

Change in Ethnic Identity Across the High School Years Among Adolescents with Latin American, Asian, and European Backgrounds

Lisa Kiang · Melissa R. Witkow · Oscar A. Baldelomar · Andrew J. Fuligni

Received: 3 April 2009 / Accepted: 15 June 2009 / Published online: 25 June 2009
© Springer Science+Business Media, LLC 2009

Abstract Changes in adolescents' ethnic identity (e.g., exploration, belonging) were examined over the 4 years of high school. Results from 541 adolescents (51% female) with Latin American, Asian, and European backgrounds suggest that, as a group, adolescents do not report developmental changes in their ethnic exploration and belonging over time. Yet, within-person analyses of change reveal that individual adolescents exhibited substantial fluctuation in ethnic identity across the years, and this fluctuation was associated with concurrent changes in family cohesion, proportion of same-ethnic peers, and ethnic centrality. The discussion focuses on the value of examining intraindividual change over at least several years in order to more fully understand processes of ethnic identity development during adolescence.

Keywords Ethnic identity · Within-person change · Adolescence

Introduction

A key development task for adolescents is to explore, establish, and eventually commit to a sense of personal and

social identity (Erikson 1968). Ethnic identity is particularly salient as adolescents discover their uniqueness and explore the ethnic groups and categories to which they belong (Phinney 2003). Existing research has consistently documented links between ethnic identity and positive adjustment including self-esteem, academic motivation, well-being, and adaptive relationships (Fuligni et al. 2005; Umaña-Taylor et al. 2002; Wong et al. 2003). Yet, due to the limited number of longitudinal studies that have tracked the same participants over time, little is known about the process of ethnic identity change during the adolescent years, and how such change may be intricately tied to other aspects of adolescents' lives. In the current study, we examine normative group changes in ethnic identity among youth from Latin American, Asian, and European backgrounds. In addition, we use a within-person approach to explore whether intraindividual changes in ethnic identity are related to concurrent fluctuations in family relationships, ethnicity of peers, and ethnic centrality. Our overarching goal is not only to determine whether adolescents, as a group, exhibit normative developmental changes in ethnic identity, but also to illuminate specific factors in adolescents' lives that may be related to such change.

Normative Developmental Changes in Ethnic Identity

Theoretically, adolescents are expected to experience intense psychological turmoil as they establish a sense of self-identity, and to normatively resolve this conflict by exploring who they are and where they stand in terms of the world around them (Erikson 1968; Marcia 1966). With regards to ethnic identity, as youth become more aware of the existence and social significance of ethnic categories, their process of identity development could lead them to explore their family's ethnic and cultural origins more

L. Kiang (✉)
Wake Forest University, P.O. Box 7778,
Winston-Salem, NC 27109, USA
e-mail: KiangL@wfu.edu

M. R. Witkow
Willamette University, Salem, OR, USA

O. A. Baldelomar · A. J. Fuligni
University of California, Los Angeles (UCLA),
Los Angeles, CA, USA

closely (Phinney 2003). Adolescents' process of self-definition would thus lead them to increase along the continuum of ethnic exploration, or the degree to which they actively explore and attempt to learn about their ethnic background. Ethnic belonging, or the extent to which adolescents feel positively connected to their ethnic group, should be expected to increase over time as well. Given their developmental salience, it is important to track how these two dimensions of exploration and belonging change during the adolescent years.

Knowledge on the developmental progression of ethnic identity has largely relied on cross-sectional data. For instance, existing research on identity subscales of ethnic exploration and belonging suggests that older adolescents report stronger levels of ethnic identity than younger adolescents (Phinney 1990; Quintana 2007). More specifically, a cross-sectional study of ethnically diverse adolescents found that ethnic pride or belonging increased incrementally with each grade in high school (Rotheram-Borus et al. 1998). Although informative, cross-sectional studies have limited our knowledge on actual levels of change and on individual trajectories of development.

Indeed, longitudinal evidence of change and stability in adolescents' ethnic identity has only recently begun to emerge. For instance, Pahl and Way (2006) examined longitudinal trajectories in middle to late adolescents from African and Latin American backgrounds and found that, in general, ethnic exploration decreased slightly after the tenth grade, but virtually no change in affirmation or belonging over time was found. In contrast, French et al. (2006) followed two cohorts of younger adolescents for 3 years—one of early adolescents in the fifth or sixth grade, and one of middle adolescents in the eighth or ninth grade. In both of these cohorts, ethnic belonging increased over time and, for the older cohort only, exploration increased over time. Taken together, these results suggest that ethnic exploration in particular may peak just as youth are beginning their high school years before leveling out or perhaps even decreasing in later years, as Pahl and Way (2006) described.

The scant and mixed empirical literature on the longitudinal progression of ethnic identity thus points to the need for more direct tests of theoretical assumptions. Developmental theory clearly states that a normative increase in ethnic exploration and belonging should be expected over time. Alternatively, normative change in ethnic identity may be an assumption that has yet to be fully supported by empirical research (Phinney 1990). Criticisms of identity development have certainly been made, arguing that current methods of categorizing identity lack validity as well as the ability to truly predict change (van Hoof 1999). Such alternative views have been, in part, supported by research that has found limited evidence for

change over time, particularly for feelings of ethnic belonging (e.g., Pahl and Way 2006).

