

**ETHNIC DIFFERENCES IN COPING WITH  
INTERPERSONAL STRESSORS**  
**A Test of Self-Construals as Cultural Mediators**

AMY G. LAM

*University of California, San Francisco*

NOLAN W. S. ZANE

*University of California, Davis*

This study examines ethnic differences in how Asian and White American students cope with interpersonal stressors and tests whether differences in self-construals mediate the relationship between ethnicity and coping. Asian Americans were found to be more oriented toward secondary control and less oriented toward primary control than White Americans. Independent self-construal fully mediated the ethnic difference in primary control. Greater orientation toward an independent self-construal accounted for the greater use of primary control among Whites, in relation to Asians. Interdependent self-construal partially mediated the ethnic difference in secondary control. Greater orientation toward an interdependent self-construal accounted for the greater use of secondary control among Asians, in relation to Whites. Other factors, such as structural variables, may account for further ethnic variations in secondary control coping.

**Keywords:** primary control; secondary control; Asian Americans; self-construal

**Understanding how individuals cope** with interpersonal problems is of great importance, given that much of our daily lives involve interactions with others (Carpenter & Scott, 1992). All relationships, at some point in time, involve problems or tensions that can be stressful to an individual (Carpenter & Scott, 1992). Negative social interactions and interpersonal stressors have been found to be negatively related to psychological and physical well-being (Abbey, Abramis, & Caplan, 1985; Bolger, DeLongis, Kessler, & Schilling, 1989; Cohen et al., 1998; Ewart, Taylor, Kraemer, & Agras, 1991; Herbert & Cohen, 1993; Kiecolt-Glaser et al., 1993; Rook, 1984; Walen & Lachman, 2000). For example, Walen and Lachman (2000) found that social strain was negatively associated with health, life satisfaction, and positive mood, whereas it was positively associated with health problems and negative mood. Bolger et al. (1989) also found that interpersonal conflicts were the most upsetting of all daily stressors, accounting for 80% of the variance in daily mood. Taken together, these findings underscore the importance of examining how people cope with interpersonal stressors.

---

AUTHORS' NOTE: This study was supported in part by the National Research Center on Asian American Mental Health (National Institute of Mental Health Grant No. MH59616). The authors gratefully acknowledge the assistance of Alice Nguyen and Fam Saeparn for their help in data collection and those at the center for reading earlier drafts. We also thank Stephen Russell and Stanley Sue for their comments on previous versions of the article and Stephen Brown and Irene Kim for constant feedback and support on the project. An earlier version of this article was presented at the 108th American Psychological Association Convention, August 2000, in Washington, D.C. Correspondence concerning this article should be addressed to Amy Lam, Health Psychology Program, University of California, 3333 California Street, Suite 465, San Francisco, CA 94143-0848; e-mail: agram@itsa.ucsf.edu.

JOURNAL OF CROSS-CULTURAL PSYCHOLOGY, Vol. 35 No. 4, July 2004 446-459

DOI: 10.1177/0022022104266108

© 2004 Sage Publications

Cultural influences can be pivotal in shaping an individual's coping patterns. Although coping is a universal process, one's cultural background and values may shape what coping patterns are appropriate and valued in a given society (Benedict, 1946; Lazarus & Folkman, 1984; Marsella & Dash-Scheuer, 1988). Ethnic and national differences have been found with respect to coping goals (Essau & Trommsdorff, 1996; Marsella & Dash-Scheuer, 1988). When comparing primary control coping (i.e., changing the existing environment to fit the individual's needs) to secondary control coping (i.e., changing the individual's feelings and thoughts to adjust to the objective environment), studies indicate that secondary control is emphasized more among individuals from Asian cultures than among those from Western cultures (Flammer et al., 1995; McCarty et al., 1999; Oerter, Oerter, Agostiani, Kim, & Wibowo, 1996; Peng, 1995; Seginer, Trommsdorff, & Essau, 1993, Experiment 1; Trommsdorff, 1989 as cited in Flammer et al., 1995; Trommsdorff & Essau, 1998; Trommsdorff & Friedlmeier, 1993).

Ethnic and nation group differences are important in describing and documenting coping processes among different groups of people. However, simply knowing that a psychological phenomenon is associated with a certain ethnic group does little to explain what, specifically, about that ethnic group is related to the psychological phenomenon of interest (Betancourt & Lopez, 1993; Phinney, 1996; Phinney & Landin, 1998). Examining specific variables associated with ethnic or national group differences provides researchers with a better understanding of the mechanisms underlying the relationship between ethnicity and behavior (Betancourt & Lopez, 1993; Phinney, 1996; Phinney & Landin, 1998).

