adults actively explored the meaning of their race/ethnicity with their parents and their same-race and cross-race friends. On average, all racial/ethnic groups reported engaging in racial/ethnic exploration at least once in a while with both same-race and cross-race friends. In addition, ethnic exploration occurred more frequently between young adults and their same-race friends compared with cross-race friends. Exploration activities in this study involved learning the histories, engaging in the traditions, and talking about issues related to one's racial/ethnic group, all of which resemble parent cultural socialization practices documented in the extant literature. These findings suggest that peers may indeed act as a socialization agent with respect of one's heritage culture.

In addition to one's heritage culture, peer groups may also practice the mainstream culture and shape one's endorsement of it, especially given the fact that peers are an important link to the outside world for young people (de Anda, 1984). This body of evidence mainly comes from qualitative studies. Lesane-Brown and colleagues (2005) explored friends' cultural socialization messages among 18 African American adolescents. In addition to messages related to their racial/ethnic group (e.g., "what it means to be Black"), youth also reported having received messages from their friends concerning how to interact with the mainstream culture (e.g., "how to deal with people outside your race"). In another qualitative study of Asian American adolescents, Pyke and Dang explored peers' efforts to shape adolescents' endorsement of both cultures (Pyke & Dang, 2003). In their description, peers constantly monitored youth's attitudes and behaviors and made sure that youth did not act "too ethnic" and simultaneously not "too mainstream." In doing so, they explicitly encouraged behaviors that they consider culturally appropriate and discouraged inappropriate ones (Pyke & Dang, 2003). Finally, some evidence

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suggests that peers also implicitly shape adolescents' cultural endorsement by exerting power in adolescents' friendship choices and crowd affiliations. Wade and Okesola (2002) found in their study that African American adolescents often felt pressured by their friends or peers to interact with same-race individuals rather than cross-race individuals. These studies together suggest that both overt and covert peer socialization are likely to occur and shape adolescents' endorsement of both the heritage and mainstream cultures.

A limitation in the current literature is that it lacks empirical evidence that systematically documents what practices peers employ to socialize young people toward one's heritage culture and the mainstream American culture. The current study adapted the measure of parent cultural socialization to explore numerous socialization practices peers may use toward both heritage and mainstream cultures.

Family-peer incongruence in cultural socialization. Although families and peers socialize youth toward both their racial/ethnic and the mainstream American culture, it is a general perception that the two sets of socializing agents differ in their relative endorsement of the two cultures: families often emphasize the transmission of their heritage culture, whereas the peer groups are more oriented towards the mainstream culture (Portes & Rumbaut, 1996; Zhou, 1997). In fact, the overall cultural contexts of families and peers have been considered as drastically incongruent, such that ethnic minority adolescents are often portrayed as living between the two worlds (Zavala-Martinez, 1994).

Studies directly documenting family-peer incongruence in their cultural socialization are limited. In Kiang and Fuligni's (2008) study of young adults' ethnic exploration with their family members versus their friends, they found that young adults engaged in more frequent exploration activities of their heritage culture (e.g., learning cultural histories, participating in

cultural traditions and talking about racial/ethnic issues) with families than with friends. Another qualitative study by Qin (2009) explored conflicting expectations from parents and peers that Chinese immigrant adolescents experience in terms of their clothing choices, extracurricular activities, and academic engagement. At home, parents emphasized the traditional Chinese values centered on education and family obligation; adolescents were expected to be frugal, work hard, and spend most of their time with family. At school, peers practiced the mainstream culture and value being popular, and adolescents were expected to be fashionable, participate in extracurricular activities, and hang out with friends (Qin, 2009). Even though these findings indicate family-peer incongruence in cultural socialization may exist, empirical studies are limited in terms of a comprehensive investigation of families' and peers' specific socialization practices towards both the mainstream and one's heritage culture. The current study compared whether parents and peers employ similar socialization practices to a similar extent. Specifically, I explored whether families and peers indeed differ in their relative endorsement of the heritage culture versus the mainstream culture and how these differences are linked to adolescent adjustment.

Family-Peer Incongruence and Adolescent Adjustment

The potential incongruence in family and peer cultural socialization may have important implications for the adjustment of racial/ethnic minority adolescents. Both bioecological theory (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006) and a more culturally relevant perspective centering on biculturalism (Berry, 1997; LaFromboise et al., 1993) provide theoretical support to examine the implications of incongruence, yet the two frameworks posit that the relation between family-peer incongruence and adolescent adjustment will look quite different.

According to the bioecological theory, family-peer incongruence may compromise individual development. The bioecological model (Bronfenbrenner & Morris, 2006) indicates that development takes place in individuals' interactions with their surrounding environments (e.g., peers, family, school, culture). These contexts exist in dynamic, mutually interrelated relationships and should not be considered in isolation from each other. One approach to studying these contexts simultaneously is to look at their congruence or incongruence. Bronfenbrenner (1979) posits adaptive child adjustment when the different settings are compatible in terms of their role demands and developmental goals for the child. In contrast, incongruent developmental settings may create difficulties for individuals to fulfill their roles and further compromise individual development and psychological wellbeing.

In line with this hypothesis, an ethnographic study by Phelan and colleagues (1991) provided a detailed description of how the congruence in the norms, values, beliefs, expectations and actions of adolescents' multiple worlds (e.g., home, school and peers) influence their adjustment. When families, schools and peers share similar values and expectations, adolescents were able to integrate their roles across contexts, work toward consistent goals shared by different contexts, and receive support from important others across settings, including parents, friends, and teachers. In contrast, when the multiple worlds differed greatly or even contradicted each other in expectations, norms, and values, young people found it difficult to reconcile the discrepancies, set up coherent goals, and behave consistently. They were also forced to keep their important others in the different settings separate and even disengage from some contexts, leaving them feeling alienated from their important others (Phelan et al., 1991).

Quantitative studies on home-school dissonance also supported the link between contextual incongruence and adolescent maladjustment. Congruent learning environments at

home, school and community have been shown to boost children's academic motivations and achievement (Crosnoe, Leventhal, Wirth, Pierce, & Pianta, 2010; Epstein & Sanders, 2000). Such congruence, however, may be less common for certain groups of students. For example, racial/ethnic minority students often experience incongruent behavioral expectations and activities at home and school, as classroom practices and norms often reflect the mainstream cultural values and sometimes devalue their racial/ethnic cultural values at home (Gay, 2000; Ladson-Billings, 1994; Tyler, Boykin, Miller, & Hurley, 2006). Moreover, evidence suggests that students recognize the dissonance between their teachers' and parents' expectations, values, ideas, and viewpoints, and they tend to be troubled by such discontinuities between home and school (Arunkumar, Midgley, & Urdan, 1999; Kumar, 2006; Tyler et al., 2010). For example, in studies with racial/ethnically diverse samples, students who perceived greater family-school discontinuities in beliefs, values and expectations reported more anger and self-deprecation, lower self-esteem, and less hopefulness; they also displayed more academic cheating and disruptive classroom behaviors, reported lower academic efficacy and had lower class grades and GPAs (Arunkumar et al., 1999; Tyler et al., 2010). These studies highlight the negative impact of perceived discontinuities across developmental settings on adolescent adjustment.

Bioecological theory and the related empirical evidence would suggest that family-peer incongruence in cultural socialization is likely to represent incongruent developmental settings, which may be especially problematic for racial/ethnic minority youth. Further, based on studies on home-school discontinuity, the negative association between family-peer incongruence in cultural socialization and adolescent adjustment may be explained, in part, by adolescents' perceived discontinuity between families and peers. That is, family-peer incongruence in cultural socialization may create feelings of being caught between the different cultural contexts at home

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and with friends among racial/ethnic minority youth, which in turn compromise adolescents' psychological wellbeing and academic achievement.

In contrast to the bioecological theories, a more culturally relevant perspective centering on biculturalism (Berry, 1997; LaFromboise et al., 1993) asserts more positive developmental implications of family-peer incongruence. Racial/ethnic minorities live at the juncture of two cultures and are constantly faced with the challenge of dealing with different, and even conflicting, cultural demands (LaFromboise et al., 1993). Individuals who are highly engaged in the mainstream culture and simultaneously tied to their heritage culture are often well adjusted (Berry, Phinney, Sam, & Vedder, 2006; LaFromboise et al., 1993; Phinney & Devich-Navarro, 1997). They are more likely than their peers to meet the demands of both the dominant and heritage cultures (LaFromboise et al., 1993), receive social support from both cultural groups (Mok, Morris, Benet-Martínez, & Karakitapoğlu-Aygün, 2007), and enjoy greater cognitive complexity, flexibility, and creativity as a result of negotiating the two cultures (Benet-Martínez, Lee, & Leu, 2006; Tadmor, Tetlock, & Peng, 2009). In contrast, individuals who have unbalanced involvement with heritage and mainstream cultures fare worse than their bicultural counterparts (Berry et al., 2006; LaFromboise et al., 1993; Phinney & Devich-Navarro, 1997). They either embrace the mainstream culture at the cost of losing connections with their heritage culture or engage in their heritage culture without participating in the mainstream culture – either strategy brings a negative relationship or stressful experience with one of their cultures and compromises individual wellbeing (Berry, 1997, 2003). From this perspective, family-peer incongruence in cultural socialization, particularly when families endorse one's heritage culture and peer groups practice the mainstream culture, may promote adolescents to develop biculturalism, which would ultimately lead to adaptive adjustment.

Empirical evidence shows that compared to individuals with unbalanced involvement in the two cultures, bicultural individuals have better psychological adjustment, such as higher self-esteem (Phinney, Cantu, & Kurtz, 1997), less depressive symptoms (Wei et al., 2010), and lower loneliness (Suarez, Fowers, Garwood, & Szapocznik, 1997). Bicultural youth also have better academic outcomes, including higher school engagement, academic achievement, and educational attainment (Farver, Bhadha, & Narang, 2002; Feliciano, 2001; Zarate, Bhimji, & Reese, 2005). More comprehensively, in a sample of over 5,000 adolescents across 13 countries, successfully integrating one's heritage culture and the mainstream culture was positively linked to socioemotional well-being (Berry et al., 2006). Finally, a recent meta-analysis of 83 studies and 23,197 participants also confirmed the positive association between biculturalism and adaptation (Nguyen & Benet-Martínez, 2013). The benefits of biculturalism suggest that family-peer incongruence may also be promotive of adolescents' adjustment. That is, instead of creating feelings of being caught between the different cultural contexts at home and in the peer group, family-peer incongruence in their cultural socialization may be positively associated with better psychological wellbeing and higher academic achievement.

Thus, according to the two competing theories, family-peer incongruence in cultural socialization may influence adolescent adjustment in opposite directions. The bioecological systems theory suggests that such incongruence may create conflicting feelings in adolescents toward their families and friends, which in turn compromise adjustment. On the other side of the coin, according to theories of biculturalism, the different cultural contexts at home and with friends may provide adolescents opportunities to engage in both cultures, which does not create internal conflicts but promotes adolescent adjustment instead. The current study tested these competing theories by exploring the direct relations between family-peer incongruence in

cultural socialization and adolescents' psychological wellbeing and academic achievement, as well as mediating pathways from family-peer incongruence, to feelings of being caught between families and friends, to adolescent adjustment.

The Moderating Role of Coping Strategies, Relationship Quality, and Peer Networks

These opposing hypotheses may be disentangled further by examining potential moderators. I propose that the relation between family-peer incongruence in cultural socialization and adolescent adjustment may be negative (i.e., hypothesis of bioecological theory; Bronfenbrenner & Morris, 2006) or positive (i.e., hypothesis of bicultural theories; Benet-Martínez, Leu, Lee, & Morris, 2002; Berry, 1997; LaFromboise et al., 1993) depending on individual and relationship characteristics. In fact, both the bioecological and bicultural frameworks indicate the need to explore potential moderators. According to the bioecological theory, contextual effects on individual adjustment, including those of culture, are often interactive in nature (Bronfenbrenner & Morris, 2006). It is important to focus on the generative effects as well as buffers or mitigators, as they can help us to not only better understand the nuances of the relationships under study, but also identify adolescents at risk and develop intervening programs.

Such variations have also been suggested by the literature on biculturalism. Living in two cultures often has differential impact on individual adaptation– while bicultural contacts involve a variety of stressors, and individuals who are unable to adapt to these stressors tend to suffer as a result, those who are able to develop and maintain competence in both cultures find such experiences beneficial (Berry, Kim, Minde, & Mok, 1987; Chen, Benet-Martínez, & Bond, 2008; LaFromboise et al., 1993). Such variations often depend on adolescents' individual characteristics, their social relations, and the larger social contexts they reside in (Berry et al.,

1987; LaFromboise et al., 1993). Individuals who are cognitively competent to negotiate the different requirements across cultures, have sufficient social support from their close relationships, and experience minimal resistance from the larger society are more likely to integrate both cultures and benefit from bicultural experiences (Benet-Martínez & Haritatos, 2005; Berry et al., 1987; LaFromboise et al., 1993).

Informed by both theories, the incongruent family and peer cultural contexts may involve stressful experiences as posited in the "incongruence as deficits" hypothesis (based on bioecological theory). However, if adolescents have characteristics and support that enable them to negotiate and deal with the different requirements across developmental settings, they are likely to benefit from the multiple cultural contexts as posited in the "incongruence as assets" hypothesis (based on biculturalism). Thus, the key to disentangling the effect of family-peer incongruence on adolescent adjustment may lie in the factors that enable adolescents to successfully deal with the different requirements arising from the incongruence. The current study examined three potential moderators that represent important individual and relational characteristics that often act as buffers or mitigators, namely adolescents' coping style, relationship quality with parents and peers, and social network characteristics.

Adolescents' coping strategies. Coping refers to one's "cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 142). It is an important indicator of adolescents' adjustment in the face of stressors (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Seiffge-Krenke, 2011). Three general styles have been identified in the literature, including active coping (e.g., seeking support and discussing the problem with adults or peers), internal coping (e.g., considering possible solutions and cognitive adaption to the

situation), and withdrawal (e.g., distraction and seeking emotional outlets; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman; Seiffge-Krenke, 1995; Skinner & Zimmer-Gembeck, 2007). Active and internal coping strategies allow individuals to manage stressful situations by attempting to reduce the impact of stressors on one's psychological wellbeing (Seiffge-Krenke, 2011). Such coping strategies are associated with better adjustment, including fewer internalizing and externalizing problems, better interpersonal relationships, and greater academic performance (Connor-Smith et al., 2000; Dumont & Provost, 1999; Ebata & Moos, 1991). In contrast, the withdrawal style of coping is often regarded as maladaptive, as it does little to change the stressful situation (Seiffge-Krenke, 2011). Adolescents who avoid or withdraw from stressors often show more internalizing and externalizing problems, poorer social competence, and worse academic performance (Connor-Smith et al., 2000; Dumont & Provost, 1999; Ebata & Moos, 1991).

The moderating role of coping strategies has been found for stressors specific to adolescents of color, such as discrimination. For example, Phinney and Chavira (1995) examined the variation in self-esteem as a function of coping with prejudice in a sample of Latino, African American, and Asian American adolescents. Adolescents who employed a proactive coping style, such as discussion and self-affirmation, were less affected by discrimination in terms of their self-esteem (Phinney & Chavira, 1995). Coping strategies may have similar moderating effects on the relation between family-peer incongruence in cultural socialization and adolescent adjustment. Adolescents who are able to discuss their problems with others and seek emotional support may be more successful in dealing with the incongruence and regulating their distress, which further enables them to benefit from both cultural contexts. In contrast, youth who tend to withdraw from stressors may be less likely to make efforts to reconcile family-peer incongruence

and thus may experience greater distress. That is, the "incongruence as assets" may apply to individuals who adopt active or internal coping, whereas the "incongruence as deficits" hypothesis may apply to individuals who tend to withdraw from stressors.

Family and peer relationship quality. Moving beyond the individual level, adolescents' relationships with their parents and peers are another set of potential moderators of contextual effects. For example, parent-child relationships often serve as a context in which parenting practices are made more or less effective (Darling & Steinberg, 1993). Parenting practices often yield more positive youth outcomes when the parent-child relationship is characterized by high warmth and supportiveness (Keijsers, Frijns, Branje, & Meeus, 2009; Mounts, 2002). In addition, close and secure relationships provide youth with supportive resources that enable them to cope more effectively with stressors (Luthar, 2006). Compared with adolescents whose relationships are characterized by high negativity, adolescents who have close and secure relationships with their significant others, including parents and peers, not only fare better in stressful life conditions (e.g., poverty; Conger & Conger, 2002; Criss, Pettit, Bates, Dodge, & Lapp, 2002) but also in their daily lives when encountering regular levels of interpersonal disagreement and conflicts (Adams & Laursen, 2007; Burk & Laursen, 2005).

The moderating role of relationship quality has also been found for experiences that are specific to racial/ethnic minority adolescents, such as cultural conflicts. For example, in samples of Latino and Asian American families, parent-child discrepancies in their cultural orientations are associated with negative youth outcomes (i.e., internalizing and externalizing problems) only when youth perceive poor relationships or communications with their parents (Kim & Park, 2011; Schofield, Parke, Kim, & Coltrane, 2008). Informed by these studies, I investigated whether parent-child and peer relationships may moderate the link between family-peer

incongruence in cultural socialization and adolescent adjustment. I suspect that adolescents who have close and supportive relationships with their parents and peers may experience less distress resulting from the incongruence they face and benefit from both cultural contexts. Thus, they may be better positioned to integrate the different cultural practices and form a bicultural orientation (i.e., "incongruence as assets"). On the other hand, those who have alienated and conflictual relationships with their parents or peers are likely to experience more difficulties in dealing with the incongruence, have stronger feelings of being caught between their families and peers, and experience greater distress and maladaptation (i.e., "incongruence as deficits").