However, perhaps some of the inconsistencies in the existing literature can be attributed to individual differences that moderate patterns of change. For instance, Pahl and Way (2006) found ethnicity to moderate longitudinal trajectories of ethnic exploration such that African American youth reported less of a decrease in exploration compared to Latin American youth. Such differences call into question the unique circumstances in which youth from diverse ethnic backgrounds develop and highlight the need to consider ethnicity in delineating processes of ethnic identity change. Notably, Pahl and Way (2006) suggest that one explanation for the ethnic differences found is that their African and Latin American youth differed in the extent to which they were numerically represented in the context in which the study took place; that is, Latin American youth tended to be in the ethnic majority and, as such, they may have been less inspired to question the meaning and value behind their ethnic group membership. The proximal context in which adolescents are spending their daily lives is thus another important moderating variable to consider. Those who are in the ethnic minority amongst their peers and within the immediate environment of their school could experience a greater impetus to explore and develop an affiliation with their ethnic group. A third potential moderator is gender (Chavous et al. 2008). Traditionally seen as primary bearers of cultural practices and traditions, females may be more entrenched in the process of ethnic identity development than males and display stronger levels of ethnic identity over time (Rotheram-Borus et al. 1998). Alternatively, it is possible that, in modern American contexts, such prescribed gender roles are less common and no longer expected. Indeed, evidence of gender differences in longitudinal trajectories of ethnic identity development have yet to be found (Pahl and Way 2006).

Within-Person Changes in Ethnic Identity

Above and beyond understanding normative developmental change at the group level, it may be even more informative to examine changes in ethnic identity at an individualized, within-person level. This was not done by Pahl and Way (2006), French et al. (2006), or any other longitudinal study of ethnic identity to date. Analysis of normative change only provides knowledge about overall change as a group, and results can be misleading. For example, no evidence for normative change might suggest that there is great stability in ethnic identity during the adolescent years, calling into question the validity of developmental theory. However, individual adolescents may change a lot from year to year, but without heading toward a single linear direction. This

would suggest that the period of adolescence is indeed marked by intense identity development, but that individual fluctuations may be masking group-level trends. Indeed, evidence for this idea was recently found in a longitudinal study of ethnic labels among adolescents from immigrant families. Although, as a group, Latin American and Asian adolescents did not exhibit normative change in their use of ethnic labels (e.g., Latino vs. Mexican vs. Mexican American), significant numbers of individual adolescents changed their labels from year to year (Fuligni et al. 2008). Moreover, these labeling changes were linked to individual changes in adolescents' closeness with parents, ethnic pride and exploration, and proficiency in their families' heritage language.

By treating within-person variation as a primary outcome in and of itself, we can thus provide a more direct basis to infer how ethnic identity actually changes during adolescence, and more closely estimate the specific variables that may be intricately linked with ethnic identity development (Hoffman 2007). Indeed, a key question regarding intraindividual change in ethnic identity is whether such change is simply random, or whether there is a predictable process that coincides with variability in other relevant aspects of adolescents' lives. For instance, on a given occasion, if an adolescent scores high on ethnic identity, relative to his or her usual level, does that adolescent also score high on another domain, again relative to his or her usual level? By longitudinally correlating within-person fluctuations in ethnic identity with fluctuations in other key developmental variables, we can obtain important information on how ethnic identity evolves alongside other factors in adolescents' lives.

A number of proximal and contextual factors can be theoretically linked to within-person change in ethnic identity. One of the most primary is that of adolescents' family relationships. Research has consistently demonstrated that the family represents a primary socializing influence in adolescents' lives (Dmitrieva et al. 2004; Parke 2004). Emerging work on ethnic socialization in particular suggests that positive relationships with parents predict stronger levels of ethnic identity in children (Okagaki and Moore 2000; Wilson and Constantine 1999). Adolescents with closer relationships with their parents may feel more motivated to connect with and learn more about their shared ethnic background. Hence, if one grows closer to one's family over the high school years, one may simultaneously have more opportunities to explore and to feel affiliated with one's ethnic group. In contrast, one who grows more distant to one's family, perhaps in the process of establishing autonomy, may experience concurrent decreases in ethnic identity.

Another socializing influence in adolescents' lives is their peers. In theory, ethnic identity is a dynamic construct

that is highly context dependent (Phinney 2003). Recent work demonstrates that same-ethnic peer relationships can actually pull for strong feelings of ethnic belonging and exploration in adolescents from Latin American and Asian backgrounds (Kiang and Fuligni 2009). Similar to processes of parental socialization, adolescents may feel more comfortable being themselves and exploring their ethnicity with their same-ethnic friends. Indeed, Chinese American college students have been found to report higher levels of ethnic identity in their peer relationships if they also perceived a strong level of ethnic support coming from those relationships (Kiang et al. 2007). Moreover, perhaps peers, particularly same-ethnic peers, jointly engage in similar processes of identity exploration and development (Kao and Joyner 2004). Change in adolescents' proportion of same-ethnic peers from year to year may be therefore concurrently related to change in ethnic identity.

Ethnic centrality, or how important one's ethnicity is to one's overall sense of self, may be another primary correlate of ethnic exploration and belonging (Sellers et al. 1998). It may well be that, in order for an adolescent to actually explore his or her ethnicity, he or she must first be motivated to do so. As ethnicity becomes more central to one's life, we might expect a greater motivation to explore and learn more about one's ethnic background. Similarly, the more important or central one's ethnicity is, the more likely it is that one will feel positively about one's group.

Hypotheses

The current study addressed three key questions regarding developmental changes in the strength of ethnic identity reported among adolescents with different ethnic and generational backgrounds across the high school years. First, do adolescents report normative developmental changes in their ethnic exploration and ethnic belonging from the ninth to the twelfth grades? Second, do demographic and contextual variables such as ethnicity, the school context from which youth were recruited, and gender moderate patterns of ethnic identity change over time? Given that social and contextual influences in adolescents' lives, including traditionally prescribed gender roles, can affect developmental processes, it is important to consider these demographic variables to determine whether processes of change occur in a generalizable manner across groups. Theoretically, since the adolescent identity crisis is resolved by first exploring and then feeling a strong connection to one's identity (Erikson 1968), we expected that adolescents would report stronger levels of exploration and belonging over time. Alternatively, it is possible that such change will only be observed at the within-person level, suggesting that adolescence is a crucial time of identity

development, but that individual differences in the negotiation of identity formation trump any observable group trends. Hence, our third key question addresses how ethnic identity changes within individual adolescents over time and whether such intraindividual changes occur simultaneously with within-person changes in other primary factors in adolescents' lives. Specifically, we expected that ethnic exploration and belonging would vary in conjunction with increases and decreases in family cohesion, proportion of same-ethnic friends, and the central importance that adolescents attribute to their ethnicity.