The present study sought to examine the role of culture in the coping process by applying a control-related model of coping that focuses on the goals people have that guide their coping behavior (Rothbaum, Weisz, & Snyder, 1982; Weisz, Rothbaum, & Blackburn, 1984). McCarty et al. (1999) suggest that most of the research related to coping has focused on coping methods (e.g., observable overt methods vs. hidden covert methods) rather than on coping objectives or goals that underlie these methods. They argue for the importance of studying coping goals, as individuals with the same coping behavior may actually have different underlying goals in executing those behaviors.

The majority of studies on primary and secondary control coping have examined general coping orientations to a variety of stressors, including interpersonal issues, work-related problems, and health concerns. However, coping processes may vary, depending on the type of stressor (McCrae, 1984). Given the pivotal role that interpersonal stress plays in people's lives, it would be informative to determine if there were ethnic differences in coping with interpersonal conflict. Moreover, ethnic differences in coping, if found, may be explained by cultural variations. Because of their socialization experiences, individuals may have different values that regulate coping behaviors. Individuals from Western cultures tend to be socialized to emphasize an independent self-construal, valuing independence and autonomy. Individuals with an autonomous, unique self may have a desire for self-expression and congruency between their behaviors and internal attributes (Morling & Fiske, 1999; Weisz et al., 1984). The external environment is used to confirm one's internal attributes and sense of self (Markus & Kitayama, 1991). Individuals socialized to have an independent, autonomous self-concept may be more oriented toward primary control coping, as this orientation prioritizes aligning the environment with one's desires and goals (Heckhausen & Schulz, 1995; Morling & Fiske, 1999).

On the other hand, individuals from East Asian cultures tend to be socialized to emphasize an interdependent self-construal focused on group cohesion. Individuals with this interdependent and connected sense of self have a desire for maintaining harmony and conform-

ing to group norms (Chang, Chua, & Toh, 1997; Morling & Fiske, 1999; Weisz et al., 1984). The external environment is used not to confirm internal attributes but to guide one's behaviors (Markus & Kitayama, 1991). Individuals socialized to have an interdependent, relational self-concept may be more oriented toward secondary control coping, as this orientation places more emphasis on altering the self to adapt and accommodate to one's environment (Heckhausen & Schulz, 1995; Morling & Fiske, 1999).

We would also expect to see this phenomenon among Asians who reside in North America, as the majority of Asians who reside in North America are either recent immigrants or second-generation Americans (Tanaka, Ebreo, Linn, & Morera, 1998; Uba, 1994). In particular, researchers suggest that ethnic minorities tend to maintain the cultural values of their ethnic culture (Hieshima & Schneider, 1994; Kim, Atkinson, & Yang, 1999; Sodowsky, Kwan, & Pannu, 1995; Szapocznik, Scopetta, Kurtines, & Arandale, 1978). For example, Heine, Lehman, Markus, and Kitayama's (1999) report on studies of self-views found that whereas third-generation Asian Canadians had similar cultural values as their European Canadian counterparts, prethird-generation Asian Canadians had cultural values that were more in line with their culture of origin. Other studies indicate that even among third- and fourth-generation Asian Americans, although behaviors may have acculturated to the dominant American culture, cultural values and norms—including coping patterns—are still very much consistent with one's culture of origin (Hieshima & Schneider, 1994; Kim et al., 1999; Sodowsky et al., 1995). Given that cultural values tend to acculturate at a slower rate than behaviors, it is expected that secondary control would be more prevalent among Asian Americans as compared to White Americans.

Although researchers have implicated cultural variables such as self-construals in explaining ethnic and national group differences in primary and secondary control (Chang et al., 1997; Seginer, 1998; Seginer et al., 1993; Trommsdorff & Essau, 1998; Weisz et al., 1984), there are few studies that have directly examined the relationship between specific cultural variables and coping. In one study, researchers examined the relationship between secondary control and interdependence (Morling & Fiske, 1999). Morling and Fiske measured and tested the validity of harmony control (one subtype of secondary control) and found a positive correlation between harmony control and interdependence (9% shared variance). Another study focused on the relationship between primary control and independent self-construal (Cross, 1995). Cross found that independent self-construal was related to primary control coping for students from East Asia but not for students from the United States. Both of these studies did not examine the mediational effect of self-construals on ethnic differences in control coping. The current study extends previous research by empirically testing whether different types of self-construals (independent vs. interdependent) can explain ethnic differences in different forms of coping (primary vs. secondary).

In the present study, we first sought to determine whether ethnic differences existed in how individuals cope with a specific and important type of stress, namely, interpersonal stress. It was hypothesized that Asian Americans would be more oriented toward secondary control coping and less oriented toward primary control coping than White Americans. Second, we sought to test the mediational effect of culturally based self-construals in explaining ethnic differences in control coping. Specifically, White Americans' greater orientation toward primary control, relative to Asian Americans, would be mediated by ethnic differences in independent self-construal. Asian Americans' greater orientation toward secondary control, relative to White Americans, would be mediated by ethnic variations in interdependent self-construal.