Peer norms. Moving beyond the dyadic level and toward adolescents' larger social networks, characteristics of network members are also likely to condition adolescent adjustment. Peer norms reflect the dominant attitudes, expectations, and behaviors that are not only typically held by group members but also shape the views and actions of group members (Perkins, 2002). An extensive body of work has documented adolescents' conformity to peer norms of delinquency and substance use, possibly as a result of peer reinforcement and socialization processes (Mounts & Steinberg, 1995). For example, Dishion, McCord, and Poulin (1999) noted an escalation of youth problem behaviors due to affiliation with high deviance peer groups. Additionally, Haines and Spear (1996) showed a reduction in binge drinking among college students by changing their perceptions of drinking norms. Building upon the direct effect of peer norms, some recent work has also documented peer norms' moderating effect on adolescent adjustment. For example, Landford and colleagues (2003) found a stronger association between negative parenting and youth externalizing problems in the context of high peer deviance.

Studies on the role of peer norms in adolescents' reaction to minority-specific experiences are limited. However, some qualitative studies do suggest peer norms may moderate

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the impact of family cultural conflicts on adolescent adjustment. For example, Asian immigrant adolescents often reported greater resistance to their parents' ethnic cultural beliefs and behaviors if they perceive such cultural practices are atypical in their friends' families or their peer norms reject such cultural practices (Qin, 2008). I extend this work by examining how adolescent-perceived family-peer incongruence may be shaped by the dominant views in their peer groups regarding how stressful incongruence is. Specifically, when group members generally perceive family-peer incongruence as stressful or have strong feelings of being caught between their families and peers, adolescents' distress may be reinforced and amplified by their friends. In contrast, when group members generally handle family-peer incongruence well and the average distress is low, adolescents may be encouraged not to perceive the incongruence as stressful as well.

In sum, the current study examined variations in the relation between family-peer incongruence in cultural socialization and adolescent adjustment by three factors: adolescents' individual coping style, parent-child and peer relationship qualities, and peer norms. I hypothesize that family-peer incongruence may promote adolescents' wellbeing for those who employ adaptive coping, maintain positive relationships with their parents and peers, and affiliate with friends who are less distressed by such incongruence (i.e., "incongruence as assets"). In contrast, youths' adjustment may be compromised by family-peer incongruence if they tend to withdrawal from stressors, have poor relationships with their parents or peers, and associate with peer groups characterized by heightened feelings of being caught between families and peers (i.e., "incongruence as deficits").

The Present Study

The primary goal of the present study is to link family and peer cultural socialization to

racial/ethnic minority adolescents' adjustment. I focused on the particular developmental stage of early adolescence, when issues related to culture and race/ethnicity become an important pursuit for young people (French, Seidman, Allen, & Aber, 2006; Yip, Seaton, & Sellers, 2006) and messages from their important others may be particular influential. Specifically, there are four research aims. First, specific cultural socialization practices employed by adolescents' families and peers were explored. I examined both overt and covert practices by families and peers to socialize adolescents towards both the heritage and mainstream culture. A cultural socialization scale was first developed in a pilot study, in which I asked young adults to reflect back on the socialization practices of parents and peers when they were early adolescents, and its psychometric properties (i.e., factor structure, reliability, cross-group equivalence) were examined in the primary study with early adolescents.

Second, I examined the extent to which family and peer cultural socialization practices are incongruent. Mean differences between family and peer cultural socialization towards both cultures were examined. I hypothesized that compared with peer cultural socialization, youth's families practiced heritage cultural socialization to a greater degree and mainstream cultural socialization to a lesser degree. I also explored whether there were subgroups of adolescents who experience different patterns of socialization from their families and peers.

Third, I examined the relations between family-peer incongruence in cultural socialization and adolescent adjustment. Here, competing hypotheses were tested concerning whether family-peer incongruence benefitted or compromised adolescents' wellbeing. I also examined the extent to which this link is mediated through adolescents' feelings of being caught between families and peers (see Figure 1).

Finally, I investigated whether the effect of family-peer incongruence was contingent on

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adolescents' coping strategies, their relationship qualities with parents and peers, and peer norms around feeling caught between families and peers. I hypothesized that family-peer incongruence was beneficial when adolescents used adaptive coping strategies, maintained supportive relationships with their families and friends, and associated with peers who were not distressed by such incongruence. In contrast, family-peer incongruence was likely to be a disadvantage for adolescent development when they used maladaptive coping, when their relationship with significant others were poor, and when there were heightened feelings of being caught between families and peers in youth's peer network.

Method

Participants

The study included two unique samples. First, a pilot study collected retrospective data from 208 young adults reflecting cultural socialization practices by their families and peers in adolescence. Participants were between 18 to 25 years old ($M = 21.51$, $SD = 1.95$) at the time of data collection. The sample includes 56% female and racial/ethnic minorities from diverse groups (26% Latinos, 33% African Americans, 39% Asian Americans, and 2% other race/ethnicity). The majority of the sample were U.S. born (85%), and all the participants attended secondary schools in the U.S. Median educational level is some college. Demographic characteristics of the sample are shown in the top portion of Table 1. This pilot data sample was only used to develop the cultural socialization scale used in the primary study.

Second, the primary study (Schools, Peers, and Adolescent Development Project; Project SPAD) included 254 8th grade students at two middle schools in the south. The sample includes 50% females and is mostly racial/ethnic minorities (85% Latinos, 11% African Americans, 4% other race/ethnicity). A majority of the participants (70%) were born in the U.S., and a majority of the parents (76% fathers, 72% mothers) were foreign-born. The sample has a relative high percentage of students whose parents did not graduate from high school (58%). More demographic information is shown in the lower portion of Table 1.

Procedures. The pilot study was conducted online at Amazon Mechanical Turk. A survey was posted on Amazon Mechanical Turk, which is an internet marketplace where researchers can post surveys and collect responses from a population of thousands of anonymous users (Pontin, 2007). Empirical evidence shows that MTurk participants are more demographically diverse than typical American college samples or standard Internet samples, in

terms of age, gender, race/ethnicity, and education level (Berinsky, Huber, & Lenz, 2012; Buhrmester, Kwang, & Gosling, 2011) and that the obtained data are as reliable as those obtained via traditional method; participants are internally motivated (e.g., for enjoyment) and the quality of their responses is not affected by the compensation rate (Buhrmester et al., 2011; Marge, Banerjee, & Rudnicky, 2010; Mason & Watts, 2009).

All registered users of MTurk were eligible if they were between 18 to 25 years old, were racial/ethnic minorities (i.e., Latino, African Americans, Asian Americans), and attended high schools in the U.S. To ensure the quality of the sample and data, I also limited participants to those who have U.S. IP addresses with a 95% approval rate (an indicator of response quality) on MTurk (Mason & Suri, 2012). Users who met all these criteria were invited to participate in the study. The current study did not obtain active written or signed consent. Instead, participants read a consent text describing the purpose of the study and were informed that continuing to answer the survey will indicate consent to participate in the study. All participants received a small monetary incentive ($2) through the MTurk payment system after completing the survey.

For the primary data, the research team identified two middle schools with concentrated racial/ethnic minority population in a central city in the south. Upon gaining approval from the local school district and school administrators, the research team distributed parent consent forms to the entire 8th grade during advisory periods and collected returned consent forms throughout the week. Students who returned parent consent forms were entered into a drawing (two iPod Nanos and two iPod Shuffles) whether or not their parents agreed to have their children participate. Students whose parents provided consent (62% of all the eligible students at School 1 and 69% at School 2) were then asked to sign the student assent form and complete the survey during a non-core content course. Each participant received a small amount of

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compensation ($15) for completing the survey. Additionally, each class received a small honorarium (gift value of $15) for providing the research team with time for recruitment and survey administration. Each school received an honorarium (gift value of $50) for assistance in coordination of data collection activities.

All the parent consent forms, student assent forms, and student surveys were available in both English and Spanish. To ensure comparability, questionnaires were translated into Spanish and then back-translated into English. Inconsistencies were resolved by two bilingual research team members, with careful consideration of items' culturally-appropriate meaning. The majority of the students completed surveys in English (92%).

Measures. All measures in the pilot study are displayed in Appendix 1, and those in the primary study are displayed in Appendix 2. Descriptive statistics are shown in Table 2. The pilot study only assessed cultural socialization. The primary study assessed cultural socialization, adolescents' socioemotional wellbeing, school outcomes, feelings of being caught between families and peers, coping strategies, and relationship quality with parents and peer.

Cultural socialization. The cultural socialization measure was developed in the pilot study using young adults' report of the cultural socialization practices they received during adolescence. The selection of young adults was purposeful. Compared to adolescents, young adults are better positioned at reasoning and reflecting on their experience in adolescence; they are also more capable to provide insights for researchers to generate hypotheses for future prospective studies (Gearing, Mian, Barber, & Ickowicz, 2006). These advantages are especially important given the exploratory nature of the pilot study. Items were adapted from the Familial Ethnic Socialization Measure (FESM; Umaña-Taylor & Fine, 2004). Family cultural socialization was assessed by the original FESM scale, and I adapted the FESM scale to measure

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peer cultural socialization practices. FESM includes 6 items assessing parents' overt efforts to teach their children about their heritage cultures (e.g., "My family teaches me about our family's ethnic/cultural background") and another 6 items assessing parents' covert efforts to do so (e.g., "My family participates in activities that are specific to my ethnic group"). The 12 items were adapted to capture peers' overt and covert efforts to socialize the target participant about their heritage culture by changing the word "my family" to "my friends." In addition, another 24 items were included to capture family and peer socialization of the mainstream culture by changing the word "ethnic/cultural" to "the mainstream American." Using a 5-point scale, participants rated in retrospect the frequency of each practice they experienced while they were in adolescence. I also included four open-ended questions in the pilot study (e.g., "did your family do other things that are related to your racial/ethnic culture?") soliciting any additional cultural socialization practices towards one's own ethnic culture and the mainstream American culture by families and peers.

I conducted EFA using data from half of the pilot study sample (randomly selected) for each of the four scales, including parent heritage cultural socialization, parent mainstream cultural socialization, peer heritage cultural socialization, and peer mainstream cultural socialization. For each scale, a two-factor solution (i.e., overt and covert socialization) emerged as optimal. Based on the factor loadings, I chose four items for overt socialization and three items for covert socialization (see Appendix 3). The other items were dropped due to low factor loadings or cross loadings. Qualitative analyses were also conducted on the open-ended responses in the pilot study to identify other potential cultural socialization practices. I coded the data to identify consistently emerging themes (i.e., socialization strategies) and then examined whether these themes are consistent across gender and racial/ethnic groups (Miles & Huberman,

1994). Based on this information, I included one additional item for the covert socialization practices ("prepare/eat food of the heritage/mainstream culture").

The primary study used the cultural socialization measure developed from the pilot study. *Family socialization towards one's heritage culture* was assessed by four overt socialization items (e.g., "teach/talk to you about the values and beliefs of your ethnic/cultural background") and four covert socialization items (e.g., "listen to music or watch tv/movies by artists from your ethnic/cultural background"). Adolescents also rated the same practices for *family socialization of the mainstream culture*, *peer socialization of one's heritage culture*, and *peer socialization of the mainstream culture*. Ratings ranged from 1 to 5. The internal consistency was high for each subscale ($\alpha = .88$ to .94).

Feelings of being caught between families and peers. This measure was adapted from the bicultural conflict subscale of the Bicultural Identity Integration Scale (Benet-Martínez & Haritatos, 2005). Using a 5-point scale, adolescents rated three items on the frequency in which they felt conflicted by their families and peers (e.g., "I am conflicted between my family's and my friends' ways of doing things"). The internal consistency was high ($\alpha = .83$).

Socioemotional wellbeing. Two measures of adolescents' socioemotional wellbeing were used, including depressive symptoms and loneliness. *Depressive symptoms* were assessed by the Children's Depressive Inventory (Kovacs, 1992). Using a 3-point scale, adolescents rated their depressed feelings in the past two weeks on 10 items (e.g., "I am sad"). *Loneliness* was assessed by Asher and Wheeler's (1985) Loneliness Scale. Using a 5-point scale, adolescents rated 13 items about their feelings of loneliness at school (e.g., "I have nobody to talk to"). The internal consistency was high for both the depressive symptoms scale ($\alpha = .80$) and the loneliness scale ($\alpha = .84$). All the socioemotional wellbeing items were coded such that a higher mean score

denoted stronger socioemotional distress.

School outcomes. Four aspects of school outcomes were measured, including school belonging, school engagement, educational expectations, and achievement. *School belonging* was assessed by a 5-item subscale from Gottfredson's (1984) Effective School Battery (e.g., "I feel like I am a part of this school"). *School engagement* was measured by a 5-item scale from the Perceived Social Norms for Schoolwork and Achievement during Adolescence (Witkow, 2006). It assessed students' behavioral engagement at school (e.g., "I pay attention in class"). All school belonging and engagement items were rated on a 5-point scale, and higher scores denoted stronger belonging or engagement. The internal consistency was moderate for both the school belonging measure ($\alpha = .79$) and the school engagement measure ($\alpha = .75$). *Educational expectations* assessed students' realistic prediction of their educational attainment using a single item ("How far in school do you think you will actually go?"). Adolescents responded to this question on a 7-point scale, ranging from *less than high school graduation* (1) to *obtain a PhD, MD, or other advanced degree* (7). Finally, *achievement* data were obtained from the local school district. I used Grade Point Average (GPA) and standardized test scores as indicators of achievement. GPA was calculated based on grades in all courses (core courses and electives), with grades ranging from *A* (4) to *F* (0). All grades were averaged to create a composite of GPA. Standardized test scores were obtained from the state mandated assessment on reading, math, science, and social studies. Test scores were recoded by the school district using a 4-point scale, ranging from *unsatisfactory* (1) to *advanced* (4).

Coping strategies. The coping measure was adapted from the Coping across Situations Questionnaire (CASQ; Seiffge-Krenke, 1995). Using a 5-point scale, adolescent rated 7 items on three coping strategies, including *active coping* (three items; e.g., "I discuss the problem with my

parents"), *internal coping* (three items; e.g., "I accept that there will always be problems"), and *withdrawal* (1 item; "I try not to think about the problem"). The internal consistency was acceptable for both the active coping subscale (α = .66) but low for the internal coping subscale (α = .50). The latter subscale was not included in the current study.

 Relationship quality. Relationship quality with parents and peers were measured by 11 items from the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). Adolescents rated six items on parents' sensitivity and responsiveness to adolescents' emotional states (e.g., "My parents respect my feelings") and five items on the same characteristics of their friends (e.g., "My friends listen to what I have to say"). Ratings ranged from 1 to 5, with higher mean scores representing better relationship quality. The internal consistency was high for both the parent and peer subscale (α = .88 to .92).

 Distress in peer network. Distress in the peer network was created by matching adolescents' peer nominations with individual student's reports of feelings of being caught between families and friends. In the peer nomination section of the survey, students were asked to write the names of their five closest friends in the grade level at their school. They were then presented with a roster with all the students in the grade level and asked to write the roster ID of each friend. We collected data from between 62% and 69% of the 8th grade students in each participating school, and this response rate met the criteria of creating a valid peer network (60-70%; Cillessen, 2009). On average, each student nominated 5 (*SD* = 1) friends, and each student nominated 3 (*SD* = 1) study participants. Moreover, 97% of the students nominated at least one other study participant as a close friend. I calculated distress in the peer network for each participant by averaging their nominated friends' reports of feelings of being caught between their families and friends.

Covariates. Data on students' gender and race/ethnicity was collected from the school district. Students' race/ethnicity was categorized as one of the three labels: African American, Latino, or Other. Based on student reports, we identified their nativity status (1 = both parents born in U.S., 0 = at least one parent born outside U.S.), family structure (1 = *living with both biological parents*, 0 = other family structure), and parent education (1 = *less than high school*, 4 = *four-year college graduates or higher*).

Analysis Plan

To answer the four research questions using the primary data, data analyses proceeded in the following steps. First, to explore family and peer cultural socialization practices, I randomly selected half of the primary data sample to conduct exploratory factor analyses (EFA) with a promax rotation to examine the factor structure of each subscale. A combination of model fit statistics (root mean square, error-adjusted), eigenvalues, and scree plots were used to determine the number of factors. I then conducted confirmatory factor analyses (CFAs) with the other half of the sample to assess whether the proposed factor structures provided an adequate fit to the data (Floyd & Widaman, 1995). Measurement equivalence was then examined for subscales between families and peers, between the heritage culture and the mainstream culture, across boys and girls, and across races/ethnicities. Multi-group confirmatory factor analysis (CFA) was used to examine the cross-group equivalence of the derived factors (Knight & Hill, 1998; Millsap & Kwok, 2004; Widaman & Reise, 1997). Four types of factorial invariance (configural, metric, strong, and strict) were tested sequentially, from the least restrictive to the most. Configural invariance is established if the same set of items load well on the latent factor. Metric invariance exists if the factor loading of each item is invariant across groups. The third level of invariance, strong invariance, can be achieved if the intercept of each item (i.e., the mean) is invariant across

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groups. Finally, strict invariance exists if the residual variance of each item shows cross-group invariance. Each invariance level was established if its model fit did not differ significantly from that of the previous invariance level. When a certain invariance level was not tenable, partial invariance was tested by allowing the target parameter to be freely estimated for some items (Byrne, Shavelson, & Muthén, 1989). Even though establishing invariance at all the four levels is ideal, strong invariance is required for mean comparisons across groups (Chen, 2008). I revised the scale as needed to establish strong invariance between family and peer cultural socialization because these scales were compared with each other in subsequent analyses.