Method

Sample

Beginning in ninth grade and continuing yearly through twelfth grade, students from three public high schools in the Los Angeles area were recruited for participation in a longitudinal study. The schools were chosen to reflect the communities from which their students are drawn and they varied in terms of ethnic composition, socioeconomic status, and overall level of achievement. The first school was populated predominantly by students who came from families with Latin American and Asian backgrounds with lower-middle to middle-class educational and occupational statuses. This school tended to be in the lower-middle to middle range of the achievement distribution of schools within the state of California (California Department of Education 2006). The second school possessed average levels of achievement and consisted mainly of students from Latin American and European backgrounds whose families had lower-middle to middle-class backgrounds. Finally, the third school mainly consisted of students from families with Asian and European backgrounds who were middle to upper-middle class in terms of parental education and occupation. The third school tended to have above average achievement levels. No single ethnicity dominated any of these schools; rather, the two largest ethnic groups each comprised about 30–50% of the total population in each school (California Department of Education 2006).

In two of the schools, the entire ninth grade was invited to participate during the first year of the study. The same process continued in subsequent years, with all students in the correct grade being invited to participate. In the third school, approximately half of the ninth grade was randomly invited to participate since the large size of the school made it unfeasible to recruit all students. In this school, only students who had participated in ninth grade were followed in subsequent years. Participation rates ranged from approximately 53–69% depending on the school. At all three schools, students who participated in early years

but were no longer enrolled in the school were contacted and invited to participate by mail in subsequent years.

The sample used in the present analyses was the 541 participants from European, Asian, and Latin American families who had participated in the study for at least two of the four years ($M = 3.50$ years, $SD = .70$). Of the 20 time-varying variables across the 4 years of the study, there was only one significant difference between the individuals who were included in current study and those who had only one wave of data (20% of the larger sample). Ethnic identity exploration assessed in the ninth grade appeared to be higher for those who were in the study ($M = 2.95$, $SD = .95$) compared to those who were not in the study ($M = 2.68$, $SD = 1.03$), $t(538) = 2.59$, $p < .01$.

Participants were evenly split by gender (263 male, 278 female). The majority of the 244 participants from Asian families were from Chinese backgrounds (77.0%), and the majority of the 196 participants from Latin American families had Mexican backgrounds (87.8%). Of the Asian participants, 79 were of the first generation (i.e., the students were foreign-born themselves), 151 were of the second generation (i.e., the students were born in the United States), and 14 were of the third generation or greater (i.e., both the students and their parents were born in the United States). Of the participants from Latin American families, 35 were of the first generation, 122 were of the second generation, and 39 were of the third generation or greater. Of the 101 participants from European to American families, 8 were of the first generation, 6 were of the second generation, and 87 were of the third generation or greater.

Procedure

Students who returned parental consent forms and provided their own assent to participate completed a questionnaire during class time each spring. Consent forms and study materials were available in English, Chinese, and Spanish. Fewer than eight participants chose to complete the questionnaires in a language other than English during any single year.

Measures

Strength of Ethnic Exploration and Belonging

Adolescents completed two subscales of the Multigroup Ethnic Identity Measure (MEIM; Phinney 1992). The Affirmation and Belonging subscale consists of seven items and assesses ethnic pride, feeling good and happy about one's ethnicity, and feelings of belonging and attachment to one's ethnic group. Sample items include, "I am happy that I am a member of the group I belong to," "I have a lot

of pride in my ethnic group,” and, “I feel good about my cultural or ethnic background.” The Ethnic Identity Achievement subscale consists of five items and measures individuals’ exploration of what it means to be a member of their ethnic group. Sample items include, “I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs,” “I am active in organizations or social groups that include mostly members of my own ethnic group,” and, “In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.” Participants responded to each item on a five-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). Internal consistencies were similarly high for all three ethnic groups across each of the 4 years of the study for both measures (Belonging: α s = .85–.91; Exploration: α s = .71–.80). Scores were recoded on a 0–4 scale in these analyses for ease of interpretation.

Percent of Same-Ethnic Peers in School

The percent of same-ethnic peers in each participant’s grade at school during their ninth grade year was collected from information provided by the California Department of Education (2006). The ninth grade class at the first school was 56% Latino, 35% Asian, 6% White, and 1% other. The ninth grade class at the second school was 30% Latino, 8% Asian, 51% White, and 11% other. The ninth grade class at the third school was 17% Latino, 40% Asian, and 32% White, and 6% other. This variable reflecting percent of same-ethnic peers within each school was stable over the years of the study. Percentages of when adolescents were in the ninth grade were compared to percentages of when adolescents were in the twelfth grade and these values were not significantly different within any of the three schools (range $\chi^2(3) = .27$ – 1.44 , *ns*).