## METHOD

### PARTICIPANTS

The sample for this study consisted of 158 participants from a Southern California university (i.e., 79 White Americans and 79 Asian Americans). Although participants ranged in age from 17 to 44, most individuals were in their early 20s ( $M = 19.97$ ,  $SD = 2.52$ ;  $Mdn = 20$ ). Of the White American participants, 36 (46%) were male and 43 (54%) were female. Of the Asian American students, 33 (42%) were male and 46 (58%) were female. The sample was relatively evenly distributed along graduating class lines, consisting of 26% freshman, 21% sophomores, 23% juniors, and 30% seniors.

For the White American sample, all participants described themselves as White or Caucasian. All 79 participants were born in the United States and had lived in the United States their entire lives. For the Asian American sample, participants' ethnic composition comprised eight different backgrounds. The majority of the Asian American sample was of East Asian descent (i.e., Chinese, Japanese, and Korean; 80%). The remaining sample included individuals from Southeast Asian backgrounds (20%). Approximately 51% of the Asian American sample was foreign born, and among the foreign-born students, the mean percentage of time lived in the United States was 62% of their lives ( $SD = 29.41$ ; range = 10.00-99.55). Subgroup analyses for the three largest Asian ethnic groups (i.e., Chinese  $n = 37$ ; Korean  $n = 13$ ; Japanese  $n = 13$ ) were conducted on the dependent and independent variables (i.e., primary control, secondary control, independent self-construal, interdependent self-construal). Because results indicated no significant differences among these three groups on these variables, intraethnic analyses were not conducted.

### INSTRUMENTS

The set of questionnaires consisted of a demographic questionnaire and self-report measures, including the Primary-Secondary Control Questionnaire (PSCQ; Seginer, 1998) and the Self-Construal Scale (SCS; Singelis, 1994). Given that Cronbach's alpha coefficients of internal reliability were similar for the White and Asian American samples, the reliability coefficients of the total sample were reported.

*Demographic questionnaire.* Demographic information, including age, gender, ethnic background, place of birth, marital status, academic grade level, academic major, religiosity, and parents' occupation, was collected. A single socioeconomic status (SES) index for the participant's family was derived by computing a mean score of the participant's report of both mother's and father's SES score, using the Nam-Powers Socioeconomic Status Scores (Nam & Terrie, 1988). In cases where one parent's SES score was absent, the score of the present parent was used as the participant's family SES score. The Nam-Powers Socioeconomic Status Scores are based on the 1980 Census data. This measure has demonstrated high levels of reliability and convergent validity with other measures of SES (Miller, 1991).

*PSCQ.* The PSCQ for interpersonal relationships is a 90-item self-report measure designed to assess control orientations in interpersonal situations. This measure was developed by the work of Seginer and her colleagues (Seginer, 1998; Seginer et al., 1993) and is based on the theory of primary and secondary control (Rothbaum et al., 1982; Weisz et al., 1984). Participants were presented with 15 college-life situations involving interpersonal

stressors with peers, parents, and teachers and authorities. Examples of the college-life situations were as follows: “Lately you feel that your best friend is drifting away from you. S/he never phones you and s/he avoids talking to you during the breaks. How would you react?” (peers); “You invite a friend over to your house. It is the first time that your parents meet her/him. S/he does not make a good impression on them and they tell you over and over that they disapprove. What would you do?” (parents); “Your TA [teacher’s assistant] insists that you have not prepared your assignment in a thoughtful and thorough fashion. S/he thinks you should write the assignment over again. How would you react?” (teachers and authorities). Participants were asked to indicate the degree to which they would use a primary control strategy, four types of secondary control strategies (interpretive, vicarious, illusory, and predictive), and a relinquished control strategy (i.e., giving up) to deal with each of these stressful situations on a 5-point Likert-type scale, ranging from 1 (*I’m positive that I would not react this way*) to 5 (*I’m positive that I would react this way*).

As the purpose of the study was to examine an individual’s overall tendency toward coping with interpersonal stressors, we sought to examine control coping across all 15 situations for both the primary control domain and the secondary control domain. The PSCQ was originally developed on Israeli college students. Previous estimates of internal consistency for this scale range from  $\alpha = .43$  to  $\alpha = .80$  (Seginer, 1998; Tsamri, 1999). The PSCQ has also been shown to possess concurrent validity with other primary and secondary control measures (Seginer, 1998).

Because the measure was originally developed on a non-American sample, we determined how applicable it was for assessing coping with interpersonal stressors among U.S. college students. First, the measure was found to be internally consistent for our sample (alpha coefficients of .66 for primary control and .88 for secondary control). Second, we examined the types of situations that were assessed by the PSCQ and compared them with those of studies that have systematically sampled interpersonal situations that are of major concern to college students in the United States. The situations sampled by the PSCQ compared very favorably with those assessed in previous studies (Archer & Lamnin, 1985; Gim, Atkinson, & Whiteley, 1990; Zane, Sue, Hu, & Kwon, 1991). As such, this measure was found to demonstrate content validity for our sample.