Second, to investigate the extent to which family and peer cultural socialization are incongruent, I first used paired-sample t-tests to examine the mean differences in family and peer socialization practices toward one's heritage culture and the mainstream culture. I also used latent profile analysis (LPA) to explore distinct patterns of family and peer culture socialization to heritage and mainstream culture (e.g., family-peer incongruence with more peer socialization to the mainstream culture, etc.). LPA allows for estimations of subpopulations based on multiple indicators. Models estimating one to six profiles were fit sequentially. I selected the optimal solution based on multiple fit indices, including loglikelihood, Bayesian information criterion (BIC), the sample size adjusted BIC (ABIC), and a log-likelihood-based test (i.e., Lo-Mendel-Rubin (LMR) test; Nylund, Asparouhov, & Muthén, 2007). Higher loglikelihood values, as well as smaller BIC and ABIC values, indicate better model fit, and a significant LMR test indicated that a given model significantly improves model fit compared to the previous model. The number of random starts were increased to ensure that the final model converged at a stable solution (Hipp & Bauer, 2006). Residual variances of indicators were freely estimated across profiles to increase the precision of class specification (Enders & Tofighi, 2008).

Because of the small sample size, LPA may be underpowered to identify latent classes. As an alternative, I introduced interaction terms between parent and peer cultural socialization to assess incongruence in subsequent analyses. I also determined incongruence between parents' and peers' cultural socialization practices by calculating difference scores using two approaches. In the first approach, raw difference scores were created by subtracting peer socialization scores from those of families, separately for the heritage and mainstream culture. In the second approach, I assessed the degree of family-peer incongruence using the absolute value of the raw difference scores and identified the direction of family-peer incongruence using two dichotomous variables. One variable captured whether family cultural socialization was higher than that of peers (i.e., when the raw family-peer difference score was one standard deviation above the mean), and the other captured whether family cultural socialization was lower than that of peers (i.e., when the raw family-peer difference score was one standard deviation below the mean); the excluded reference group were adolescents whose family and peers practice cultural socialization were similar (i.e., when the raw family-peer difference score was between one standard deviation below and above the mean). This was done for cultural socialization practices towards the heritage and the mainstream cultures separately.

Third, to explore the extent to which family-peer incongruence influences adolescent adjustment, I conducted path analyses to test the relations among family-peer incongruence, adolescents' feelings of being caught between family and peers, and multiple indicators of adolescent adjustment (see Figure 1). Family-peer incongruence was captured in three ways, one using the family-peer cultural socialization profiles enumerated in step 2 of the analyses (LPA results), another using the difference scores between family and peer cultural socialization, and the third using interactions between family and peer cultural socialization. Separate path analyses

models were conducted for each incongruence measure (i.e., family-peer incongruence profiles, difference scores, interactions).

Finally, to explore the moderating role of adolescents' coping strategies, relationship quality and distress in the peer network, I introduced main effects of each moderator and interaction terms between family-peer incongruence and the moderator. When a significant interaction term emerged, simple slope analyses were conducted to explore how the effects of family-peer incongruence vary at different levels of moderators. Specifically, the effect of family-peer incongruence were tested twice, first when the moderator was one standard deviation above the mean and again when the moderator was one standard deviation below the mean (Aiken & West, 1991).

Results

Factor Structure of the Cultural Socialization Scale

To explore the factor structure of the cultural socialization scale, I conducted factor analyses for each of the following four subscales: family socialization of the heritage culture, family socialization of the mainstream culture, peer socialization of the heritage culture, and peer socialization of the mainstream culture. I was particularly interested in whether an overt socialization factor and a covert socialization factor comprised the cultural socialization scale. Exploratory factor analyses (EFAs) were first conducted on half of the sample (randomly selected). EFA results, including eigenvalues and model fit indices, are presented in Table 3, and factor loadings from EFAs are presented in Table 4. Similar factor structures were observed for the four subscales. Specifically, eigenvalues and factor loadings suggested a one-factor model for each subscale. Even though model fit indices (i.e., CFI, RMSEA, SRMR, and chi-square values) indicated that the two-factor, three-factor, or four-factor model fit the data better than the one-factor model, multiple items had cross-loadings, and some factors had only one item in these multi-factor models. Thus, I identified a one-factor structure for each of the four subscales.

Confirmatory factor analyses (CFAs) were then conducted to establish goodness of fit for factors using the other half of the randomly-selected sample. In some cases, I introduced correlated residuals within a factor to improve model fit (Brown, 2006). Model fit indices and factor loadings from CFAs as well as reliabilities (Cronbach's alphas) for each subscale are presented in the left portion of Table 5. The final one-factor models all showed a good fit to the data, and all factor loadings were above .30 (Brown, 2006) and significant at $p < .001$. Reliabilities were high across the four subscales ($\alpha = .86 - .94$).

Measurement Equivalence of the Cultural Socialization Scale

After establishing the factor structure of the cultural socialization scale, I conducted invariance analyses to explore measurement invariance across different socialization agents (i.e., family versus peer) and different cultures (i.e., heritage versus mainstream culture) as well as invariance across adolescent gender, race/ethnicity, and nativity.

Invariance across family and peer socialization and across heritage and mainstream cultures. Multi-group confirmatory factor analyses were used to examine invariance across the following four subscales: family socialization of the heritage culture, family socialization of the mainstream culture, peer socialization of the heritage culture, and peer socialization of the mainstream culture. Because adolescent reports of these socialization practices are non-independent, I modeled the four subscales in a single covariance matrix. Non-invariance was determined if at least two of the following three criteria were met: $\varDelta\chi^2$ significant at $p < .05$, $\varDelta CFI \geq .01$ and $\varDelta TLI \geq .02$ (see Cheung & Rensvold, 2002 for a discussion of criteria for measurement invariance). As displayed in the upper portion of Table 6, invariance was observed at the configural and metric level. The strong invariance model did not exhibit adequate fit to the data, and a partially strong invariance model was adopted by freely estimating item 2 ("hang out mostly with people who share the heritage/mainstream culture") and item 8 ("attend things such as festivals, concerts, plays, or other events that represent the heritage/mainstream culture") across the four subscales. Partial strict invariance was also adopted by freely estimating item 3 ("teach/talk to you about the values and beliefs of the heritage/mainstream culture") in addition to items 2 and 8.

Because strong invariance was not observed for the original cultural socialization scale but was required for comparing family and peer cultural socialization in subsequent analyses (Chen, 2008), I dropped items 2 and 8 with non-invariant points of origin and conducted another

set of invariance analyses with the revised scale. As shown in the bottom portion of Table 6, the six-item scale demonstrated invariance at the configural, metric, and strong level. A strict invariance model did not achieve adequate model fit, and a partial strict invariance model was adopted by freely estimating item 3. The revised scale also showed good model fit and factor loadings in confirmatory factor analyses, and reliabilities were high (see the right portion of Table 5). The revised scale was used for all subsequent analyses.

Invariance across adolescent gender, race/ethnicity, and nativity. I further examined measurement invariance with the revised scale (with items 2 and 8 omitted) across three covariates, namely adolescent gender, race/ethnicity, and nativity, in multiple indicators multiple caucus (MIMIC) models (Kline, 2011). The MIMIC approach assumes configural and metric invariance and tests for strong invariance by estimating the effect of covariates on both the latent factor and the individual items. Non-invariance is indicated by the significant effect of a covariate on an item, which suggests that the response probabilities for the particular item vary by the covariate, even when the latent factor is held constant. I conducted MIMIC analyses separately for each of the three covariates (i.e., gender, race/ethnicity, nativity) and separately for each of the four subscales (i.e., family socialization of the heritage culture, family socialization of the mainstream culture, peer socialization of the heritage culture, peer socialization of the mainstream culture). Invariance was observed for nearly all the 72 tested relationships with only one exception: girls were more likely than boys to report that their families "prepare and eat food of the heritage culture" ($\beta = .17$, $p = .001$), suggesting cross-group measurement equivalence in general for the four subscales.

Family-Peer Incongruence in Cultural Socialization

After demonstrating sufficient measurement equivalence of the cultural socialization

scale across various groups, my next set of analyses explored family-peer incongruence in

cultural socialization practices. As preliminary analyses, I used paired-sample T-tests to compare

the mean differences between family and peer cultural socialization first for the heritage culture

and again for the mainstream culture. Results indicated higher family socialization toward the

heritage culture ($M = 3.67$, $SD = .88$) compared with peer socialization toward the heritage

culture ($M = 3.48$, $SD = 1.04$; t (246) = 5.07, $p < .001$). There were no significant differences in

family and peer socialization toward the mainstream culture ($M = 3.26$, $SD = .93$ and $M = 3.27$,

$SD = 1.06$ for the family and peer socialization, respectively; t (244) = .29, $p = .77$).

To explore the overall pattern of family-peer socialization toward both heritage and

mainstream cultures, I conducted latent profile analyses using the four socialization indicators:

family socialization of the heritage culture, family socialization of the mainstream culture, peer

socialization of the heritage culture, and peer socialization of the mainstream culture. Models

estimating one to five profiles were fit sequentially. Model fit indices are presented in Table 7,

and the 3-class solution was selected. Although the loglikelihood values increased and BIC

values decreased across the 2-class to 4-class models, these changes began to level off from the

3- to 4-class model. In addition, the LMR test showed that the 3-class model fit the data better

than the 2-class model, whereas the fit did not differ significantly between the 3- and 4-class

models. Profiles for the 3-class model are displayed in Figure 2. The largest group (56% of the

overall sample) had moderate levels of cultural socialization across family and peer socialization

and across heritage and mainstream cultures, and they were labeled the "*moderate*" socialization

group. Another 26% of the sample had the lowest levels of cultural socialization across the four

types of socialization practices, and they were labeled as the "*congruently low*" socialization

group. Finally, 18% of the sample had the highest levels of cultural socialization, and they were labeled as the "*congruently high*" socialization group.

Because no incongruence groups emerged, the latent profiles were not used in subsequent analyses to assess family-peer incongruence in cultural socialization. Instead, I used interaction terms and difference scores between family and peer socialization to capture incongruence; a more detailed description of this strategy follows.

Linking Family-Peer Incongruence in Cultural Socialization to Adolescent Adjustment

The fourth set of analyses examined the link between family-peer incongruence in cultural socialization and adolescent adjustment. Adjustment indicators included socioemotional wellbeing (depressive symptoms, loneliness) and school outcomes (school belonging, school engagement, educational expectations, GPAs, standardized test scores). Bivariate correlations among study variables are displayed in Tables 8a and 8b. Separate analyses were conducted for family-peer incongruence assessed by interactions and difference scores.

Incongruence as interaction terms. In using interaction terms to capture incongruence, I first tested the main effects of family and peer cultural socialization on adolescent adjustment and then introduced interactions terms between family and peer socialization. Separate models were conducted for socialization of the heritage culture and the mainstream culture. Results are displayed in the upper portion of Tables 9a and 9b. Family cultural socialization was associated with positive developmental outcomes in general. Specifically, adolescents with higher levels of family socialization toward their heritage culture reported stronger school belonging as well as higher educational expectations, school engagement, and GPAs. The effects of family heritage socialization were marginally significant for loneliness. Adolescents with higher levels of family

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socialization toward the mainstream culture had stronger school belonging but lower standardized test scores.

In contrast to the generally positive role of parent cultural socialization for adolescent adjustment, peer cultural socialization tended to pose challenges. Adolescents receiving greater heritage cultural socialization from their peers had lower educational expectations and standardized test scores. They also had lower GPAs (marginally significant). Similarly, adolescents receiving greater mainstream cultural socialization from their peers had lower GPAs.

Moving to interactions between family and peer cultural socialization, two significant interaction terms emerged for adolescents' feelings of loneliness: one between family and peer socialization of the heritage culture and the other between family and peer socialization of the mainstream culture. Simple slope analyses showed that regardless of whether socializing toward the heritage or the mainstream culture, greater family cultural socialization was associated with less loneliness when peer cultural socialization was high (β = -.31, p = .001 for the heritage culture, β = -.23, p < .05 for the mainstream culture). Such positive impact of family socialization was not significant when peer socialization was low (β = -.02, p = .80 for the heritage culture, β = .07, p = .53 for the mainstream culture). The interaction effects are shown in Figures 3a – 3b. No significant interaction effects were observed for the academic outcomes.

Incongruence as difference scores. In using difference scores to capture incongruence, I first created raw difference scores by subtracting peer cultural socialization from family cultural socialization, with separate scores for heritage and mainstream culture. The effects of family-peer difference scores on adolescent adjustment were estimated, controlling for average family and peer socialization. Separate models were conducted for socialization of the heritage culture and the mainstream culture. Results are shown in the middle portion of Tables 9a and 9b. Results

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showed that the more that family socialization of the heritage culture exceeded peer socialization of the heritage culture, the better adolescents did in terms of educational expectations, GPA, and standardized test scores. Conversely, the more peer socialization of the heritage culture exceeded heritage culture socialization from families, the worse adolescents did on the school outcomes. A similar trend was observed for school engagement (marginally significant). For both contrasts, there was no influence of difference scores on socioemotional outcomes.

Based on the raw difference scores between family and peer cultural socialization, I further explored how the direction of family-peer incongruence might be linked to adolescent adjustment, controlling for the degree of incongruence and the average level of family and peer socialization. Results are displayed at the bottom portion of Tables 9a and 9b. Specifically, incongruence in which families practiced greater socialization than peers was not associated with adolescent adjustment, whereas incongruence in which peer cultural socialization exceeded family cultural socialization was associated with poorer school outcomes, including educational expectations, school engagement, GPA, and standardized test scores.

Linking Family-Peer Incongruence, Feelings of Being Caught between Families and Peers, and Adolescent Adjustment

The fifth set of analyses tested the extent to which the link between family-peer incongruence and adolescent adjustment was mediated by adolescents' feelings of being caught between their families and peer groups. I conducted path analyses separately for family-peer incongruence assessed by interaction terms and by difference scores.

Incongruence as interaction terms. Both direct and indirect effects were estimated among cultural socialization predictors (i.e., family socialization, peer socialization, interactions between family and peer socialization), adolescents' feelings of being caught, and adolescent

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adjustment. Estimates for the indirect effects are presented in the top portion of Tables 10a and 10b. Because only two marginally significant indirect effects emerged from the interaction between family and peer socialization of the heritage culture to adolescents' adjustment (loneliness and depressive symptoms), no further simple slope analyses were conducted to explore these interactions.

Incongruence as difference scores. Direct effects among the key variables are depicted in Figure 4. Regardless of whether socializing toward the heritage or mainstream culture, the more family socialization exceeded peer socialization, the less feelings of being caught between families and peers were reported by adolescents. Conversely, the more peer socialization exceeded family socialization, the greater feelings of being caught adolescents perceived. These feelings of being caught between families and peers, in turn, were associated with greater loneliness and depressive symptoms, as well as lower levels of school engagement. A similar negative effect of feelings of being caught was also observed for educational expectations at the marginally significant level. Indirect effects are presented in the middle portion of Tables 10a and 10b.

I further disentangled the mediated model by distinguishing the directions of family-peer incongruence. Direct effects of key variables are depicted in Figure 5. Adolescents reported less feelings of being caught between their families and peers if they received greater socialization of the mainstream culture from their families than from their peers. In contrast, adolescents perceived greater feelings of being caught if their peers practiced more heritage cultural socialization than their families. The feelings of being caught, in turn, were linked to greater loneliness and depressive symptoms as well as less school engagement, similar to the previous model. A marginally significant effect of feelings of being caught was also observed for

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educational expectations, with greater feelings of being caught linked to lower educational expectations. Indirect effects are displayed in the bottom portion of Tables 10a and 10b.

The Moderating Role of Coping Strategies, Relationship Qualities, and Peer Norms

My final set of analyses explored how model relationships varied as a function of adolescents' coping strategies (active coping, withdrawal), relationship qualities (family relationship quality, peer relationship quality), and distress in the peer network. Because no significant effects of incongruence on adolescent adjustment were observed when incongruence was based on interaction terms between family and peer socialization, this set of analyses only used difference scores to capture family-peer incongruence. Interaction terms were created between family-peer incongruence difference scores and each of the moderators as well as between adolescents' feelings of being caught between family and peers and each of the moderators. Analyses were conducted separately for heritage and mainstream cultural socialization. Significant moderation effects are displayed in the left portion of Table 11.

The link between family-peer incongruence and feelings of caught between families and peers did not vary significantly among adolescents using different coping strategies, nor did it vary significantly among adolescents reporting varying levels of relationship quality with their families or friends. In contrast, I did observe several significant moderation effects for the links between adolescents' feelings of being caught and their adjustment. Simple slope analyses were further conducted to disentangle these interactions. The right portion of Table 11 presents estimates for the effect of feelings of being caught on adolescent adjustment when the moderator was at a higher level (i.e., one standard deviation above the mean) and a lower level (i.e., one standard deviation below the mean). First, greater feelings of being caught between families and peers were associated with poorer school engagement among adolescents using lower levels of

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active coping but were unrelated for those adolescents using higher levels of coping (see Figure 6). Second, greater feelings of being caught were also associated with lower school engagement, GPAs, and standardized test scores among adolescents using lower levels of withdrawal coping but were unrelated for adolescents using higher levels of withdrawal coping (see Figures 7a – 7c). Similarly, the negative effect of feelings of being caught was observed for school engagement and GPAs among adolescents who had poorer peer relationships but not among adolescents who had more supportive peer relationships (see Figures 8a – 8b). Finally, feelings of being caught were linked to lower education expectations and school engagement among adolescents whose friends did not perceive such feelings of being caught but not among adolescents whose friends also had high feelings of being caught (see Figures 9a – 9b).