Family Cohesion

Adolescents completed a subset of the Family Adaptation and Cohesion Evaluation Scales (FACES) II inventory separately for each parent (Olson et al. 1979). Questions were the same for mothers and fathers and participants responded to each on a five-point scale (1 = *Almost never*, 5 = *Almost always*). The measure for each parent included 10 items such as, “My mother [father] and I do things together,” “My mother [father] and I are supportive of each other during difficult times,” and, “My mother [father] and I feel very close to each other.” Internal consistencies were similarly high for all three ethnic groups across each year of the study (α s = .84–.93). Scores were recoded on a 0–4 scale for ease of interpretation. Correlations between mothers and fathers ranged from .26 to .39,

$p < .001$, depending on the year. Preliminary analyses showed mother-child cohesion and father-child cohesion exhibited similar patterns of association with other study variables; hence, for parsimony, an average was computed for each participant across both parents.

Ethnic Composition of Friendship Group

Students were asked to list the initials of their five best friends so that they were thinking about specific individuals. Across the 4 years of the study, the average number of friends listed ranged from 4.51 (SD = 1.36) to 4.84 (SD = .75). For each friend, they were asked to indicate whether or not that friend is of the same ethnicity (yes/no). A variable was created indicating the percentage of each participant’s friends who share their ethnicity (0 = no friends share one’s ethnicity, 1 = all friends share one’s ethnicity).

Ethnic Centrality

Adolescents completed items from the centrality subscale adapted from the Multidimensional Inventory of Black Identity (MIBI; Sellers et al. 1997). All items were modified to be more general so that members of any ethnic group could complete them. The measure included seven items that assessed the extent to which students’ ethnicity was central to their definition of themselves. Participants responded on a five-point scale (1 = *Almost never*, 5 = *Almost always*) to items such as, “In general, being a member of my ethnic group is an important part of my self-image,” “Being a part of my ethnic group is an important reflection of who I am,” and, “Overall, being a member of my ethnic group has very little to do with how I feel about myself (reversed)” Internal consistencies were similarly high for all three ethnic groups across each of the 4 years of the study (α s = .73–.81). Scores were recoded on a 0–4 scale in these analyses for ease of interpretation.

Results

Normative Changes in Ethnic Exploration and Belonging

The first goal of this study was to examine group-level change over time in adolescents’ ethnic identification, in terms of both exploration and belonging. Hierarchical Linear Models (HLM; Bryk and Raudenbush 1992) were used in analyses given our longitudinally-nested, within-person data. The general statistical model that was estimated was as follows:

$$\text{Ethnic identification}_{ij} = b_{0j} + b_{1j} (\text{Year}) + e_{ij} \tag{1}$$

$$b_{0j} = c_{00} + c_{01} (\text{Gender}) + c_{02} (\text{Ethnicity}) + c_{03} (\text{Percent same-ethnic peers}) + u_{0j} \tag{2}$$

$$b_{1j} = c_{10} + c_{11} (\text{Gender}) + c_{12} (\text{Ethnicity}) + c_{13} (\text{Percent same-ethnic peers}) + u_{1j} \tag{3}$$

As shown in Eq. 1, adolescents’ strength of ethnic identification in a particular year (i) for a particular individual (j) was modeled as a function of the average level of ethnic identification by the individual (b_{0j}) and the year of the study (b_{1j}). Year was coded such that year 1 = 0, year 2 = 1, year 3 = 2, and year 4 = 3. Equations 2 and 3 show how both the average strength of ethnic identification and the effect of the year of the study were modeled as a function of adolescents’ gender, ethnicity, and the percent of same-ethnic peers in one’s grade in school in ninth grade. Gender was effects coded such that males = -1 and females = 1. Ethnicity was indicated with two dummy codes representing European American and Asian, leaving Latin American as the baseline condition.

As shown in Table 1, results indicated no normative or group level developmental changes in adolescents’ strength of ethnic identification. The one exception to this pattern was that Asian adolescents, compared to Latin American adolescents, reported declining levels of belonging over time. On average, Asian adolescents reported lower levels of belonging than Latin American adolescents. European American adolescents reported lower levels of belonging and exploration compared to Latin American adolescents. Similarly, on average, adolescents in schools with more

Table 1 Hierarchical linear models predicting change over time in the strength of adolescents’ ethnic belonging and exploration

	Belonging <i>b</i> (SE)	Exploration <i>b</i> (SE)
Intercept	3.13 (.06)***	2.02 (.07)***
Gender	.05 (.04)	.06 (.04)
Asian	-.28 (.08)***	.02 (.07)
European-American	-.74 (.10)***	-.61 (.11)***
% Same-ethnic peers	-.68 (.29)*	-.78 (.38)*
Year	-.03 (.02)	.00 (.02)
Gender	-.01 (.01)	.00 (.01)
Asian	-.07 (.03)*	-.04 (.03)
European-American	.00 (.04)	-.03 (.04)
% Same-ethnic peers	.22 (.13)	.15 (.14)

Note: Gender was effects coded boys = -1, girls = 1. Gender, ethnicity, and year of the study were uncentered. Percent of same-ethnicity peers at adolescents’ schools was centered at the mean of the sample

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

Table 2 Descriptive information regarding belonging according to year, ethnicity, and sex

	9th Grade		10th Grade		11th Grade		12th Grade	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
European-American	3.44	.81	3.28	.86	3.36	.92	3.34	.96
Asian	3.84	.84	3.74	.75	3.70	.81	3.56	.84
Latin American	4.14	.82	4.08	.81	4.11	.82	4.00	.82
Boys	3.75	.91	3.76	.84	3.81	.83	3.60	.87
Girls	3.95	.81	3.80	.85	3.77	.92	3.73	.91

Table 3 Descriptive information regarding exploration according to year, ethnicity, and sex

	9th Grade		10th Grade		11th Grade		12th Grade	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
European-American	2.50	.88	2.33	.88	2.32	.96	2.43	.90
Asian	3.04	.87	2.98	.84	2.98	.86	2.95	.88
Latin American	3.09	1.01	2.92	.97	3.01	.94	3.04	.90
Boys	2.88	.99	2.77	.93	2.86	.93	2.84	.91
Girls	3.00	.92	2.91	.91	2.89	.95	2.92	.93

same-ethnicity peers reported lower levels of belonging and exploration. For descriptive purposes, average levels of ethnic belonging and exploration are listed in Tables 2 and 3 by ethnicity, gender, and year in school.