**SCS.** The SCS (Singelis, 1994) is a 24-item scale measuring thoughts, feelings, and actions comprising self-construals. The SCS contains two subscales (i.e., independent and interdependent self-construal), with each factor containing 12 items. In the original measure, items were rated on a 7-point Likert-type scale. The present study asked participants to indicate the degree to which they agreed with these items using a 4-point scale ranging from 1 (*no*) to 4 (*yes*), as research indicates that an individual’s ability to differentiate between alternatives often decreases beyond 5 points (Feldt, 1958). Previous estimates of internal reliability indicate a moderately high internal consistency for both independent and interdependent self-construals ( $\alpha = .69$  and  $.73$ , respectively; Singelis, & Brown, 1995). The SCS has also been shown to possess construct and predictive validity (Singelis, 1994). For this study, Cronbach’s alpha coefficients of .56 and .63 were found for the independent and interdependent scales, respectively. Although these coefficients are less than optimal, subsequent analyses indicate that significant relationships were still found between the self-construal variables and control coping.

**TABLE 1**  
**Intercorrelations Between Variables in the Study**

| <i>Measure</i>       | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> |
|----------------------|----------|----------|----------|----------|----------|
| 1. Primary control   | —        | -.44***  | .43***   | -.25***  | .17*     |
| 2. Secondary control | -.39***  | —        | -.35***  | .39***   | -.20**   |
| 3. Independent SC    | .40***   | -.30***  | —        | -.19**   | .13      |
| 4. Interdependent SC | -.21**   | .35***   | -.16*    | —        | .00      |
| 5. SES               | .10      | -.09     | .06      | .06      | —        |
| <i>M</i>             | 3.62     | 2.44     | 2.99     | 2.84     | 67.97    |
| <i>SD</i>            | .45      | .40      | .34      | .35      | 18.90    |

NOTE:  $N = 158$  for the sample. Correlations above the diagonal are zero-order correlations; correlations below the diagonal control for ethnicity. Independent SC = independent self-construal; Interdependent SC = interdependent self-construal.

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

## PROCEDURE

Students were recruited through several methods including classes (9%), campus organizations and events (76%), ads (8%), and personal contact (7%). Participants were tested in groups of 5 to 15 people. The study was introduced to students as a short questionnaire addressing how college students cope with college life. Students were advised about the voluntary nature of their participation and were provided consent forms. Measures were then presented to participants in a randomized order to control for possible order effects. On completion of the questionnaires, most participants were entered into a raffle for participation. The raffle included one \$100 prize, one \$50 prize, and two \$25 prizes. Several participants (i.e., 9%) received extra credit toward their class and were not entered into the raffle.

## RESULTS

### DEMOGRAPHICS

Preliminary analyses indicated that there were no significant differences in age, gender, religiosity, and academic grade level between Asian American and White American participants. Significant differences between these two groups were found in terms of SES, with White Americans ( $M = 73.89$ ,  $SD = 13.76$ ) having a significantly higher SES than their Asian American counterparts ( $M = 62.06$ ,  $SD = 21.41$ ;  $t[156] = -4.13$ ,  $p < .0001$ ).

### DESCRIPTIVES

Table 1 shows the zero-order correlations, partial correlations, means, and standard deviations for the major independent and dependent variables in the study. Because zero-order correlations may be affected by positioning effects of the two ethnic groups, partial correlations were conducted controlling for ethnicity.

All correlations were in the expected direction. Primary control was negatively related to secondary control. This finding is similar to other studies, indicating that these two variables are somewhat negatively correlated, as opposed to being independent constructs (Connor-

**TABLE 2**  
**Ethnic Differences on the Dependent and Independent Variables**

| <i>Measure<sup>a</sup></i> | <i>Asian Americans</i><br>(n = 79) |           | <i>White Americans</i><br>(n = 79) |           | <i>Ethnic Effect</i> |
|----------------------------|------------------------------------|-----------|------------------------------------|-----------|----------------------|
|                            | <i>Adj. M</i>                      | <i>SE</i> | <i>Adj. M</i>                      | <i>SE</i> | <i>F</i>             |
| Primary control            | 3.53                               | .05       | 3.71                               | .05       | 6.00*                |
| Secondary control          | 2.58                               | .04       | 2.30                               | .04       | 20.50****            |
| Independent SC             | 2.93                               | .04       | 3.06                               | .04       | 5.32*                |
| Interdependent SC          | 2.91                               | .04       | 2.78                               | .04       | 5.34*                |

NOTE: Independent SC = independent self-construal; Interdependent SC = interdependent self-construal.

a. All results shown are from an ANCOVA controlling for SES.