Discussion

Race/ethnic minority youth live at the intersection of different cultures (e.g., the mainstream culture, their heritage culture), and the extant literature has identified important qualities that help young people navigate across multiple cultures (e.g., biculturalism, ethnic identity; LaFromboise, Coleman, & Gerton, 1993; Umaña-Taylor et al., 2014). However, few studies have examined the various cultural socialization settings that youth reside in. As a first attempt, the current study explored cultural socialization practices by youth's families and peer groups and investigated how the similarities or differences in family and peer cultural socialization influence youth adjustment. Despite the common assumption in the literature that family and peer cultural contexts are drastically different for immigrant youth and children of immigrants (Portes & Rumbaut, 1996), the current findings suggest that these cultural contexts share more similarities than differences: family and peer cultural socialization practices were closely related to each other; I also did not observe a subgroup of adolescents experiencing incongruent cultural socialization by families and peers using the latent class analyses. However, an investigation of mean differences did reveal that peers, in general, engaged in less heritage cultural socialization but similar levels of mainstream cultural socialization as youth's families. Moreover, when incongruence in family and peer cultural socialization did occur, particularly when peers performed greater cultural socialization (either the heritage or mainstream culture) than their parents, adolescents tended to suffer from this incongruence both socioemotionally and academically. Such links were explained in part by adolescents' feelings of being caught between their families and peers. Adolescents' coping, peer support and peer network buffered the detriments to a certain degree.

Family and Peer Cultural Socialization

The current study first attempted to explore peer cultural socialization, its practices and components. Both retrospective data from young adults in the pilot study and data from adolescents in the primary study showed that peer cultural socialization can be captured by practices similar to those of parent socialization, even though the same practice may be endorsed by peers and parents to a different degree. Regarding the components of peer socialization, based on young adults' reflections, these practices can be categorized as either overt or covert socialization, which is consistent with the literature on classifications of parent cultural socialization (Umaña-Taylor & Fine, 2004). However, based on adolescent reports, only one factor was identified for either parent or peer cultural socialization. This difference may be explained by the developmental stages of the two samples. Based on ethnic identity development theories, early adolescence is a time when children start to actively explore issues related to race/ethnicity. Such explorations increase markedly in middle and late adolescence and continue into emerging adulthood (French, Seidman, Allen, & Aber, 2006; Phinney, 2006; Yip, Seaton, & Sellers, 2006). Matching these developmental periods to the participants in the current study, early adolescents in the primary study may be less sophisticated in thinking about all the explicit and implicit messages related to culture due to a lack of experience. In comparison, the young adults in the pilot study may have a more nuanced perspective of their adolescent experiences because they were using their current ethnic identity lens. Another possibility is that parents' and peers' socialization may become more nuanced as adolescents turn older. For example, studies on parent cultural socialization showed that older adolescents received more frequent cultural socialization messages than their younger counterparts (Fatimilehin, 1999; McHale, et al., 2006). Future studies using samples in middle and late adolescence, or even emerging adulthood, may

provide more information on the developmental changes in cultural socialization by both families and peers.

In considering the exact items within the socialization scales, I first constructed a scale demonstrating strong factorial invariance across family and peer socialization practices, which is required for cross-group mean comparisons (Chen, 2008). In doing so, two items from the original scale (i.e., "hang out mostly with people who share the heritage/mainstream culture," "attend things such as festivals, concerts, plays, or other events that represent the heritage/mainstream culture") were dropped. The non-invariance in the point of origin of these two items suggested that adolescents tended to rate their friends as more likely than their families to associate with people from the mainstream culture and participate in mainstream cultural activities, even if peers and families practiced cultural socialization to the same degree. Such non-invariance is sensible, as adolescents may be more likely to engage in social activities such as hanging out and attending concerts with friends than with families in general. For example, McHale, Crouter, and Tucker (2001) found that children were more likely to report hanging out with peers than with other adults. Adolescents were also found to spend more time with peers than with parents on extracurricular activities (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2007). By dropping these two items and establishing a strong invariance across family and peer cultural socialization, the final scale can be more widely used in measuring cultural socialization across developmental settings in future studies.

Moving to the family-peer incongruence in cultural socialization, peers engaged in less heritage cultural socialization but similar levels of mainstream cultural socialization as families. While family-peer differences in heritage cultural socialization are consistent with the prior work on ethnic identity exploration activities (Kiang & Fuligni, 2008), it is somewhat surprising that

peers engaged in similar levels of mainstream cultural socialization as families, as qualitative work has documented immigrant adolescents' struggle in conforming to parents' traditional expectations versus peers norms that are mainstream culture-oriented (Qin, 2009). At least two reasons come into play here. First, the current data were collected from schools with a dense race/ethnic minority (predominantly Latino) population, and thus mainstream American culture may be less endorsed and practiced at the school level. Second, studies show that adolescents' cultural orientations develop across the course of adolescence, and individuals become more oriented toward the mainstream culture as they move through late adolescence and emerging adulthood (Schwartz et al., 2013). It is possible that peers' mainstream cultural socialization may be more practiced in middle or late adolescence and in schools with more racial/ethnically diverse student populations.

While the mean differences between family and peer cultural socialization (specifically toward the heritage culture) was observed at the average level, I was not able to identify subpopulations of adolescents who experienced family-peer incongruence versus congruence in latent profile analysis. Instead, three groups of adolescents emerged with congruently high, moderate, and low cultural socialization across their family and peers. Perhaps the sample size in the primary study was not sufficient in identifying larger numbers of groups. Indeed, simulation studies suggest that classes can be more accurately identified with a sample size of 500 or even higher (Nylund, Asparouhov, & Muthén, 2007; Tein, Coxe, & Cham, 2013). The sample size-to-parameters ratio in the current latent profile analysis also did not reach an ideal level (typically 20, but only 10 for a 3-class model and 7 for a 4-class model; Kline, 2011). In addition to the sample size, an inclusion of more indicators may also improve the possibility of identifying accurate classes (Tein, Coxe, & Cham, 2013). A person-centered approach is more informative

when the construct includes a variety of indicators that act in complex, interactive manners (Bámaca-Colbert & Gayles, 2010; Bergman & Magnusson, 1997). Future studies may be able to identify more classes with multiple informant data (e.g., parent and peer report) and other aspects of cultural socialization (e.g., language use).

Finally, the lack of an "incongruence" group may also indicate that family and peer cultural socialization are closely related to each other, and that although family-peer incongruence exists, the difference between family and peer socialization is not as large as group differences. In this case, incongruence may be better captured by mean differences than latent profiles. This finding suggests that family and peer cultural socialization may not be as drastically different as they have been commonly assumed for immigrant youth and children of immigrants (Portes & Rumbaut, 1996). Perhaps a more accurate description of the cultural contexts at home and in peer groups is that they share more similarities than differences, and family-peer incongruence may only present for a smaller group of individuals. However, when incongruence did occur, as assessed by variable-centered approaches (e.g., difference scores, interactions), it was indeed associated with adolescent adjustment.

Developmental Implications of Family-Peer Incongruence in Cultural Socialization

Two approaches were used to assess family-peer incongruence, and they provided different yet complementary insights into the developmental implications of family-peer incongruence. While family-peer *congruence* was shown to be beneficial for adolescent adjustment using the interaction terms between parent and peer cultural socialization, the difference score approach demonstrated the disadvantages of family-peer *incongruence* for adaptation. Specifically, when family-peer incongruence was captured by interaction terms, high parent cultural socialization was only protective of loneliness when peers also practiced cultural

socialization to a high degree. This was observed for both heritage and mainstream cultural socialization. Such findings are consistent with the bioecological theory (Bronfenbrenner, 1979) emphasizing the importance of cross-context congruence. It is also partially consistent with the biculturalism perspective (Berry, 1997; LaFromboise et al., 1993) in providing strong heritage and mainstream cultural background. Perhaps a more accurate approach to understanding the cultural contexts across developmental settings is to combine these two theoretical perspectives. That is, adaption may be most likely to occur when different developmental settings congruently provide strong support for both the heritage and mainstream cultures.

The congruently strong cultural contexts were found to be especially beneficial for adolescents' socioemotional adjustment. This is consistent with prior work on parent cultural socialization on adolescent adjustment (Rodriguez, Umaña-Taylor, Smith, & Johnson, 2009), which suggests that parent cultural socialization influence adolescent adjustment by promoting their self-concepts. For example, one study found that greater cultural messages were directly linked to adolescents' ethnic identity and self-esteem, whereas academic adjustment was more of a distal outcome (Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009). In the current study, adolescents' feelings of loneliness may represent a construct that is closely related to such self-concepts and thus more sensitive to family-peer incongruence in their cultural messages.

When using difference scores to capture incongruence, another pattern emerged. Specifically, incongruence was associated with poorer school outcomes only when peers practiced cultural socialization to a greater degree than did parents; incongruence was not linked to poorer adolescent adjustment when parents socialized adolescents more than peers, and this pattern held for both socialization toward the heritage culture or the mainstream culture. This finding is partially consistent with bioecological theory (Bronfenbrenner, 1979), which suggests

incongruence in proximal contexts may be maladaptive, yet the current study highlighted some nuances in this relationship by attending to the directions of incongruence.

The current findings may be explained by the relative importance or the different functions of parent versus peer socialization during early adolescence. During this developmental period, although peers start to become an important socialization agent, parents tend to remain the primary socialization agent, specifically in shaping adolescents' racial/ethnic identity and cultural values (Umaña-Taylor, Alfaro, Bámaca, Guimond, 2009; Umaña-Taylor, Bhanot, & Shin, 2006). Therefore, it may be more normative for adolescents to experience incongruence in which parents practiced greater cultural socialization than peers as opposed to incongruence in the other direction. In comparison, when parents did not fulfill their roles as primary socialization agents and adolescents instead received greater cultural messages from their peers instead, youth may lack clear guidance to navigate across developmental settings and feel more caught between families and peers. Additionally, the incongruence in which peers practiced more cultural socialization than parents may reflect a more unfavorable family environment in general. For example, studies have shown that parents who were from low SES background and less warm towards their children tended to practice lower levels of cultural socialization (Brown, Tanner-Smith, Lesane-Brown, & Ezell, 2007; McHale et al., 2006). Furthermore, greater cultural socialization by peers than families may also capture adolescents spending a large amount of time with peers, which has been linked to lower grades and more behavioral problems (Barnes et al., 2007; McHale et al., 2001).

Processes by Which Socialization Incongruence Influences Developmental Outcomes

In relation to mediators that may explain the link between incongruence and adjustment, incongruence was indirectly linked to socioemotional distress (i.e., loneliness, depressive

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symptoms) through adolescents' feelings of being caught between families and peers. This is consistent with prior work on adolescents' perceptions of home-school discontinuities, which demonstrates that adolescents who perceived greater incongruence in beliefs and expectations at home and at school reported more socioemotional distress and lower self-esteem (Arunkumar et al., 1999; Tyler et al., 2010). Feelings of being caught between developmental settings may create uncertainties about one's roles and developmental goals (Phelan et al., 1991), which may be more closely linked to self-concept and socioemotional wellbeing. Studies on biculturalism also have documented individuals' struggles with multiple identities when they hold conflicted feelings toward one's heritage and mainstream cultures (Benet-Martínez & Haritatos, 2005). Thus, adolescents' feelings of being caught are likely to be particularly relevant for socioemotional rather than academic outcomes.

Future studies are needed to explore other potential mediators that may explain the link between actual family-peer incongruence and school outcomes. For example, values and expectations are important predictors of academic motivation (Wigfield & Eccles, 2000), and thus a lack of consistent expectations in culturally incongruent settings may compromise one's academic motivation. Prior work does suggest that students experiencing cultural discontinuities at home and at school reported lower motivation (Warzon & Ginsburg-Block, 2008). Parent cultural socialization was also shown to indirectly influence achievement through academic motivation (Huynh & Fuligni, 2008). Informed by these studies, family-peer incongruence in cultural socialization may lead to lower academic motivation, which further compromises adolescents' school outcomes. Another potential mediator may be socioemotional distress. Prior work has identified links between socioemotional well-being and subsequent academic performance (Benner, 2011). Thus, instead of considering socioemotional and academic

outcomes at the same level, it may be instead that the process by which family-peer incongruence indirectly affects academics is via adolescents' loneliness and depressive symptoms. Testing these links is not possible with the current cross-sectional data but would be an important direction for future work in this area. Exploring potential processes by which incongruence matters is important, as it highlights potential targets for intervention programs. Family-peer incongruence may be difficult to change as it is interrelated with parents' and peers' acculturation/enculturation levels (Knight et al., 2011). Interventions may be more fruitful in improving adolescent adjustment by targeting mediators such as adolescents' perceptions or motivations.

Moderating Effects of Coping Strategies, Relationship Quality, and Network Stress

In exploring potential moderation, there was no variation in the link between incongruence and feelings of being caught between families and peers by coping strategies, relationship quality, and friends' feelings of being caught. However, the effects of feeling caught between parents and peers on adolescent adjustment were indeed conditioned by the three moderators. Feelings of being caught between parents and peers were associated with poorer school outcomes only when adolescents used lower levels of active coping and withdrawal coping, had poorer peer relationships, and had peers who were not stressed by family-peer incongruence. The protective effect of active coping and relationship quality was consistent with prior work, which suggests that adaptive coping strategies and peer support often buffer the negative impact of stressors (Phinney & Chavira, 1995; Adams & Laursen, 2007). However, the benefits of withdrawal coping and peers' feelings of being caught were somewhat unexpected.

Perhaps the protective effect of withdrawal coping can be understood by distinguishing the situational factors of the stressor. For example, adolescents tend to use more active coping

strategies when the stressor is peer-related (e.g., arguments with friends; Griffith et al., 2000; Seiffge-Krenke et al., 2009) and when they perceive the situation is controllable (Clarke, 2006; Ebata & Moos, 1994). In contrast, they tend to withdraw when the stressor is related to families (e.g., arguments with parents; Griffith et al., 2000) and when they lack control over the stressor (Ebata & Moos, 1994). Moreover, the use of withdraw coping seems to be more adaptive in uncontrollable situations than in controllable situations (Compas et al., 2001; Edlynn, Gaylord-Harden, Richards, & Miller, 2008). In the current study, feelings of being caught between families and peers represent a stressor that involves two competing sets of socialization agents, which may be perceived by adolescents as somewhat uncontrollable or static, and thus, withdrawal coping may act as a more adaptive coping strategy in this case. This finding highlights the importance of promoting a variety of strategies, including active approach and withdrawal, in coping with the incongruent cultural contexts between families and peers.

In relation to the moderator of peer network stress, unexpectedly, I observed a protective effect of having friends who similarly felt caught between families and peers. This is inconsistent with prior work documenting the detriments of negative peer norms, such as the peer contagion effect (Dishion & Tipsord, 2011). Specifically, this line of work suggests that youth's problem behaviors are likely to escalate as a result of involvement with highly deviant peers (Dishion, McCord, & Poulin, 1999), and that adolescents' depressive symptoms are likely to be magnified by their friends' depressive symptoms (Stevens & Prinstein, 2005). A closer examination of the detailed peer processes may disentangle this inconsistency. It is possible that friends who also perceived a high level of feeling caught between parents and peers may serve as a coping resource with whom adolescents can share their concerns and issues. Youth may not be able to do so when he/she was the only one in the peer group to suffer from such incongruence. Indeed,

studies have shown that peers provide youth with supportive resources that enable them to cope more effectively with stressors such as discrimination (Brody et al., 2006). Adolescents' attributions may also explain the moderating effect of peer network stress. For example, studies have found that the consequences of victimization and failures in exit exams were especially detrimental when such experiences were not shared by students' same-race/ethnic peers (Benner, 2013; Graham, Bellmore, Nishina, & Juvonen, 2009), possibly as a result of a self-blame attributions (i.e., that such negative experiences occurred due to some internal versus external reason). In my study, when feelings of being caught are not shared, this may similarly lead adolescents to attribute that these feelings are a problem within themselves as opposed to an external issue.

All the significant moderating effects emerged for the links between adolescents' feelings of beingcaught and school outcomes but not socioemotional outcomes. This may be a measurement issue, as school outcome variables had larger variance than did socioemotional indicators (see Table 2). The strong relationship between feelings of being caught and socioemotional distress may also explain its lack of variation. Nevertheless, the current findings highlight the protective effects on adolescent adjustment for multiple factors, ranging from individual to relational characteristics. They are informative in identifying adolescents who are at risk of academic problems (e.g., adolescents who did not use coping strategies, who had poor peer relationships, and whose friends did not share their problems). The current findings also point to intervening tools (e.g., promoting a variety of coping strategies, supportive peer relationships) that could help alleviate the negative impact of family-peer incongruence on adolescent adjustment.

Strengths, Limitations and Future Directions

An important contribution of the current study is the examination of multiple developmental contexts simultaneously. Even though developmental settings have been theorized as interdependent and interactive in nature, studies on contextual influences often focus on the separate impacts of each context. The current study examines family and peer contexts simultaneously by looking at their similarities or differences, and how adolescents make meanings of these similarities versus differences.

Another theoretical contribution is the examination of previously underdeveloped constructs, such as peer cultural socialization, cultural socialization toward the mainstream culture, and family-peer incongruence in cultural socialization. Multiple steps were taken in developing the cultural socialization scale, such as collecting pilot data (both quantitative and qualitative data) to select representative items and conducting quantitative analyses to evaluate measurement reliability and validity. Family-peer incongruence was also assessed using several approaches to gain a comprehensive understanding of its forms, prevalence, and developmental implications.

Another strength of the current study is its study design. The primary sample was representative of the student population at schools. Peer network data were collected from over 60% of the students from each of the two participating schools, and the sample demographic characteristics were comparable to the actual student population in the school district area (e.g., 85% Latinos in the sample compared to 86% Latinos in the population). We also obtained a wide range of adjustment indicators, including self-reported socioemotional and academic adjustment and achievement data from school records. These data provided a more thorough view of adolescent adjustment.