For this and all subsequent analyses, additional tests were performed to examine differences according to generational status. Because generation and ethnicity were confounded, these tests were conducted within ethnic group. For Latin American adolescents, Eqs. 2 and 3 were modified such that ethnicity was removed and replaced with dummy codes representing second generation and third generation, with first generation serving as the baseline group. For Asian adolescents, because there were so few third generation participants, comparisons were only conducted between first and second generation adolescents. Generation analyses were not conducted for European American adolescents because the vast majority of them were of the third generation or greater. In the preceding analyses examining normative change over time, there was no effect of generation for either Latin or Asian American youth.

Within-Person Changes in Ethnic Identification

Amount of Within-Person Change

Although there was not a normative trend regarding adolescents’ ethnic identification over time, there was a

substantial amount of change in any direction (i.e., towards higher levels or lower levels of belonging and exploration) within individuals over time. For instance, variation in adolescents’ reports of ethnic belonging ranged from .00 to 1.29 at any given year ($M = .36$; $SD = .23$). Similarly, variation in participants’ reports of exploration ranged from .00 to 2.00 ($M = .40$; $SD = .26$). The degree of average variation did not vary according to ethnicity for either of these variables. While the amount of average variation in ethnic belonging did not vary according to gender, average variation in exploration was greater for boys ($M = .43$; $SD = .29$) than for girls ($M = .38$; $SD = .23$), $t(539) = 2.09$, $p < .05$.

Predictors of Within-Person Change

Given the degree of change in ethnic identification within adolescents across time, an additional set of HLM models was estimated to determine whether changes in adolescents’ ethnic identification from year to year were associated with concurrent changes in their family cohesion, ethnic composition of their friendship group, and ethnic centrality. Separate models were estimated for each of the predictor variables. Given that there was a maximum of four time points per person, and that some participants had only two or three time points, we did not have enough power and degrees of freedom to estimate all of the predictors simultaneously. The general form of the model used for these analyses was as follows:

$$\text{Ethnic identification}_{ij} = b_{0j} + b_{1j} (\text{Predictor}) + e_{ij} \quad (4)$$

$$b_{0j} = c_{00} + c_{01} (\text{Gender}) + c_{02} (\text{Ethnicity}) + c_{03} (\text{Percent same-ethnic peers}) + u_{0j} \quad (5)$$

$$b_{1j} = c_{10} + c_{11} (\text{Gender}) + c_{12} (\text{Ethnicity}) + c_{13} (\text{Percent same-ethnic peers}) + u_{1j} \quad (6)$$

Equation 4 shows how adolescents’ strength of ethnic identification on a particular year (i) for a particular individual (j) was modeled as a function of the average level of ethnic identification by the individual (b_{0j}) and the specific predictor variable (b_{1j} ; i.e., family cohesion, ethnic composition of friendship group, ethnic centrality). Equations 5 and 6 show how the average strength of ethnic identification and the effect of the predictor variable were modeled as a function of gender, ethnicity, and the percent of same-ethnic peers in one’s grade in school in ninth grade, which were each coded in the same manner as before.

Family Cohesion

As shown in Table 4, increases in family cohesion were associated with increases in belonging. While this was

Table 4 Hierarchical linear models predicting strength of adolescents’ ethnic belonging and exploration according to family cohesion

	Belonging <i>b</i> (SE)	Exploration <i>b</i> (SE)
Intercept	2.77 (.13)***	1.83 (.14)***
Gender	.06 (.09)	.01 (.09)
Asian	−.93 (.18)***	−.64 (.19)***
European-American	−.95 (.32)**	−.97 (.31)**
% Same-ethnic peers	−1.3 (.76)	−.54 (.80)
Family cohesion	.14 (.05)**	.09 (.06)
Gender	−.01 (.04)	.01 (.04)
Asian	.24 (.07)***	.27 (.08)***
European-American	.07 (.12)	.13 (.12)
% Same-ethnic peers	.37 (.29)	−.01 (.31)

Note: Gender was effects coded boys = −1, girls = 1. Gender, ethnicity, and family cohesion were uncentered. Percent of same-ethnicity peers at adolescents’ schools was centered at the mean of the sample

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

found for all ethnic groups, the relationship was particularly strong for Asian adolescents. While there was no relationship between family cohesion and ethnic exploration for Latin or European American adolescents, there was a positive relationship for Asian adolescents. In follow-up analyses, there was no effect of generation for Latin or Asian American adolescents.

Ethnic Composition of Friendship Group

As shown in Table 5, changes in having relatively more same-ethnicity friends was associated with increasingly higher levels of both ethnic belonging and exploration. In follow-up analyses, there was no effect of generation for Latin or Asian American adolescents.

Ethnic Centrality

As shown in Table 6, increases in ethnic centrality were associated with increases in both belonging and exploration. Compared to adolescents from Latin American backgrounds, the relationship between ethnic centrality and ethnic belonging was stronger for those from European American backgrounds.

Additional analyses pointed to generational differences in the relationship between ethnic centrality and both exploration and belonging for Asian adolescents, and between centrality and exploration for Latin American adolescents. Specifically, the relationship between centrality and exploration ($b = −.18$, $p < .01$) and belonging ($b = −.17$, $p < .05$) was weaker for second generation Asian adolescents than first generation Asian adolescents.