\* $p < .05$ . \*\*\*\* $p < .0001$ .

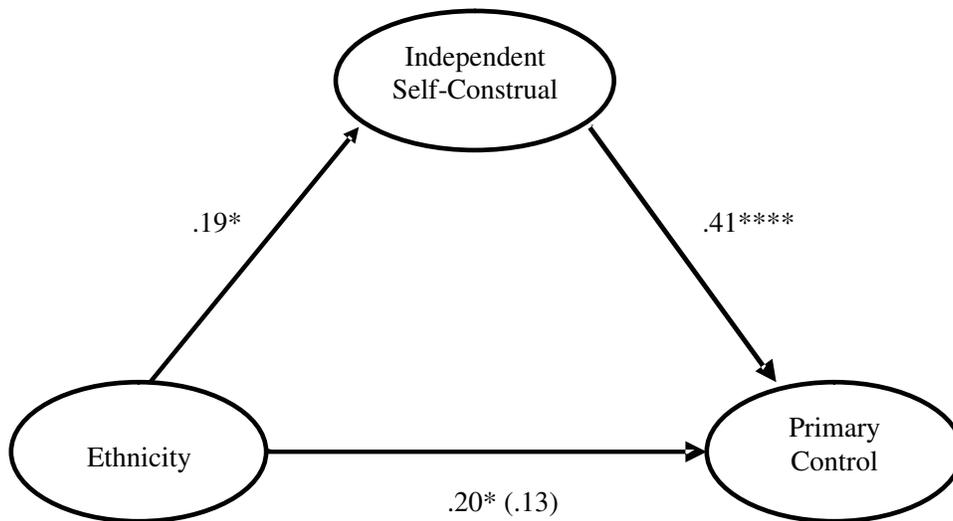
Smith & Compas, 2002; Flammer et al., 1995; Weisz, McCabe, & Dennig, 1994). Additionally, primary control was positively correlated with independent self-construal and negatively correlated with interdependent self-construal. Secondary control was positively correlated with interdependent self-construal and negatively correlated with independent self-construal. These findings are congruent with past studies that have theorized a relationship between primary control and independent and individualistic values, as well as an association between secondary control and interdependent and collectivistic values (Chang et al., 1997; Seginer, 1998; Seginer et al., 1993; Trommsdorff & Essau, 1998; Weisz et al., 1984). However, this is one of the first studies to empirically demonstrate the relationship between both primary and secondary control coping and self-construals.

Because there were ethnic differences on SES, we also wanted to examine whether SES was related to the independent and dependent variables. Zero-order correlations indicated that SES was positively related to primary control and negatively correlated to secondary control.

#### ETHNIC GROUP COMPARISONS

It was hypothesized that significant ethnic differences existed between Asian Americans and White Americans on primary and secondary control and independent and interdependent self-construals. Because SES and ethnicity were both found to be related to primary and secondary control, SES and ethnicity effects may confound each other. To examine whether ethnicity had an effect on the dependent variables that was independent of SES, subsequent analyses controlled for SES.

ANCOVAs were conducted, with ethnicity as the quasi-independent variable and SES as the covariate. The homogeneity of regression assumption was met (regression slopes between SES and primary and secondary control were the same for Whites and Asians), justifying the use of ANCOVAs. Results are shown in Table 2. Significant ethnic differences were found in the expected direction for both primary and secondary control coping. Asian Americans were less oriented toward primary control than White Americans. Asian Americans were more oriented toward secondary control than White Americans. Additionally, for both White and Asian Americans, primary control coping was preferred more than secondary control coping.



**Figure 1: Mediating Effect of Independent Self-Construal on the Relationship Between Ethnicity and Primary Control, Controlling for SES**