The current findings, however, should be interpreted within the study's limitations. First, we used cross-sectional data and, thus, the proposed causal relationships described in the current study (i.e., family-peer incongruence in cultural socialization influences adolescent adjustment) cannot be determined. Recent work showed that a bidirectional relationship may exist between parent cultural socialization and adolescents' ethnic identity (Umaña-Taylor, Zeiders, & Updegraff, 2013). Thus, it is possible that adolescents not only passively receive cultural socialization from their parents and peers but also actively seek out cultural messages from their important others. It is also possible that adolescents not only passively experience incongruent cultural contexts at home and with their peers but also actively build and manage such incongruence. This possibility has been documented in the adolescent delinquency literature, with adolescents from over-controlling families tending to have extreme peer orientations and associate with deviant peers as an attempt to build autonomy (Fuligni & Eccles, 1993; Fuligni, Eccles, Barber, & Clements, 2001). From this perspective, adolescents who have adjustment issues are also likely to seek out peer groups with different cultural practices in order to gain autonomy from their family environment. Therefore, future studies with longitudinal data are needed to disentangle the directionality in the link between family-peer incongruence and adolescent adjustment.

The use of cross-sectional data also was not able to partial out the influence of unmeasured variables. For example, poor family relationships may drive incongruence between family and peer socialization contexts and simultaneously be linked to maladjustment. In the current study, the impact of incongruence on adolescents' feelings of being caught and adjustment indicators persisted even after controlling for family and peer relationships. Thus, the link between incongruence and adolescent adjustment is less likely to be solely driven by the

third variable of family relationships. Yet the unmeasured causes are not limited to family relationships, and other variables including genetic factors may play a role here, as both adolescents' peer affiliations and adjustment are genetically influenced (Brendgen, 2012). Using longitudinal data and statistical techniques that address unmeasured variables (e.g., individual fixed-effect models; Duncan, Magnuson, & Ludwig, 2004) may be one approach to delineating causal relationships. The use of genetically-informed analyses (Neale & Cardon, 1992) is another opportunity to better tease apart these links controlling for genetic predispositions.

The current data are also limited to a particular time in the life course—early adolescence when students were in 8th grade. The pilot study data suggest that adolescents' perceptions of cultural socialization may become more nuanced (i.e., distinguishing overt and covert practices) across time. Similarly, studies on substance use distinguish parents' or peers' attitudes (comparable to overt socialization) and norms (comparable to covert socialization) and have highlighted their different effects on adolescents' substance use, especially as individuals move from early to late adolescence and young adulthood (Mrug & McCay, 2013). Another construct that may change across time is the actual family-peer incongruence in cultural socialization. As children enter middle and late adolescence, they transition to high school and then to college or the workforce (and potentially have more racial/ethnically diverse peers; Benner & Graham, 2007), and get more involved with the mainstream society. All of these life course transitions and shifts in proximal ecological contexts may result in greater cultural incongruence in family and peer settings. Additionally, as peers become more and more important socialization agents across adolescence and emerging adulthood (Brown & Larson, 2009), family-peer incongruence may matter for adjustment regardless of its direction, rather than only when peers practiced cultural socialization more than parents did as shown in the current study. However, youth may

also become more experienced and skilled at managing such incongruence, making incongruence less important for adjustment in later developmental periods. In sum, these possible developmental trends call for a more thorough investigation of peer cultural socialization and family-peer incongruence using longitudinal design encompassing different developmental stages.

Finally, the current data were collected from schools with a dense race/ethnic minority population, and future studies are needed to explore whether the current findings hold in schools with more diverse student bodies. Indeed, recent work has shown that race/ethnicity-related processes often vary as a function of schools' racial/ethnic composition. For example, adolescents tended to have stronger ethnic identity in predominantly non-Latino schools then in other schools (Umaña-Taylor, 2004). Tapping on cultural socialization, in a sample of Asian American high school students, Yip, Douglass, and Shelton (2013) found that contact with same-race/ethnic friends was associated with youth's positive feelings about their race/ethnicity in predominantly White or diverse schools, but not in predominantly Asian schools. In relation to the studied variables, in schools with more diverse student bodies, peer cultural socialization may be less oriented towards one's heritage culture and more oriented towards the mainstream culture because adolescents may have more contact with cross-race peers (Kiang & Fuligni, 2009). Parents may also make extra efforts to convey cultural values when they perceive their children may lose contact with the heritage culture in such schools (Umaña-Taylor & Fine, 2004). As a result, adolescents in diverse schools may experience greater family-peer incongruence compared with those in minority-concentrated schools. Future studies are needed to explore the content and degree of cultural socialization across parents and peers in more versus less diverse school contexts.

To summarize, the current study examined a common developmental challenge for race/ethnic minority youth navigating across diverse cultural contexts. In exploring and comparing cultural socialization from families and peers, the current study adds to the literature by quantitatively documenting family-peer incongruence in their cultural contexts and highlighting the developmental implications of family-peer incongruence. These findings are informative not only in identifying adolescents who are at risk due to incongruent cultural settings, but also in highlighting potential targets and strategies for future intervention efforts (e.g., alleviating adolescents' feelings of being caught, promoting a variety of coping strategies, promoting supportive peer relationships). The current findings represent a first step in understanding parent-peer cultural incongruence and clearly highlight the need for future longitudinal research on cultural socialization with adolescents in various developmental stages and from more diverse backgrounds.

Table 1

Demographic Characteristics of Participants in the Pilot Study and the Primary Study

Variable	*N*	*%*	*M*	*SD*
Pilot Study				
Gender (female)	208	56.3		
Age	208		21.51	1.95
Race/ethnicity	207			
Latino American		26.1		
African American		33.3		
Asian American		38.6		
Other race/ethnicity		1.9		
Nativity (born in U.S.)	208	85.1		
Highest education	208		3.22	1.38
Less than high school		3.3		
High school degree		45.5		
Some college		5.7		
2-year college degree		19.1		
4-year college degree		24.4		
Graduate degree		1.9		
Primary Study				
Gender (female)	254	50.4		
Race/ethnicity	254			
Latino American		84.6		
African American		10.6		
Other race/ethnicity		4.8		
Highest parent education	242		1.88	1.28
Less than high school		57.9		
High school degree		19.8		
Some college but no degree		7.0		
2-year college degree		7.4		
4-year college degree or higher		7.9		
Nativity (both parents born in U.S.)	243	20.6		
Family structure (living with both biological parents)	247	43.3		

Table 2

Descriptive Statistics for Study Variables in the Pilot Study and the Primary Study

Variable	N	Min	Max	M	SD
Pilot Study					
Family, heritage culture - overt	207	1.00	5.00	3.21	0.98
Family, heritage culture - covert	207	1.00	5.00	2.86	0.89
Family, mainstream culture - overt	205	1.00	5.00	2.46	0.99
Family, mainstream culture - covert	205	1.00	5.00	3.00	0.95
Peer, heritage culture - overt	204	1.00	4.83	2.17	0.90
Peer, heritage culture - covert	204	1.00	5.00	2.23	0.94
Peer, mainstream culture - overt	202	1.00	5.00	2.93	1.02
Peer, mainstream culture - covert	202	1.00	5.00	3.64	0.97
Primary Study					
Cultural Socialization					
Family, heritage culture - overt	247	1.00	5.00	3.79	0.97
Family, heritage culture - covert	247	1.00	5.00	3.56	0.95
Family, mainstream culture - overt	247	1.00	5.00	3.27	1.04
Family, mainstream culture - covert	247	1.00	5.00	3.24	0.95
Peer, heritage culture - overt	247	1.00	5.00	3.41	1.15
Peer, heritage culture - covert	247	1.00	5.00	3.55	1.04
Peer, mainstream culture - overt	245	1.00	5.00	3.20	1.17
Peer, mainstream culture - covert	245	1.00	5.00	3.35	1.04
Feelings of being caught	245	1.00	5.00	2.14	1.03
Loneliness	247	1.00	3.69	1.77	0.55
Depression	247	0.00	1.30	0.26	0.29
School belonging	247	1.80	5.00	4.00	0.73
Educational expectations	247	1.00	7.00	4.69	1.71
School engagement	247	2.00	5.00	3.86	0.63
GPA	254	0.00	3.64	2.71	0.57
Standardized test scores – Math	187	1.00	4.00	1.82	0.77
Reading	253	1.00	4.00	2.04	0.94
Science	252	1.00	4.00	2.08	0.89
Social studies	253	1.00	4.00	1.84	1.03
Coping styles – Active coping	246	1.00	5.00	2.88	1.01
Internal coping	246	1.00	5.00	3.31	0.88
Withdrawal	245	1.00	5.00	3.40	1.18
Parent-child relationship quality	247	1.17	5.00	4.11	0.95
Peer relationship quality	247	1.00	5.00	4.43	0.68
Peers' feelings of being caught	239	1.00	4.50	2.15	0.64

Table 3

Exploratory Factor Analyses for the Cultural Socialization Scale

Number of Factors	Eigenvalue	CFI	RMSEA	SRMR	$\Delta\chi^2$	Δdf	p
Family Socialization of Heritage Culture							
1	4.353	.847	.170	.066			
2	0.887	.933	.140	.046	86.505	7	.000
3	0.871	.991	.068	.016	6.780	6	.000
4	0.567	1.000	.000	.002	14.975	5	.011
5	0.443	-	-	-	-	-	-
6	0.361	-	-	-	-	-	-
7	0.276	-	-	-	-	-	-
8	0.240	-	-	-	-	-	-
Family Socialization of Mainstream Culture							
1	5.009	.885	.174	.056			
2	0.772	.955	.136	.033	97.689	7	.000
3	0.666	.987	.101	.016	47.783	6	.000
4	0.528	1.000	.000	.004	23.273	5	.000
5	0.392	-	-	-	-	-	-
6	0.294	-	-	-	-	-	-
7	0.192	-	-	-	-	-	-
8	0.147	-	-	-	-	-	-
Peer Socialization of Heritage Culture							
1	5.374	.921	.154	.045			
2	0.693	.978	.101	.025	91.223	7	.000
3	0.573	.996	.057	.012	33.091	6	.000
4	0.450	-	-	-	-	-	-
5	0.348	-	-	-	-	-	-
6	0.221	-	-	-	-	-	-
7	0.185	-	-	-	-	-	-
8	0.157	-	-	-	-	-	-
Peer Socialization of Mainstream Culture							
1	5.766	.916	.176	.053			
2	0.643	.983	.099	.021	127.477	7	.000
3	0.472	1.000	.000	.006	39.381	6	.000
4	0.321	-	-	-	-	-	-
5	0.316	-	-	-	-	-	-
6	0.246	-	-	-	-	-	-
7	0.158	-	-	-	-	-	-
8	0.080	-	-	-	-	-	-

Note. Empty cells indicate that model fit indices were not available because the model was not identified or did not converge. CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

Table 4

Geomin Rotated Factor Loadings from Exploratory Factor Analyses of the Cultural Socialization Scale

	1-factor model	2-factor model		3-factor model			4-factor model			
	f1	f1	f2	f1	f2	f3	f1	f2	f3	f4
Family Socialization of Heritage Culture										
1. Respect	.69	.69		.42			.76			
2. Hang out	.54	.41			.45	.39		.98		
3. Value/belief	.75	.82		.45	.54		.71			
4. Food	.59	.50			.55	.33	.64			
5. Importance	.83	.87		.79			.59			.39
6. History	.77	.72		.89						.92
7. Music/TV	.63		1.14			.96			1.23	
8. Events	.69	.47	.36	.40		.46				.35
Family Socialization of Mainstream Culture										
1. Respect	.62	.53		.43	.29		.47			
2. Hang out	.63	.31	.39		.74		.46			
3. Value/belief	.87	.76		.67	.30					
4. Food	.71	.32	.51	.28	.20	.40	.55			.35
5. Importance	.89	1.00		.98				.83		
6. History	.87	.88		.96				.76		
7. Music/TV	.63		.83			.97				.83
8. Events	.76	.29	.60	.39		.50				.63
Peer Socialization of Heritage Culture										
1. Respect	.69	.69		.79			N/A			
2. Hang out	.66	.52	.22	.88		-.30				
3. Value/belief	.85	.95	-.13	.79		.19				
4. Food	.76	.66		.33	.45					
5. Importance	.92	.92			.57	.25				
6. History	.88	.88			.71	.36				
7. Music/TV	.70		1.09		1.03	-.46				
8. Events	.83	.62	.30		.87					
Peer Socialization of Mainstream Culture										
1. Respect	.77	.50	.32	.58	.28		N/A			
2. Hang out	.74	.26	.59	.62		.29				
3. Value/belief	.90	.77	.16	.36	.63					
4. Food	.75		.73			.78				
5. Importance	.95	.98			.95					
6. History	.93	.95			.92					
7. Music/TV	.68		.85			.81				
8. Events	.78	.41	.45		.40	.44				

Note. Factor loadings are not displayed if they are not significantly different from 0 at $p < .05$. All the factor loadings are standardized. N/A indicted that estimates for factor loadings were not available because the model was not identified.

Table 5

Confirmatory Factor Analyses and Reliabilities of the Cultural Socialization Scale

	Original Scale						Revised Scale					
	λ	χ^2 (*df*)	CFI	RMSEA	SRMR	α	λ	χ^2 (*df*)	CFI	RMSEA	SRMR	α
Family Socialization of Heritage Culture												
1. Respect	.69	34.12 (15)**	.97	.07	.04	.86	.75	17.78 (6)*	.97	.08	.03	.85
2. Hang out	.58						--					
3. Value/belief	.82						.79					
4. Food	.63						.62					
5. Importance	.80						.81					
6. History	.67						.66					
7. Music/TV	.69						.53					
8. Events	.62						--					
Family Socialization of Mainstream Culture												
1. Respect	.62	34.62 (17)**	.98	.07	.03	.90	.64	12.22 (7)	.99	.06	.02	.89
2. Hang out	.68						--					
3. Value/belief	.93						.88					
4. Food	.79						.68					
5. Importance	.82						.89					
6. History	.78						.85					
7. Music/TV	.61						.57					
8. Events	.73						--					
Peer Socialization of Heritage Culture												
1. Respect	.70	40.50 (18)**	.97	.07	.03	.92	.68	17.66 (8)*	.98	.07	.03	.91
2. Hang out	.65						--					
3. Value/belief	.87						.85					
4. Food	.75						.74					
5. Importance	.92						.93					
6. History	.88						.89					
7. Music/TV	.66						.66					
8. Events	.81						--					
Peer Socialization of Mainstream Culture												
1. Respect	.80	35.02 (18)**	.98	.06	.03	.94	.75	14.62 (8)	.99	.06	.02	.93
2. Hang out	.78						--					
3. Value/belief	.92						.90					
4. Food	.75						.71					
5. Importance	.91						.96					
6. History	.89						.95					
7. Music/TV	.69						.63					
8. Events	.79						--					

Note. λ = factor loadings; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; α = reliabilities. Empty cells in the factor loading column indicate that the item was not included in the CFA model.
* $p < .05$. ** $p < .01$.

Table 6

Measurement Equivalence of the Cultural Socialization Scale across Family Socialization of Heritage Culture, Family Socialization of Mainstream Culture, Peer Socialization of Heritage Culture, and Peer Socialization of Mainstream Culture

		Model Fit							Model Comparison				
Model	Invariance Type	CFI	NNFI	RMSEA	SRMR	χ^2	df	c	ΔCFI	ΔNNFI	$\Delta\chi^2$	Δdf	$\Delta\chi^2$-p
						Original Scale							
1	Configural invariance	.955	.945	.046	.062	616.763	403	1.254					
2	Metric invariance	.954	.946	.046	.066	644.094	424	1.235	.001	-.001	25.347	21	.232
3	Strong invariance	.934	.926	.054	.074	760.606	445	1.221	.020	.020	142.474	21	.000 ***
3p	Partial strong invariance	.947	.940	.048	.070	690.299	439	1.229	.007	.006	50.099	15	.000 ***
4	Strict invariance	.935	.930	.052	.078	765.434	457	1.240	.012	.010	66.929	18	.000 ***
4p	Partial strict invariance	.940	.935	.050	.077	738.472	454	1.232	.007	.005	46.538	15	.000 ***
						Revised Scale							
5	Configural invariance	0.971	0.962	0.043	0.053	302.109	206	1.245					
6	Metric invariance	0.971	0.964	0.042	0.056	319.027	221	1.223	0.000	-0.002	15.250	15	.434
7	Strong invariance	0.962	0.955	0.047	0.061	364.643	236	1.206	0.009	0.009	51.805	15	.000 ***
8	Strict invariance	0.945	0.940	0.054	0.074	439.259	254	1.236	0.017	0.015	63.372	18	.000 ***
8p	Partial strict invariance	0.953	0.948	0.050	0.070	409.002	251	1.218	0.009	0.007	41.475	12	.000 ***

Note. CFI = Comparative Fit Index; NNFI = Non-Normed Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; *c* = scaling correction factor for the maximum likelihood estimation with robust standard errors (MLR). Items for the original scale and the revised scale are shown in Table 5.
*** $p < .001$.

Table 7

Latent Profile Analysis of Family and Peer Cultural Socialization of Heritage and Mainstream Culture

	1 class	2 classes	3 classes	4 classes	5 classes
Loglikelihood	-1389.63	-1206.93	-1126.58	-1107.42	not replicated
parameters	8.00	17.00	26.00	35.00	
BIC	2795.26	2507.52	2396.40	2407.66	
ABIC	2823.33	2453.63	2313.98	2296.71	
Entropy	N/A	0.92	0.88	0.89	
LMR p-value	N/A	0.00	0.01	0.44	

Note. BIC = Bayesian Information Criteria; ABIC = Sample-Size Adjusted BIC; LMR = Lo-Mendell-Rubin Adjusted Likelihood Ratio Test. Entropy and LMR test were not available in the 1-class solution. Estimates for the 5-class solution were not reported because the best loglikelihood value was not replicated and the solution may not be trustworthy due to local maxima.