Table 5 Hierarchical linear models predicting strength of adolescents' ethnic belonging and exploration according to ethnic composition of adolescents' friendship group

	Belonging <i>b</i> (SE)	Exploration <i>b</i> (SE)
Intercept	3.10 (.05)***	2.03 (.05)***
Gender	.04 (.03)	.06 (.03)
Asian	-.41 (.06)***	-.05 (.07)
European-American	-.75 (.09)***	-.64 (.09)***
% Same-ethnic Peers	-.53 (.25)*	-.75 (.30)*
Ethnic composition of friendship group	.21 (.10)*	.32 (.14)*
Gender	-.03 (.06)	-.01 (.08)
Asian	-.03 (.14)	-.07 (.17)
European-American	.01 (.22)	.05 (.24)
% Same-ethnic Peers	-.62 (.60)	.06 (.76)

Note: Gender was effects coded boys = -1, girls = 1. Gender and ethnicity were uncentered. Percent of same-ethnicity peers at adolescents' schools and ethnic composition of friendship group were centered at the mean of the sample

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

Table 6 Hierarchical linear models predicting strength of adolescents' ethnic belonging and exploration according to ethnic centrality

	Belonging <i>b</i> (SE)	Exploration <i>b</i> (SE)
Intercept	1.68 (.10)***	.80 (.10)***
Gender	-.01 (.05)	.03 (.06)
Asian	-.42 (.13)***	.08 (.15)
European-American	-.45 (.14)***	-.30 (.14)*
% Same-ethnic peers	-.23 (.49)	-.51 (.61)
Ethnic centrality	.58 (.03)***	.50 (.04)***
Gender	.02 (.02)	.00 (.02)
Asian	.05 (.04)	-.02 (.06)
European-American	.12 (.05)*	.04 (.07)
% Same-ethnic peers	.05 (.16)	.07 (.23)

Note: Gender was effects coded boys = -1, girls = 1. Gender, ethnicity, and ethnic centrality were uncentered. Percent of same-ethnicity peers at adolescents' schools was centered at the mean of the sample

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

The relationship between centrality and exploration was stronger for third than first generation adolescents from Latin American backgrounds ($b = .29$, $p < .01$).

Discussion

Given that identity formation in general and ethnic identity in particular are such crucial features of development (Erikson 1968; Phinney 2003), there have been surprisingly

few studies that have explicitly examined how ethnic identity changes across the 4 years of high school. Is adolescence a period of normative identity fluctuation whereby youth, as a group, report linear trends and identify with their ethnic group more or less strongly over time? Or, are there individual differences within adolescents such that some teenagers actively explore their ethnicity and vary in the degree to which they feel connected to their ethnic group while others are more stable in their ethnic identification? Moreover, what specific factors in adolescents' lives might predict such intraindividual variability in ethnic identity change? The current study sought to answer these fundamental questions regarding adolescents' ethnic identity through a longitudinal, within-person approach.

In theory, adolescents' process of identity formation should lead them to increase their exploration into the values and traditions of their ethnic group and to feel more connected to their ethnic group over time (Marcia 1966; Phinney 2003). However, our data found little support for normative change. The only evidence for normative change was limited to ethnic belonging reported by adolescents from Asian American backgrounds. Specifically, a small reduction in ethnic belonging emerged over time, which suggests that there may be a slight acculturative trend in these adolescents' ethnic identification.

At the outset, these results may appear contrary to developmental theory (e.g., Erikson 1968; Marcia 1966) since there seems to be a great deal of stability in adolescents' ethnic identification over time. However, although we found little evidence for normative group-level change in ethnic identity constructs, this does not mean that there is not a great deal of change within adolescents over time. It is possible that observed patterns of stability are not due to actual stability in identity formation, but rather a superficial occurrence that results from individual variation masking group-level trends. Prior work on general processes of identity development (Meeus et al. 1999) as well ethnic labels more specifically (Fuligni et al. 2008) indeed suggests that identity is significantly variable during adolescence, but such variability does not always transpire in normatively predictable or linear directions. Similarly, we found in the current study that, from year to year, levels of ethnic exploration and belonging do fluctuate within individual adolescents.

Theoretical perspectives that point to adolescence as a marked time of identity formation and change are thus supported, but our results suggest that such change is governed by individual-level processes and not within adolescents as a group. Given that individual changes appear to be trumping group-level change in ethnic identity, perhaps a more informative question is what factors in adolescents' lives predict within-person change in ethnic identification? We implicated three primary variables,

namely, family cohesion, proportion of same-ethnic peers, and ethnic centrality as correlates of within-person change in ethnic identity. In terms of family cohesion, we found that the closer adolescents felt to their parents, the more they reported feeling connected to their ethnic group. Given that the family is a key source of ethnic socialization (Hughes et al. 2006), closeness with the family may highly overlap with closeness with one's ethnic group. Notably, links between family cohesion and ethnic belonging and exploration were particularly strong for youth from Asian American backgrounds, suggesting that ethnic identity development in Asian American youth may be acutely tied to family socialization processes.

Our results suggest that changes in adolescents' proportion of same-ethnic peer relationships also were significantly associated with changes in ethnic identity over time. Increases in the proportion of same-ethnic peers were concurrently related to the tendency to explore one's ethnic group, perhaps because such exploration occurs jointly between peers within the context of their relationships (Kiang et al. 2007). Thus, peers appear to represent another primary socializing influence in adolescents' lives such that having opportunities to interact with same-ethnic peers can be helpful for adolescents to learn more about their ethnicity (Kao and Joyner 2004). A greater proportion of same-ethnic peer relationships also predicted greater ethnic belonging.

Ethnic centrality also played a significant role in adolescents' change in ethnic identification over time. The more ethnicity was reported to be a central aspect of the self, the more likely adolescents were to report higher levels of ethnic exploration and belonging. The association between change in ethnic centrality and change in ethnic belonging was particularly strong for adolescents from European American backgrounds. Overall results suggest that adolescents are motivated to explore their ethnic identity and to feel more connected to their ethnic group, but only to the extent that ethnicity is central to their lives and their sense of who they are. Taken together, ethnic centrality appears to be a key motivational element that is intricately tied to a variety of ethnic identity components (Sellers et al. 1998).