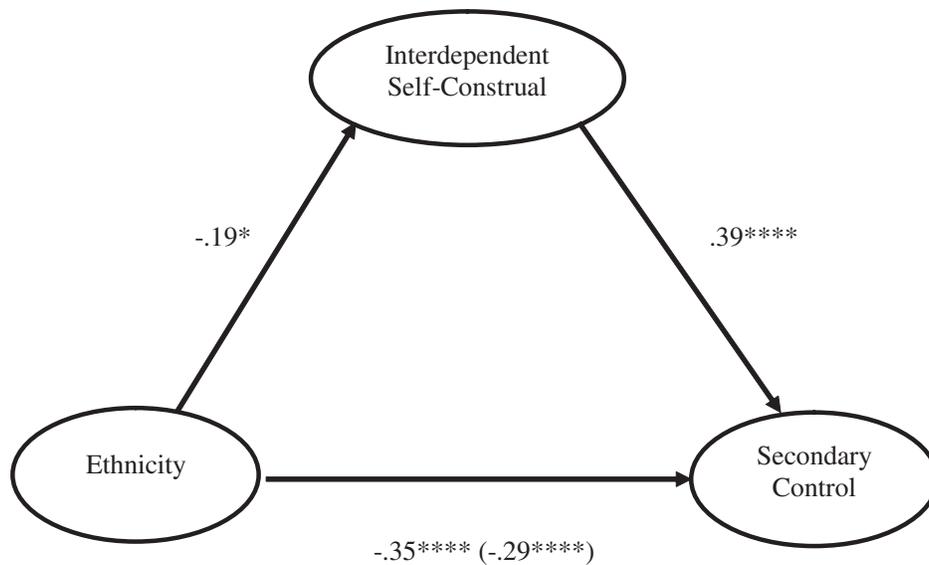
NOTE: Mediating effect is in parentheses. For ethnicity variable, White = 1; Asian = -1.  
\* $p < .05$ . \*\*\*\* $p < .0001$ .

ANCOVAs were also conducted to examine ethnic differences on independent and interdependent self-construals. Assumptions of homogeneity of regressions were met. Ethnic effects were found on independent and interdependent self-construals. Asian Americans were significantly less oriented toward independent self-construal than White Americans. Asian Americans were also significantly more oriented toward interdependent self-construal than White Americans.

#### MEDIATION ANALYSES

Mediation tests were conducted to test whether self-construals significantly mediated the ethnic differences on control coping. A mediator variable is a variable that accounts for a significant portion of variance of the influence that an independent variable has on a dependent variable (Baron & Kenny, 1986). To demonstrate a mediation effect, a series of regression analyses must be conducted and demonstrated to be significant. First, the independent variable must be significantly related to the dependent variable. Next, the independent variable must be shown to be related to the mediator. The mediator variable must also be significantly related to the dependent variable. Finally, the relationship between the independent variable and the dependent variable should be significantly reduced when controlling for the mediator (Baron & Kenny, 1986). For these analyses, SES was included as a control variable. The Sobel test was conducted to determine whether the mediation effects were significant (MacKinnon, Warsi, & Dwyer, 1995; Preacher & Leonardelli, 2001; Sobel, 1982).

As indicated in Figure 1, all conditions were satisfied to conduct the mediation test for primary control. After controlling for SES, ethnicity was significantly related to primary control. White Americans were more oriented toward primary control than Asian Americans. Next, ethnicity was related to independent self-construal. Whites were more oriented toward



**Figure 2: Mediating Effect of Interdependent Self-Construal on the Relationship Between Ethnicity and Secondary Control, Controlling for SES**

NOTE: Mediating effect is in parentheses. For ethnicity variable, White = 1; Asian = -1.

\* $p < .05$ . \*\*\*\* $p < .0001$ .

an independent self-construal than Asian Americans. The relationship between independent self-construal and primary control also was significant. Greater endorsement of an independent self-construal was related to a stronger orientation for primary control. Finally, the relationship between ethnicity and primary control was significantly reduced after controlling for the effect of independent self-construal. This indirect effect was significant ( $z = 2.13$ ,  $p = .03$ ), with independent self-construal significantly mediating the effect of ethnicity on primary control. Greater orientation toward an independent self-construal fully accounted for the greater use of primary control coping among White Americans, in comparison to Asian Americans.

As indicated in Figure 2, all conditions were met to conduct the mediation test for secondary control. After accounting for SES, ethnicity was related to secondary control. Asian Americans were more oriented toward secondary control than White Americans. Second, ethnicity was related to interdependent self-construal. Asian Americans were more oriented toward an interdependent self-construal than White Americans. Third, the relationship between interdependent self-construal and secondary control was significant. Greater endorsement of an interdependent self-construal was associated with a greater orientation toward secondary control. Finally, the relationship between ethnicity and secondary control was significantly reduced after controlling for the effect of interdependent self-construal. This indirect effect was significant ( $z = -2.10$ ,  $p = .04$ ), with interdependent self-construal significantly mediating the effect of ethnicity on secondary control. Greater orientation toward an interdependent self-construal partially accounted for the greater use of secondary control coping among Asian Americans, in comparison to White Americans. It should be noted that although independent self-construal fully mediated the ethnic effect on primary control coping, interdependent self-construal did not fully mediate the ethnic effect on secondary

control coping. Ethnicity still had an influence on secondary control after controlling for interdependent self-construal.