Table 8a

Bivariate Correlations among Study Variables

	1	2	3	4	5	6	7	8
1. Family cultural socialization								
2. Peer cultural socialization	.51***							
3. Feelings of caught	.01	.17**						
4. Loneliness	-.17**	-.12	.19**					
5. Depression	-.05	-.08	.21**	.59***				
6. School belonging	.23***	.16*	.02	-.41***	-.36***			
7. Educational expectation	.08	-.10	-.12	-.12	-.01	.17**		
8. School engagement	.25***	.13*	-.15*	-.27***	-.20**	.28***	.21**	
9. GPA	.10	-.05	-.10	-.03	.03	.20**	.26***	.47***
10. Math	.07	-.06	.02	-.04	.02	.09	.17*	.24**
11. Reading	-.06	-.16*	-.21**	-.13*	-.08	.13*	.26***	.07
12. Science	-.01	-.11	-.04	-.07	-.04	.09	.23***	.16*
13. Social studies	.10	-.01	-.01	-.02	-.01	.18**	.17**	.12
14. Active coping	.24***	.34***	-.04	-.35***	-.31***	.39***	.07	.32***
15. Withdrawal	.13*	.10	.00	-.16*	.03	.14*	.09	.15*
16. Parent support	.23***	.22**	-.18**	-.32***	-.45***	.31***	-.02	.30***
17. Peer support	.24***	.24***	-.12	-.37***	-.13*	.28***	.06	.18**
18. Friends' feelings of caught	.10	.08	-.01	.01	.13*	-.02	-.01	.05

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8b

Bivariate Correlations among Study Variables

	9	10	11	12	13	14	15	16	17
1. Family cultural socialization									
2. Peer cultural socialization									
3. Feelings of caught									
4. Loneliness									
5. Depression									
6. School belonging									
7. Educational expectation									
8. School engagement									
9. GPA									
10. Math	.32 ***								
11. Reading	.34 ***	.37 ***							
12. Science	.45 ***	.58 ***	.62 ***						
13. Social studies	.32 ***	.41 ***	.62 ***	.56 ***					
14. Active coping	.12	.04	-.04	-.04	.05				
15. Withdrawal	-.01	.05	-.01	-.03	-.03	.16 *			
16. Parent support	.05	-.07	-.09	-.13 *	-.02	.35 ***	-.04		
17. Peer support	.05	.01	.15 *	.06	.05	.29 ***	.08	.11	
18. Friends' feelings of caught	-.08	.07	-.04	.05	.05	.04	.03	-.06	.02

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9a

Standardized Coefficient Estimates for Effects of Family-Peer Incongruence in Cultural Socialization on Adolescent Adjustment

	Loneliness		Depressive Symptoms		School Belonging		Educational Expectation	
	Heritage	Mainstream	Heritage	Mainstream	Heritage	Mainstream	Heritage	Mainstream
	β SE	β SE	β SE	β SE	β SE	β SE	β SE	β SE
Interaction								
Family socialization	-.14 (.07)†	-.12 (.09)	.00 (.07)	-.06 (.08)	.20 (.07)**	.21 (.08)*	.18 (.07)*	.03 (.09)
Peer socialization	-.05 (.07)	-.04 (.09)	-.07 (.07)	-.04 (.09)	.06 (.07)	.06 (.09)	-.17 (.07)*	-.07 (.08)
Family × Peer Interaction	-.15 (.07)*	-.17 (.07)*	-.09 (.06)	-.06 (.07)	.05 (.07)	-.05 (.08)	-.03 (.06)	-.03 (.07)
Raw difference score								
Family – peer socialization	-.06 (.06)	-.04 (.07)	.03 (.06)	-.01 (.07)	.09 (.06)	.07 (.07)	.18 (.07)**	.04 (.07)
Average family & peer socialization	-.17 (.07)*	-.15 (.07)*	-.05 (.06)	-.09 (.06)	.24 (.07)***	.25 (.07)***	.04 (.06)	-.03 (.07)
Direction and degree of incongruence								
Family > peer socialization	.04 (.12)	-.07 (.09)	.11 (.09)	-.04 (.08)	-.01 (.09)	.03 (.08)	.01 (.10)	.04 (.08)
Peer > family socialization	.06 (.08)	.00 (.09)	.07 (.07)	.08 (.10)	-.11 (.08)	-.12 (.09)	-.13 (.08)†	-.04 (.09)
Degree of family-peer incongruence	-.06 (.11)	.08 (.10)	-.03 (.09)	.01 (.10)	.08 (.09)	.09 (.08)	.18 (.11)	.10 (.08)
Average family & peer socialization	-.17 (.07)*	-.14 (.07)*	-.05 (.07)	-.10 (.07)	.25 (.07)**	.27 (.07)***	.08 (.07)	-.01 (.07)

Note. Separate models were run for incongruence assessed by each of the three approaches (i.e., interactions between family and peer socialization, their raw difference scores, directions and degrees of the difference scores). Separate models were also conducted for cultural socialization toward the heritage and the mainstream culture, respectively.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9b

Standardized Coefficient Estimates for Effects of Family-Peer Incongruence in Cultural Socialization on Adolescent Adjustment

	School Engagement				GPA				Standardized Test Scores			
	Heritage		Mainstream		Heritage		Mainstream		Heritage		Mainstream	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
Interaction												
Family socialization	.26 (.08) **		.15 (.10)		.20 (.07) **		.03 (.10)		.11 (.08)		-.26 (.09) **	
Peer socialization	.01 (.08)		.07 (.09)		-.15 (.09) †		-.14 (.08) †		-.17 (.08) *		-.03 (.09)	
Family × Peer Interaction	.08 (.06)		-.03 (.07)		.06 (.06)		-.04 (.06)		-.02 (.07)		-.04 (.07)	
Raw difference score												
Family – peer socialization	.14 (.07) †		.04 (.08)		.18 (.07) *		.07 (.07)		.14 (.07) *		-.11 (.07)	
Average family & peer socialization	.25 (.06) ***		.20 (.07) **		.07 (.06)		-.09 (.07)		-.03 (.07)		-.28 (.07) ***	
Direction and degree of incongruence												
Family > peer socialization	.07 (.10)		-.05 (.08)		-.02 (.10)		.01 (.08)		-.06 (.12)		-.01 (.10)	
Peer > family socialization	-.12 (.07) †		-.26 (.10) *		-.24 (.08) **		-.10 (.10)		-.19 (.08) *		.06 (.10)	
Degree of family-peer incongruence	.00 (.11)		.27 (.12) *		.06 (.11)		.08 (.09)		.12 (.11)		.01 (.11)	
Average family & peer socialization	.25 (.07) ***		.26 (.06) ***		.06 (.06)		-.08 (.07)		-.03 (.07)		-.27 (.07) ***	

Note. Separate models were run for incongruence assessed by each of the three approaches (i.e., interactions between family and peer socialization, their raw difference scores, directions and degrees of the difference scores). Separate models were also conducted for cultural socialization toward the heritage and the mainstream culture, respectively.
* *p* < .05. ** *p* < .01. *** *p* < .001.

Table 10a

Indirect Effects from Path Analyses of Family-Peer Incongruence in Cultural Socialization, Feelings of Being Caught between Families and Peers, and Adolescent Adjustment

	Loneliness		Depressive Symptoms		School Belonging		Educational Expectation	
	Heritage	Mainstream	Heritage	Mainstream	Heritage	Mainstream	Heritage	Mainstream
	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)
Interaction								
Family socialization	-.03 (.02)	-.03 (.02)	-.03 (.02)	-.04 (.02)	.00 (.01)	.00 (.01)	.01 (.01)	.02 (.01)
Peer socialization	.05 (.02)[*]	.06 (.02)[**]	.06 (.02)[**]	.07 (.03)[**]	.01 (.02)	.01 (.02)	-.03 (.02)	-.04 (.02)[†]
Family × Peer Interaction	-.02 (.01)[†]	-.02 (.02)	-.03 (.02)[†]	-.02 (.02)	.00 (.01)	.00 (.01)	.01 (.01)	.01 (.01)
Raw difference score								
Family – peer socialization	-.04 (.02)[*]	-.04 (.02)[*]	-.05 (.02)[*]	-.05 (.02)[*]	-.01 (.01)	.00 (.01)	.02 (.01)	.02 (.01)[†]
Average family & peer socialization	.02 (.02)	.02 (.02)	.02 (.02)	.03 (.02)	.00 (.01)	.00 (.01)	-.01 (.01)	-.01 (.01)
Direction and degree of incongruence								
Family > peer socialization	-.03 (.02)	-.05 (.02)[*]	-.03 (.02)	-.05 (.02)[*]	.00 (.01)	.00 (.01)	.01 (.01)	.03 (.02)
Peer > family socialization	.04 (.02)[†]	-.01 (.02)	.04 (.02)[†]	-.01 (.02)	.01 (.01)	.00 (.00)	-.02 (.01)	.01 (.01)
Degree of family-peer incongruence	.00 (.02)	.04 (.03)	-.01 (.02)	.04 (.03)	.00 (.00)	.00 (.01)	.00 (.01)	-.02 (.02)
Average family & peer socialization	.02 (.02)	.03 (.02)	.02 (.02)	.03 (.02)[†]	.00 (.01)	.00 (.01)	-.01 (.01)	-.02 (.01)

Note. Separate models were run for incongruence assessed by each of the three approaches (i.e., interactions between family and peer socialization, their raw difference scores, directions and degrees of the difference scores). Separate models were also conducted for cultural socialization toward the heritage and the mainstream culture, respectively.
[*] $p < .05$. [**] $p < .01$. [***] $p < .001$.

Table 10b

Indirect Effects from Path Analyses of Family-Peer Incongruence in Cultural Socialization, Feelings of Being Caught between Families and Peers, and Adolescent Adjustment

	School Engagement		GPA		Standardized Test Scores	
	Heritage	Mainstream	Heritage	Mainstream	Heritage	Mainstream
	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)	β_{ind} (SE)
Interaction						
Family socialization	.01 (.01)	.02 (.02)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Peer socialization	-.03 (.02)[†]	-.04 (.02)[*]	-.01 (.02)	-.02 (.02)	-.02 (.02)	-.02 (.02)
Family × Peer Interaction	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Raw difference score						
Family – peer socialization	.02 (.01)	.03 (.01)[†]	.01 (.01)	.01 (.01)	.01 (.01)	.02 (.01)
Average family & peer socialization	-.01 (.01)	-.02 (.01)	-.01 (.01)	-.01 (.01)	-.01 (.01)	-.01 (.01)
Direction and degree of incongruence						
Family > peer socialization	.01 (.01)	.03 (.02)[†]	.00 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Peer > family socialization	-.02 (.02)	.01 (.02)	-.01 (.01)	.00 (.01)	-.01 (.01)	.00 (.01)
Degree of family-peer incongruence	.00 (.01)	-.03 (.02)	.00 (.00)	-.01 (.01)	.00 (.01)	-.01 (.01)
Average family & peer socialization	-.01 (.01)	-.02 (.01)	.00 (.01)	-.01 (.01)	.00 (.01)	-.01 (.01)

Note. Separate models were run for incongruence assessed by each of the three approaches (i.e., interactions between family and peer socialization, their raw difference scores, directions and degrees of the difference scores). Separate models were also conducted for cultural socialization toward the heritage and the mainstream culture, respectively.
[*] $p < .05$. [**] $p < .01$. [***] $p < .001$.

Table 11

Significant Interaction Effects for Family-Peer Incongruence and Adolescents' Coping strategies, Relationship Qualities, and Peer Network Stress on Adolescent Adjustment

| | Interaction Effects | | | Difference Scores | | | | | |
| | | | | Low levels of moderator (Mean – SD) | | | High levels of moderator (Mean + SD) | | |
	β	(SE)		β	(SE)		β	(SE)	
Active coping strategies									
Caught → School engagement	.14	(.07)	*	-.26	(.10)	**	-.01	(.08)	
Withdrawal coping strategies									
Caught → School engagement	.16	(.06)	*	-.28	(.10)	**	.01	(.08)	
Caught → GPA	.16	(.05)	**	-.21	(.08)	**	.09	(.08)	
Caught → Standardized test scores	.17	(.06)	**	-.23	(.08)	**	.08	(.09)	
Peer relationship quality									
Caught → School engagement	.11	(.06)	*	-.24	(.08)	**	-.02	(.10)	
Caught → GPA	.11	(.11)	*	-.18	(.08)	*	.05	(.09)	
Friends' feelings of being caught									
Caught → Educational expectations	.13	(.06)	*	-.25	(.09)	**	.03	(.10)	
Caught → School engagement	.14	(.06)	*	-.28	(.09)	**	.02	(.10)	

Note. Only significant interaction effects are shown.
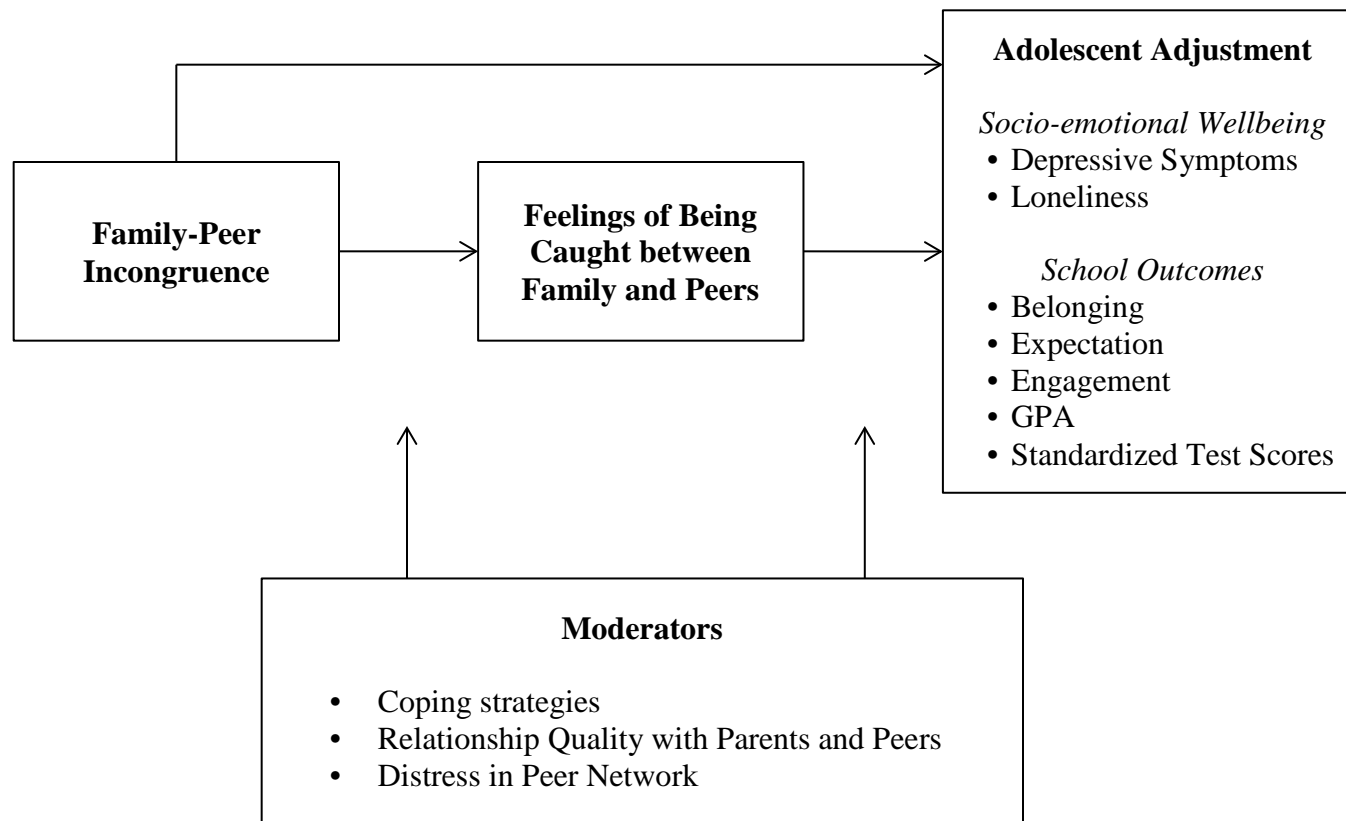* $p < .05$. ** $p < .01$. *** $p < .001$.

```
                                    ┌─────────────────────────────────┐
                                    │  Adolescent Adjustment          │
                              ┌────→ │                                 │
                              │      │  Socio-emotional Wellbeing      │
                              │      │   • Depressive Symptoms         │
┌──────────────┐  ┌──────────────┐  │   • Loneliness                  │
│ Family-Peer  │  │ Feelings of  │  │                                 │
│ Incongruence │→ │ Being Caught │→ │    School Outcomes              │
│              │  │ between      │  │   • Belonging                   │
│              │  │ Family and   │  │   • Expectation                 │
└──────────────┘  │ Peers        │  │   • Engagement                  │
                  └──────────────┘  │   • GPA                         │
                        ↑           │   • Standardized Test Scores    │
                        │      ↑    └─────────────────────────────────┘
                  ┌─────────────────────────────────┐
                  │  Moderators                     │
                  │                                 │
                  │   • Coping strategies           │
                  │   • Relationship Quality with Parents and Peers │
                  │   • Distress in Peer Network    │
                  └─────────────────────────────────┘
```