Interestingly, despite ethnic differences in overall levels of ethnic identity that showed Latin Americans to be generally higher in ethnic exploration and belonging, ethnicity did not moderate patterns of change over time. The one exception was that Asians were the only group to decline slightly in exploration over time. Furthermore, when we included generation as a control in the few cases where ethnicity moderated the relationship between ethnic identity and covariates, it was only in the link between centrality and ethnic exploration where generation had a marginally different effect for Latin American versus

Asian youth. Although these results were inconsistent (e.g., stronger effect for earlier generation Asian youth, but later generation Latin American youth), they suggest that future work should at least continue to consider generational effects (or lack thereof). In terms of additional moderating variables, school ethnic composition did not moderate ethnic identity change. However, adolescents' broader school environment did have a negative effect on average levels of ethnic identity, perhaps because a greater representation of one's own ethnic group creates less of a need to make ethnicity a pressing concern. In line with prior work (e.g., Pahl and Way 2006), gender did not predict variation in ethnic identity trends over time.

Some limitations to the current research should be noted. As with many existing studies on ethnic identity, the data analyzed here were limited in being largely adolescents' self-reports. Although it would be difficult to obtain an objective measure of, for instance, ethnic identity, it would be interesting to examine whether parental reports of parent-child closeness or sociometric data on adolescents' peer networks reveal similar findings with regard to family and peer influences on change in ethnic identity over time.

Developmentally, it would be important for future work to persist in examining longitudinal processes of ethnic identity development to determine whether normative group changes are in fact found later in development, or whether within-person changes in ethnic identification continue to co-occur with changes in variables such as the ones implicated here. It may well be that normative group changes are more common in, for instance, college or post-high school graduation. There could be a dual process occurring whereby adolescents must experience a transition (e.g., transition to high school) for identity development to be instigated, but that there is a delay in the actual ethnic exploration or sense of belonging that eventually evolves from such a transition. It also could be the case that true transitions that motivate ethnic identity development simply do not occur until emerging adulthood. Perhaps the group stability that we found across adolescents reflects the idea that adolescence merely marks the beginning of identity development, and that later transitions, such as entry into college or the work force, may actually herald a more striking redefinition of one's identity. Research has indeed suggested that many adolescents entering college tend to renegotiate or reestablish who they are, ethnically (Ethier and Deaux 1994). An alternative perspective is that group changes in identity could be happening earlier in adolescence, as illustrated by French et al. (2006), only to stabilize and be driven by individual effects later in the high school years.

It also would be important in future work to determine whether similar processes of ethnic identity development occur in different types of samples. For instance, it is

possible that the influence of peer relationships is stronger for adolescents who are a clear ethnic minority within their school or broader community. Although the effect of adolescents' immediate peer group was significant even after we controlled for the ethnic diversity of adolescents' school environment from which they may be choosing their peers, one limitation to this study was the general lack of contextual variation from which our sample was drawn. Each of our three participating schools was ethnically diverse. Perhaps examining contexts that vary at a more extreme level than do any of our research sites would better inform the overall effect of one's peer group on ethnic identity formation. At an even broader contextual level, our participants were drawn from a predominantly multicultural and multiethnic region. Future research should examine less diverse geographical areas and new immigrant settlement sites to determine whether processes of ethnic identity change might be different for adolescents who are in the true ethnic minority within their immediate environment.

One of the reasons why context would be important to consider in future work is due to its implications with regards to discrimination. Greene et al. (2006) recently pointed to the utility of considering contextual factors such as perceived discrimination in adolescent development. Indeed, links between discrimination and aspects of ethnic identification (e.g., centrality) have been well-documented (Sellers and Shelton 2003). Future work should thus examine additional correlates of ethnic identity change including perceived discrimination. In addition, it would be informative for future research to consider more diverse dimensions of ethnic identification beyond traditional components of exploration and belonging. Although, theoretically, exploration and belonging are salient dimensions of ethnic identity that are particularly privy to developmental change during adolescence, perhaps changes in family cohesion, ethnicity of peer networks, and ethnic centrality are similarly related to intraindividual changes in Sellers and colleagues' conceptualizations of private and public regard (Sellers et al. 1998). Given that ethnic identity is a multidimensional construct (Phinney 2003), there is a need to determine whether its multiple dimensions exhibit similar or different patterns of group and intraindividual change over time. In addition, examining the more precise role of family ethnic socialization would be worthwhile. For instance, recent research has captured stronger associations between ethnic identity and more explicit measures of familial ethnic socialization versus the familial socialization of more general family values (Umaña-Taylor et al. 2009). We found that the general closeness between adolescents and their parents predicted changes in adolescents' ethnic identity; it is highly likely that changes in family ethnic socialization

practices have even stronger associations with adolescents' identity formation.

Despite some of the shortcomings of the current study, overall results suggest that, in addition to delineating normative change and stability in adolescent ethnic identity development, a more intricate question regarding predictors of within-person change could more clearly and complexly specify the developmental processes that are related to identity formation. For instance, our results suggest that a number of proximal influences in adolescents' lives, such as their closeness with parents, their proportion of same-ethnic friends, and the degree to which ethnicity is considered an important aspect of the self, are predictive of adolescents' ethnic identity development. By understanding the evolution of ethnic identification at the intraindividual level, we can perhaps target such specific areas, within adolescents, to improve and optimize youths' social connectedness and positive sense of who they are.