## DISCUSSION

The present study is one of the first to examine whether specific cultural variables can account for ethnic differences in how individuals cope with interpersonal stressors. Ethnic differences in control coping with interpersonal stressors were found, suggesting that ethnicity is related to individual coping goals and should be more often considered in coping research. Specifically, Asian Americans were more oriented toward secondary control, whereas White Americans were more oriented toward primary control. These findings replicated past studies of general coping patterns. They indicated that in interpersonal contexts, individuals from Asian backgrounds engage in more secondary control coping than those from Western backgrounds (Flammer et al., 1995; McCarty et al., 1999; Oerter et al., 1996; Peng, 1995; Seginer et al., 1993, Experiment 1; Trommsdorff & Essau, 1998; Trommsdorff & Friedlmeier, 1993).

More importantly, the study's findings strongly suggest that ethnic differences in coping are related to important cultural variations in self-construals. Independent self-construal fully accounted for the White-Asian ethnic difference in primary control. This mediation effect suggests that White Americans' cultural emphasis on independence and autonomy may foster their use of primary control. In particular, persons with strong independent self-construals are more oriented toward mastering and directly controlling the environment to fit their own personal needs and desires (Markus & Kitayama, 1991). As such, this type of self-construal is congruent with primary control coping that involves efforts to align the external environment with one's goals (Heckhausen & Schulz, 1995; Morling & Fiske, 1999).

Interdependent self-construal partially mediated the ethnic effect on secondary control. This mediation effect suggests that Asian Americans' cultural values for mutual dependence and connectedness with others may foster their use of secondary control. Persons with strong interdependent self-construals emphasize a relational self in which a person's self-definition and self-concept is predicated on the nature and quality of his or her relationships with others. In this way, an individual's orientation toward an interdependent self-construal may foster secondary control coping goals that involve an individual's attempts to accommodate or adapt to existing circumstances (Heckhausen & Schulz, 1995; Morling & Fiske, 1999).

The finding that interdependent self-construal did not fully mediate the ethnic difference on secondary control coping suggests that there may be other important factors that help explain this ethnic effect. One factor that may contribute to ethnic differences in control coping is structural barriers in the environment. As a minority group in the United States, Asian Americans have differential societal privileges and power (Uba, 1994). They struggle with gaining equality and recognition in a dominant White society while facing experiences of discrimination and oppression (Phinney, 1996). Asian Americans who face oppressive conditions that are difficult to change may regulate themselves by using more secondary control coping than White Americans. Thus, individuals' use of secondary control may also be used for compensatory purposes, when primary control is less attainable (Heckhausen & Schulz, 1995). Although our study controlled for SES, a more proximal measure of structural barriers, such as direct experiences with discrimination, may be more sensitive in detecting how structural factors contribute to ethnic differences in control.

Finally, this study found that for both ethnic groups, primary control coping goals were more preferred than secondary control coping goals. This finding is consistent with Heckhausen and Schulz's (1995) theory on the primacy of primary control, which argues that primary control may be the chief mode of control for all human beings and invariant across all cultures. Although cultures vary in the extent to which they reinforce primary control, primary control is thought to be universally necessary for individuals to achieve their goals. Alternatively, primary control may have been preferred for both samples in this study because Asian and White Americans both live in the United States and are influenced by the U.S. cultural context that emphasizes individualist values, including primary control. In fact, two cross-national studies suggest the primacy of primary control is less evident for individuals in collectivist countries than for individuals in individualist countries (Flammer et al., 1996; Seginer et al., 1993). Further cross-national studies are needed to determine whether primary control is indeed primary across all cultures.

The findings indicate that self-construals are an important mechanism underlying ethnic differences in control coping. However, they should be considered within the context of the study's limitations. First, the present study was correlational in nature. Although we suggest that self-construals influence control coping, it is possible that being more oriented toward a particular control orientation fosters a certain appraisal of the self. Further longitudinal studies need to be conducted to demonstrate a causal link between self-construal and control coping. A second limitation involves the sampling of college students. Needless to say, this sample may not be representative of the general population of Asian and White Americans (Sears, 1986). Especially for our Asian American sample, participants may be more acculturated than community members. Okazaki and Sue (1998) have argued that the use of ethnic minority college students tends to make researchers underestimate the psychosocial diversity of the general community population, especially with regard to values and attitudes. The generalizability of this study beyond other populations is unknown. It should be noted that ethnic differences were still found in our study. Thus, the ethnic effects may be muted and suggestive of stronger effects in a community sample.

Finally, the study reported somewhat low reliabilities for the SCS. These reliability estimates may have been lower for this study's sample because the original measure was normed on a sample from the University of Hawaii (Singelis, 1994). This sample may not be representative of the typical White American or Asian American student from the U.S. mainland, as the cultural milieu in Hawaii differs from that of the mainland. Alternatively, the lower reliabilities may reflect the measure itself. In fact, the alpha coefficients in this study are similar to reliability estimates for this measure found in recent empirical studies with similar samples (i.e., White and Asian American college students; Norasakkunkit & Kalick, 2002; Okazaki, 2000). The SCS may need to be reevaluated and augmented to include items that increase the reliability of the measure. Despite these lower alpha coefficients, this study still found self-construal effects. Thus, the results may have been an underestimation in the strength of self-construal effects on control coping.