Figure 1. Conceptual model linking family-peer incongruence in cultural socialization to adolescent adjustment
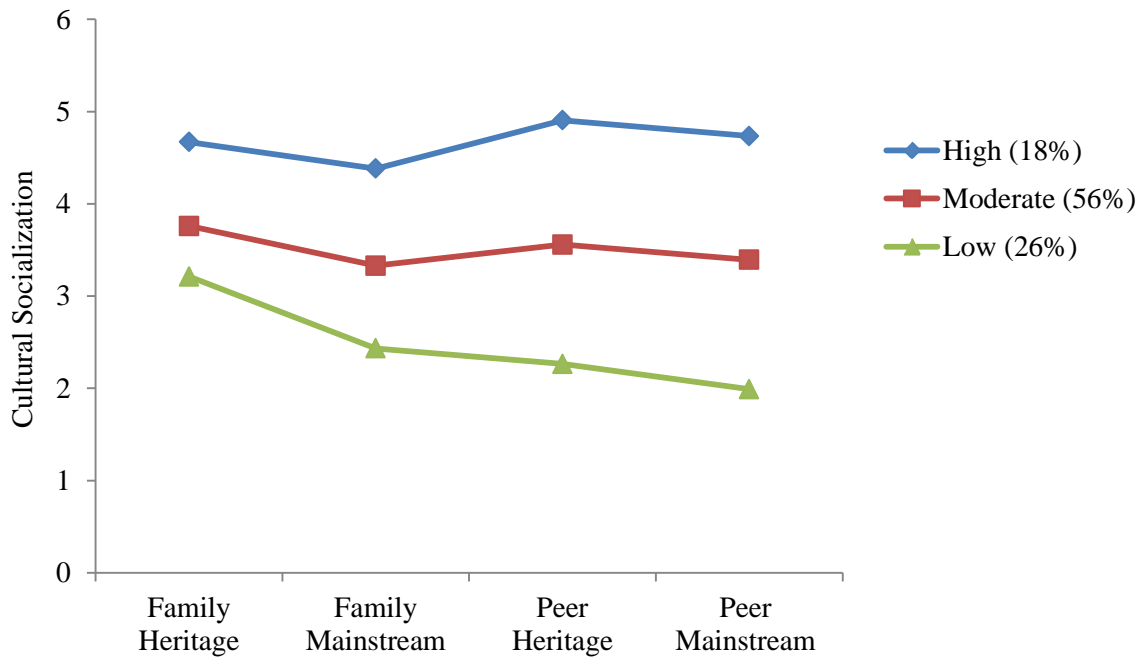
Figure 2. Latent profile analysis results for family and peer cultural socialization of heritage and mainstream culture
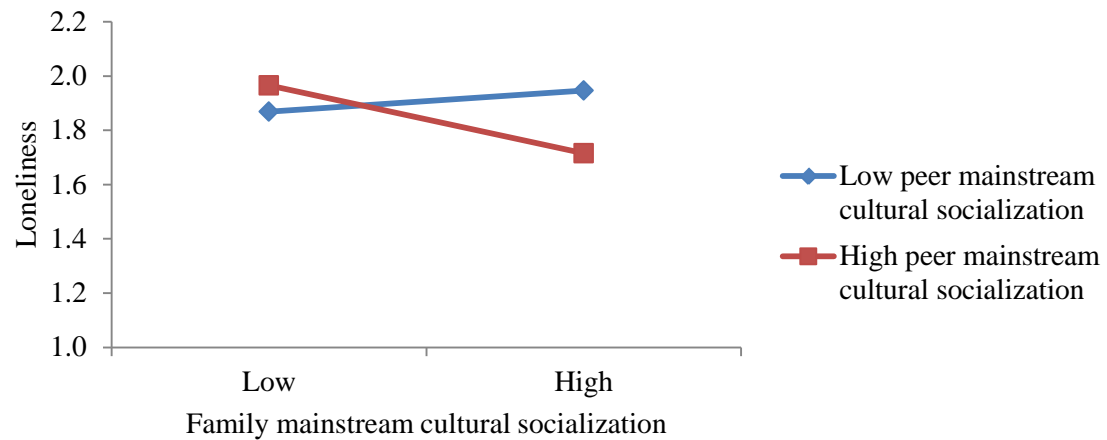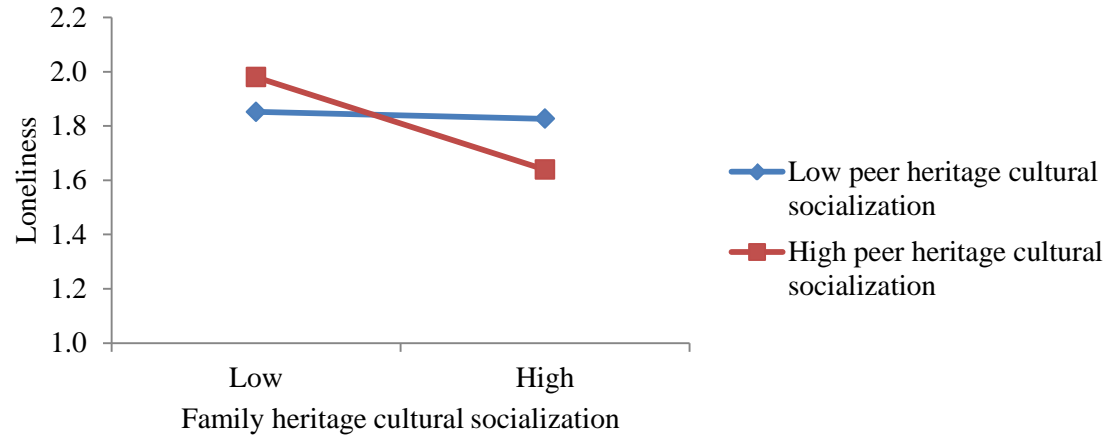
Figure 3a-3b. Interaction effect between family and peer cultural socialization on adolescents' feelings of loneliness. Low peer cultural socialization is one standard deviation below the mean, and high peer cultural socialization is one standard deviation above the mean.
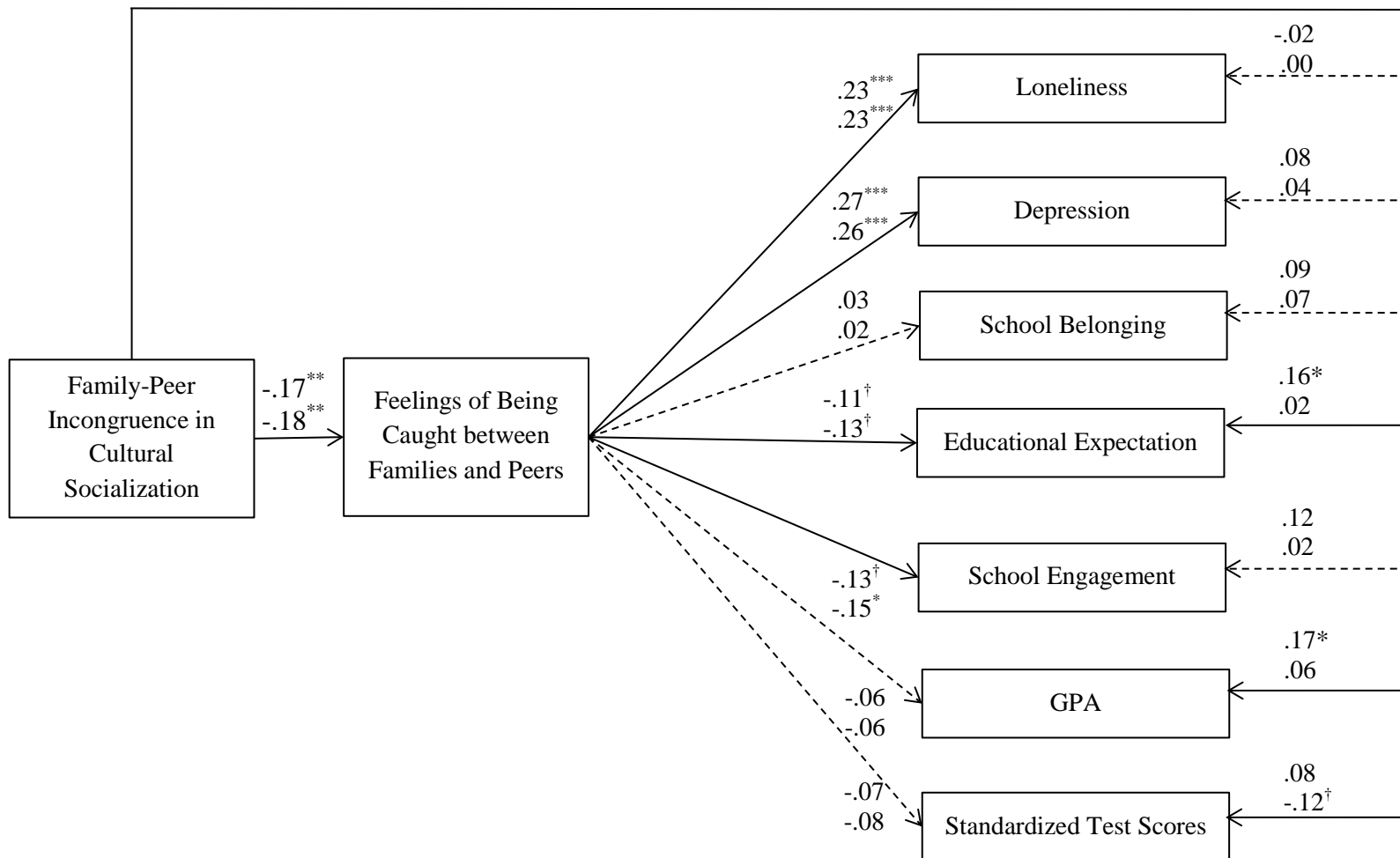
Figure 4. Standardized coefficients from path analyses of family-peer incongruence in cultural socialization, feelings of being caught between families and peers, and adolescent adjustment. Coefficients at the top represent estimates for the heritage culture, and coefficients at the bottom represent estimates for the mainstream culture. $^\dagger p < .10$. $^* p < .05$. $^{**} p < .01$. $^{***} p < .001$.
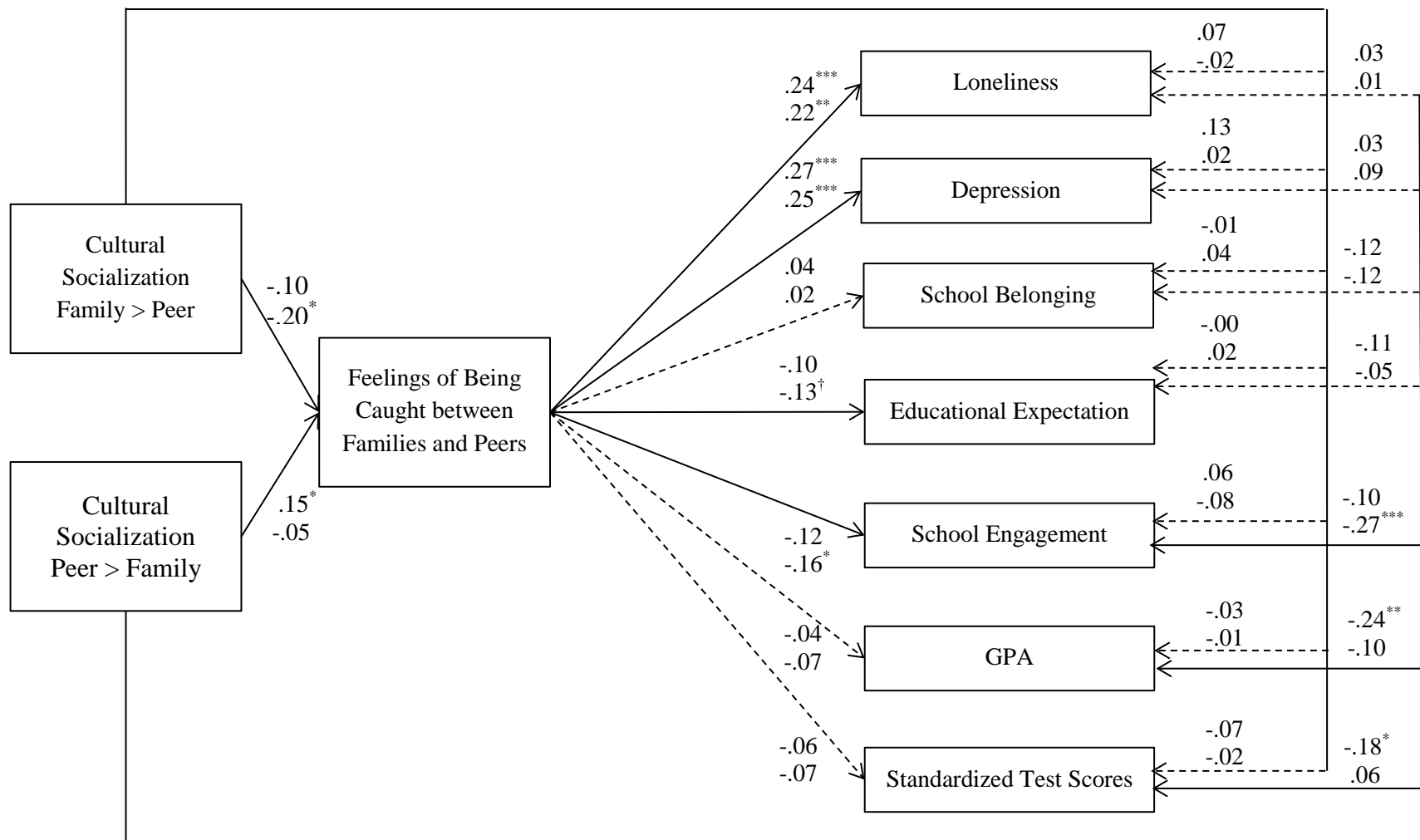
Figure 5. Standardized coefficients from path analyses for directions of family-peer incongruence in cultural socialization, feelings of being caught between families and peers, and adolescent adjustment. Coefficients at the top represent estimates for the heritage culture, and coefficients at the bottom represent estimates for the mainstream culture. $^{†} p < .10.$ $^{*} p < .05.$ $^{**} p < .01.$ $^{***} p < .001$
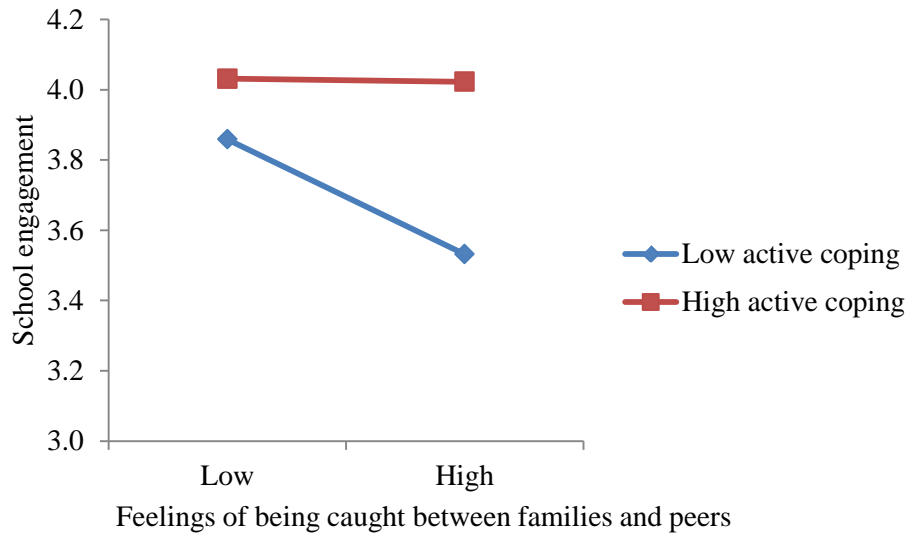
Figure 6. Interaction effect between feelings of being caught between families and peers and the use of active coping on adolescents' school engagement. Low active coping is one standard deviation below the mean, and high active coping is one standard deviation above the mean.
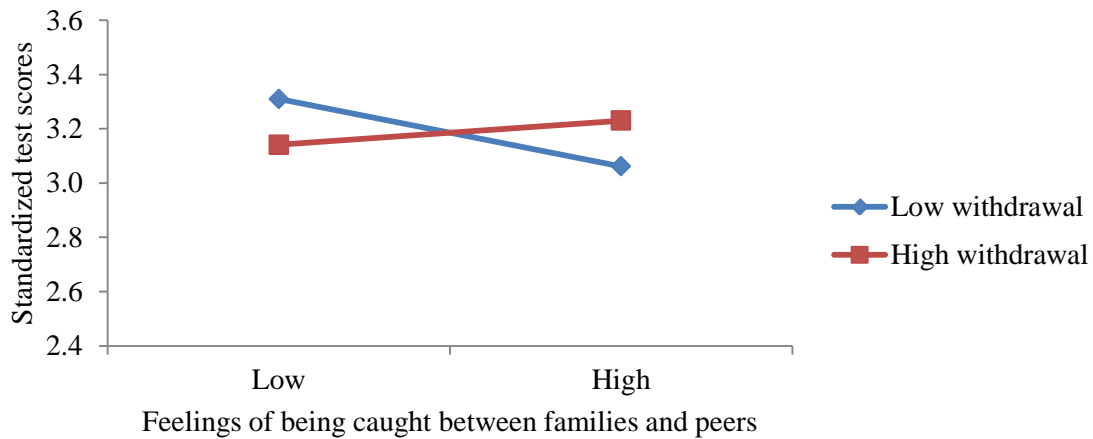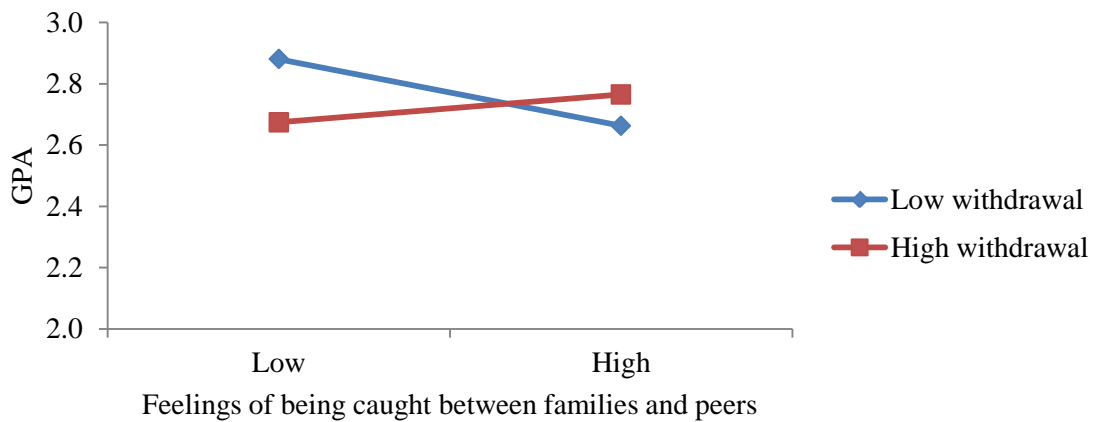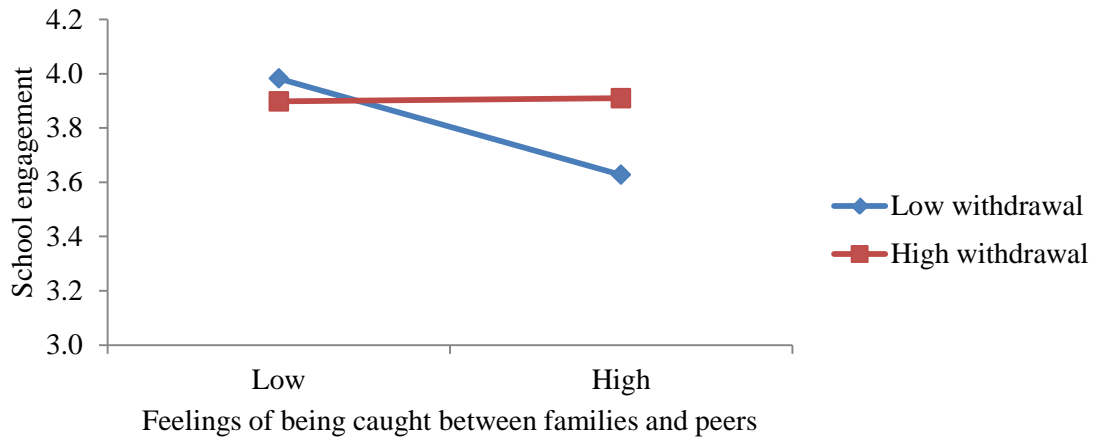
Figure 7a-7c. Interaction effect between feelings of being caught between families and peers and the use of withdrawal coping on adolescents' school outcomes. Low withdrawal is one standard deviation below the mean, and high withdrawal is one standard deviation above the mean.
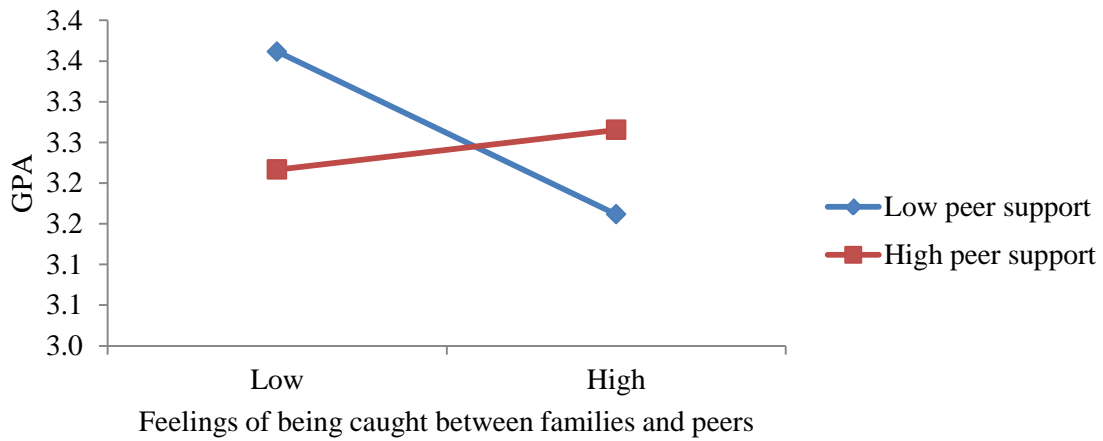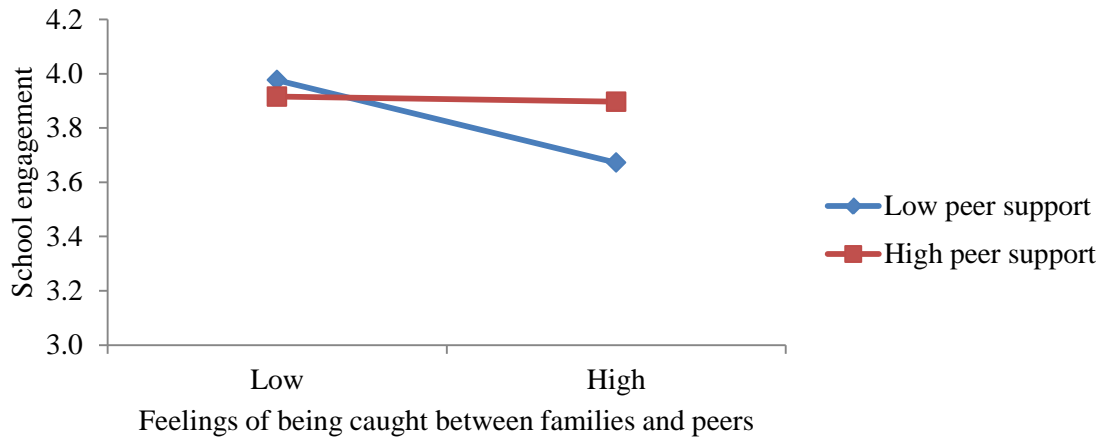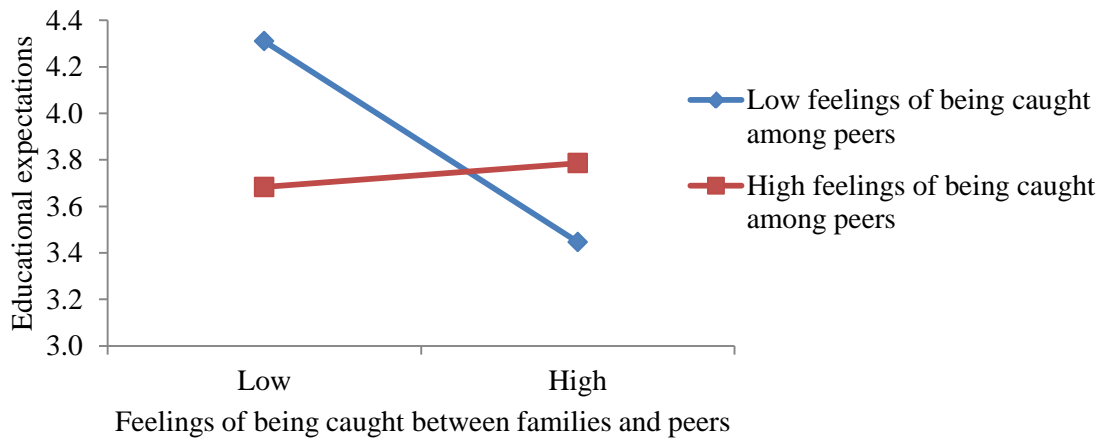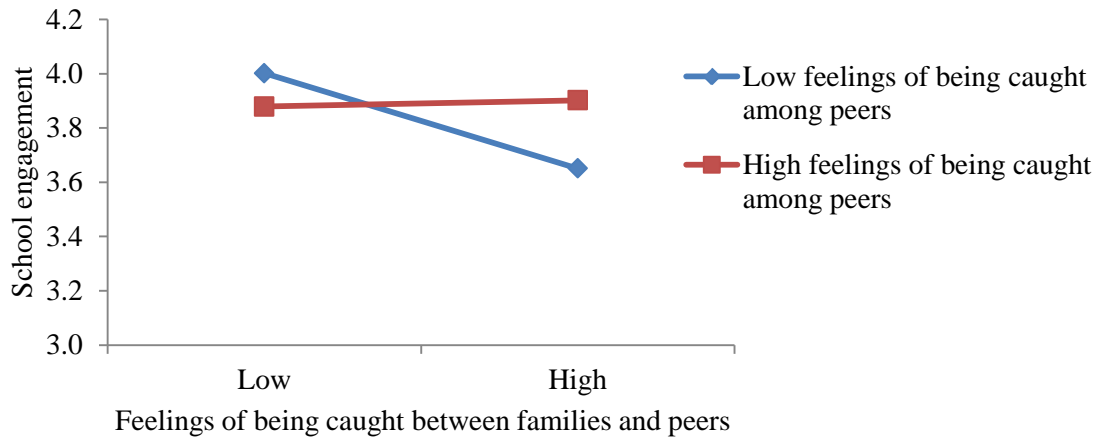
Figure 8a-8b. Interaction effect between feelings of being caught between families and peers and peer support on adolescents' school outcomes. Low peer support is one standard deviation below the mean, and high peer support is one standard deviation above the mean.