References

- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks, CA: Sage.
- California Department of Education. (2006). *School summary data*. Retrieved January 27, 2006, from <http://dq.cde.ca.gov/dataquest/>.
- Chavous, T. M., Rivas-Drake, D., Smalls, C., Griffin, T., & Cogburn, C. (2008). Gender matters, too: The influences of school racial discrimination and racial identity on academic engagement outcomes among African American adolescents. *Developmental Psychology, 44*, 637–654.
- Dmitrieva, J., Chen, C., Greenberger, E., & Gil-Rivas, V. (2004). Family relationships and adolescent psychosocial outcomes: Converging findings from Eastern and Western cultures. *Journal of Research on Adolescence, 14*, 425–447.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Ethier, K. A., & Deaux, K. (1994). Negotiating social identity when contexts change: Maintaining identification and responding to threat. *Journal of Personality and Social Psychology, 67*, 243–251.
- French, S. B., Seidman, E., Allen, L., & Aber, J. L. (2006). The developmental of ethnic identity during adolescence. *Developmental Psychology, 42*, 1–10.
- Fulgini, A. J., Witkow, M., & Garcia, C. (2005). Ethnic identity and the academic adjustment of adolescents from Mexican, Chinese, and European backgrounds. *Developmental Psychology, 41*, 799–811.
- Fulgini, A. J., Witkow, M. R., Kiang, L., & Baldelomar, O. A. (2008). Stability and change in ethnic labeling among adolescents from Asian and Latin American immigrant families. *Child Development, 79*, 944–956.
- Greene, M. L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American adolescents: Patterns and psychological correlates. *Child Development, 77*, 218–238.
- Hoffman, L. (2007). Multilevel models for examining individual differences in within-person variation and covariation over time. *Multivariate Behavioral Research, 42*, 609–629.

- Hughes, D., Rodriguez, J., Smith, E. P., Johnson, D., Stevenson, H. C., & Spicer, P. (2006). Parents' ethnic-racial socialization practices: A review of research and directions for future study. *Developmental Psychology, 42*, 747–770.
- Kao, G., & Joyner, K. (2004). Do race and ethnicity matter among friends? Activities among interracial, interethnic, and interethnic adolescent friends. *Sociological Quarterly, 45*, 557–573.
- Kiang, L., & Fuligni, A. J. (2009). Ethnic identity in context: Variations in ethnic exploration and belonging within parent, same-ethnic peer, and different-ethnic peer relationships. *Journal of Youth and Adolescence, 38*, 732–743.
- Kiang, L., Harter, S., & Whitesell, N. R. (2007). Relational expression of ethnic identity in Chinese Americans. *Journal of Social and Personal Relationships, 24*, 277–296.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*, 551–558.
- Meeus, W., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: Review of literature and longitudinal analysis. *Developmental Review, 19*, 419–461.
- Okagaki, L., & Moore, D. K. (2000). Ethnic identity beliefs of young adults and their parents in families of Mexican descent. *Hispanic Journal of Behavioral Sciences, 22*, 139–162.
- Olson, D. H., Sprenkle, D. H., & Russell, C. S. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types, and clinical applications. *Family Process, 18*, 3–28.
- Pahl, K., & Way, N. (2006). Longitudinal trajectories of ethnic identity among urban Black and Latino adolescents. *Child Development, 77*, 1403–1415.
- Parke, R. D. (2004). Development in the family. *Annual Review of Psychology, 55*, 365–399.
- Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin, 108*, 499–514.
- Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research, 7*, 156–176.
- Phinney, J. S. (2003). Ethnic identity and acculturation. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 63–81). Washington, DC: American Psychological Association.
- Quintana, S. M. (2007). Racial and ethnic identity: Developmental perspectives and research. *Journal of Counseling Psychology, 54*, 259–270.
- Rotheram-Borus, M. J., Lightfoot, M., Moraes, A., Dopkins, S., & LaCour, J. (1998). Developmental, ethnic, and gender differences in ethnic identity among adolescents. *Journal of Adolescent Research, 13*, 487–507.
- Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional Inventory of Black Identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*, 805–815.
- Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived discrimination. *Journal of Personality and Social Psychology, 84*, 1079–1092.
- Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional Model of Racial Identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review, 2*, 18–39.
- Umaña-Taylor, A. J., Alfaro, E. C., Bámaca, M. Y., & Guimond, A. B. (2009). The central role of familial ethnic socialization on Latino adolescents' cultural orientation. *Journal of Marriage and Family, 71*, 46–60.
- Umaña-Taylor, A. J., Diversi, M., & Fine, M. A. (2002). Ethnic identity and self-esteem among Latino adolescents: Making distinctions among the Latino populations. *Journal of Adolescent Research, 17*, 303–327.
- van Hoof, A. (1999). The identity status approach: In need of fundamental revision and qualitative change. *Developmental Review, 19*, 622–647.
- Wilson, J. W., & Constantine, M. G. (1999). Racial identity attitudes, self-concept, and perceived family cohesion in Black college students. *Journal of Black Studies, 29*, 354–366.
- Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality, 71*, 1197–1232.

Author Biographies

Lisa Kiang is Assistant Professor of Psychology at Wake Forest University. Her area of research is in cultural identity and social relationships, with an emphasis on positive well-being in ethnically diverse adolescents.

Melissa R. Witkow is Assistant Professor of Psychology at Willamette University. Dr. Witkow studies the intersection between peer relationships and academic motivation and achievement during adolescence, and how adolescents from diverse backgrounds negotiate the demands in their lives.

Oscar A. Baldelomar is a graduate student at the University of California, Los Angeles. His area of research is in identity processes and development.

Andrew J. Fuligni is Professor of Psychology and Psychiatry at the University of California, Los Angeles. Dr. Fuligni's research has focused on family relationships and adolescent development among culturally and ethnically diverse populations.