Figure 9a-9b. Interaction effect between adolescents' feelings of being caught between families and peers and such feelings among peers on adolescent' school outcomes. Low peer support is one standard deviation below the mean, and high peer support is one standard deviation above the mean.

Appendix 1

1. Please think back to your high school years, in general, how often do your family or friends do the following things that are related to *your racial/ethnic culture*?

1) teach/talk to me about my ethnic/cultural background

2) encourage me to respect the cultural values and beliefs of my ethnic/cultural background

3) participate in activities that are specific to my ethnic group

4) decorate home/wear clothes with things that reflect my ethnic/cultural background

5) hang out mostly with people who share my ethnic/cultural background

6) teach/talk to me about the values and beliefs of my ethnic/cultural background

7) talk about how important it is to know about my ethnic/cultural background

8) celebrate holidays that are specific to my ethnic/cultural background

9) teach/talk to me about the history of my ethnic/cultural background

10) listen to music sung or played by artists from my ethnic/cultural background

11) attend things such as concerts, plays, festivals, or other events that represent my ethnic/cultural background

12) feel a strong attachment to my ethnic/cultural background

2. During your high school years, did your **FAMILY** do other things that are related to your racial/ethnic culture? If yes, please describe all of them below.

3. During your high school years, did your **FRIENDS** do other things that are related to your racial/ethnic culture? If yes, please describe all of them below.

4. When you think of *mainstream American culture*, what comes to mind?

5. Please think back to your high school years, in general, how often do your family or friends do the following things that are related to *the mainstream American culture*?

1) teach/talk to me about the mainstream American culture

2) encourage me to respect the cultural values and beliefs of the mainstream American culture

3) participate in activities that are specific to the mainstream American culture

4) decorate home/wear clothes with things that reflect the mainstream American culture

5) hang out mostly with people who share the mainstream American culture

6) teach/talk to me about the values and beliefs of the mainstream American culture

7) talk about how important it is to know about the mainstream American culture

8) celebrate holidays that are specific to the mainstream American culture

9) teach/talk to me about the history of the mainstream American culture

10) listen to music sung or played by artists from the mainstream American culture

11) attend things such as concerts, plays, festivals, or other events that represent the mainstream American culture

12) feel a strong attachment to the mainstream American culture

6. During your high school years, did your **FAMILY** do other things that are related to the mainstream American culture? If yes, please describe all of these below.

7. During your high school years, did your **FRIENDS** do other things that are related to the mainstream American culture? If yes, please describe all of these below.

Appendix 2

1. Cultural Socialization Scale

How often does your FAMILY (FRIENDS) do the following things related to your ethnic/cultural background (the mainstream American background)?

1) encourage you to respect the cultural values and beliefs of your ethnic/cultural background (the mainstream American background)

2) hang out mostly with people who share your ethnic/cultural background (the mainstream American background)

3) teach/talk to you about the values and beliefs of your ethnic/cultural background (the mainstream American background)

4) prepare and eat food of your ethnic/cultural background (the mainstream American background)

5) talk about how important it is to know about your ethnic/cultural background (the mainstream American background)

6) teach/talk to you about the history of your ethnic/cultural background (the mainstream American background)

7) listen to music or watch tv/movies by artists from your ethnic/cultural background (the mainstream American background)

8) attend things such as festivals, concerts, plays, or other events that represent your ethnic/cultural background (the mainstream American background)

2. Feelings of Being Caught between Family and Peers

In general, how often do you have the following feelings?

1) I am conflicted between my family's and my friends' ways of doing things

2) I feel like someone moving between two worlds (family versus friends)

3) I feel caught between my family and my friends

3. Loneliness

How do you feel at school?

1) It's easy for me to make new friends

2) I have nobody to talk to

3) I am good at working with other kids

4) I have lots of friends

5) I feel alone

6) I can find a friend when I need one

7) It's hard to get other kids to like me

8) I don't have anyone to hang out with

9) I get along with other kids

10) I feel left out of things

11) There's nobody I can go to when I need help

12) I'm lonely

13) Kids in my class like me

4. Depressive Symptoms

What best describes how you feel (about yourself)? Choose the item that is most like how you have been feeling in the past 2 WEEKS.

1) I am sad once in a while/I am sad many times/I am sad all the time

2) Nothing will ever work out for me/I am not sure if things will work out for me/Things will work out for me alright

3) I do most things right/I do many things wrong/I do everything wrong

4) I hate myself/I do not like myself/I like myself

5) I feel like crying everyday/I often feel like crying/I feel like crying once in a while

6) Things bother me all the time/Things often bother me/Things bother me once in a while

7) I look ok/There are some bad things about my looks/I look ugly

8) I do not feel alone/I feel alone often/I feel alone all the time

9) I have plenty of friends/I have some friends but wish I had more/I do not have any friends

10) Nobody really loves me/I am not sure if anybody loves me/I am sure that somebody loves me

5. School Belonging

How true is each of these for you this school year?

1) I am happy to be at this school.

2) I feel like I am a part of this school.

3) I feel close to people at this school.

4) There is an adult at this school who I can go to when I need information about school.

5) There is an adult at this school who I feel comfortable talking to about a personal problem.

6. School Engagement

What best describes you at school?

1) I get good grades in school

2) I hate schoolwork

3) I work hard in school

4) I do my homework

5) I pay attention in class

6) I am disruptive in class

7. **Educational Expectations**

1) How far in school do you think you will actually go?

8. **Coping strategies**

When you have problems at school or at home, how often do you use the following strategies

to deal with the problems?

1) I discuss the problem with my parents

2) I talk with an adult at school (e.g., counselor, teacher) about the problem

3) I ask friends for help

4) I don't worry

5) I think about the problem and solutions

6) I accept that there will always be problem

9. **Relationship Quality with Parents and Peers**

What best describes your parents?

1) My parents respect my feelings

2) My parents accept me as I am

3) When we discuss things, my parents consider my point of view

4) My parents trust my judgment

5) My parents understand me

6) When I am angry about something, my parents try to be understanding

What best describes your five closest friends in your grade level?

1) My friends listen to what I have to say

2) I feel my friends are good friends

3) When I am angry, my friends try to be understanding

4) I can count on my friends to get something off my chest

5) My friends respect my feelings

Appendix 3

Table.

Geomin Rotated Factor Loadings from Exploratory Factor Analyses of the Cultural Socialization Scale in the Pilot Study

Items	Family Cultural Socialization				Peer Cultural Socialization			
	Heritage Culture		Mainstream Culture		Heritage Culture		Mainstream Culture	
	Overt	Covert	Overt	Covert	Overt	Covert	Overt	Covert
Teach/talk to me about the cultural bkg.	.77*	.04	.53*	.21	.51*	.11	.54*	.22*
Encourage me to respect the cultural values and beliefs	.74*	.10	.67*	.08	.59*	.16	.77*	.02
Teach/talk to me about the cultural values and beliefs	.88*	-.06	.84*	.00	.77*	.06	.81*	.00
Talk about how important it is to know about the cultural bkg.	.78*	.02	.95*	-.16*	.79*	.00	.97*	-.18*
Teach/talk to me about the history of the cultural bkg.	.83*	-.05	.75*	.06	.97*	-.25*	.75*	.04
Feel a strong attachment to the cultural bkg.	.42*	.33*	.35	.54*	.36*	.46*	.21*	.59*
Participate in activities that are specific to the ethnic group [a]	.06	.73*	.17	.67*	.17	.68*	.10	.71*
Decorate home/wear clothes with things that reflect the cultural bkg.	-.01	.71*	.18	.54*	.39*	.41*	.11	.71*
Hang out mostly with people who share the cultural bkg.	.02	.56*	.26	.56*	.00	.73*	.08	.70*
Celebrate holidays that are specific to the cultural bkg.	.21*	.50*	-.05	.74*	.31*	.44*	-.05	.83*
Listen to music sung or played by artists from the cultural bkg.	.03	.52*	-.05	.77*	-.09	.79*	-.20*	.87*
Attend things such as concerts, plays, festivals, or other events [a]	-.14	.76*	.18	.61*	.14	.61*	.00	.77*

Note. Bkg = Background. Highlighted items were used in the current study.
[a] These two items were combined into one item (attend things such as festivals, concerts, plays, or other events that represent the cultural background).
* $p < .05$

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