How individuals cope with stress has been of long-standing interest to health researchers. Although there has been significant interest in examining both personality characteristics and environmental factors that may be related to individual coping processes (Carver, Scheier, & Weintraub, 1989; Folkman & Lazarus, 1980; Moos & Swindle, 1990), less research has been devoted to examining the role of culture in the coping process of interpersonal stressors. Previous research has implicated cultural explanations for ethnic effects in coping. However, this study is one of the first to directly test how cultural variations can

explain ethnic differences in coping. Differences in self-construals were found to be an important factor in explaining ethnic differences in control coping.

This study raises specific questions regarding other factors that may play an important role in understanding why individuals from different cultural backgrounds cope differently with interpersonal stressors. Future research may seek to compare the self-construal hypothesis to the structural hypothesis in explaining ethnic differences in control coping. Individuals who develop certain coping patterns because of self-oriented factors may react to stress differently than individuals who develop certain coping strategies because of structural barriers in the environment. A more specific analysis of the underlying mechanisms for ethnic differences in coping will help researchers to better understand the coping and adjustment experiences of ethnic minority individuals.

## REFERENCES

- Abbey, A., Abramis, D. J., & Caplan, R. D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Social Psychology*, *6*, 111-129.
- Archer, J., & Lamnin, A. (1985). An investigation of personal and academic stressors on college campuses. *Journal of College Student Personnel*, *26*, 2210-215.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.
- Benedict, R. F. (1946). *Patterns of culture*. New York: Penguin.
- Betancourt, H., & Lopez, S. R. (1993). The study of culture, ethnicity, and race in American psychology. *American Psychologist*, *48*, 629-637.
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, *57*, 808-818.
- Carpenter, B. N., & Scott, S. M. (1992). Interpersonal aspects of coping. In B. N. Carpenter (Ed.), *Personal coping: Theory, research, and application* (pp. 93-110). New York: Praeger.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*, 267-283.
- Chang, W. C., Chua, W. L., & Toh, Y. (1997). The concept of psychological control in the Asian context. In K. Leung, U. Kim, S. Yamaguchi, & Y. Kashima (Eds.), *Progress in Asian social psychology* (pp. 95-118). New York: John Wiley.
- Cohen, S., Frank, E., Doyle, W. J., Skoner, D. P., Rabin, B. S., & Gwaltney, J. M., Jr. (1998). Types of stressors that increase susceptibility to the common cold in health adults. *Health Psychology*, *17*, 214-223.
- Connor-Smith, J. K., & Compas, B. E. (2002). Vulnerability to social stress: Coping as a mediator or moderator of sociotropy and symptoms of anxiety and depression. *Cognitive Therapy and Research*, *26*, 39-55.
- Cross, S. (1995). Self-construals, coping, and stress in cross-cultural adaptation. *Journal of Cross-Cultural Psychology*, *26*, 673-697.
- Essau, C., & Trommsdorff, G. (1996). Coping with university-related problems: A cross-cultural comparison. *Journal of Cross-Cultural Psychology*, *27*, 315-328.
- Ewart, C., Taylor, C. B., Kraemer, H. C., & Agras, W. S. (1991). High blood pressure and marital discord: Not being nasty matters more than being nice. *Health Psychology*, *10*, 155-163.
- Feldt, L. S. (1958). A comparison of the precision of three experimental designs employing a concomitant variable. *Psychometrika*, *23*, 335-353.
- Flammer, A., Ito, T., Luthi, R., Plaschy, N., Reber, R., Zurbriggen, L., et al. (1995). Coping with control-failure in Japanese and Swiss adolescents. *Swiss Journal of Psychology*, *54*, 277-288.
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health & Social Behavior*, *21*, 219-239.
- Gim, R. H., Atkinson, D. R., & Whiteley, S. (1990). Asian-American acculturation, severity of concerns, and willingness to see a counselor. *Journal of Counseling Psychology*, *37*, 281-285.
- Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review*, *102*, 284-304.
- Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, *106*, 766-794.
- Herbert, T. B., & Cohen, S. (1993). Stress and immunity in humans: A meta-analytic review. *Psychosomatic Medicine*, *55*, 364-379.
- Hieshima, J. A., & Schneider, B. (1994). Intergenerational effects on the cultural and cognitive socialization of third- and fourth-generation Japanese Americans. *Journal of Applied Developmental Psychology*, *15*, 319-327.

- Kiecolt-Glaser, J. K., Malarkey, W. B., Chee, M., Newton, T., Cacioppo, J. T., Mao, H. Y., et al. (1993). Negative behavior during marital conflict is associated with immunological down-regulation. *Psychosomatic Medicine*, *55*, 395-409.
- Kim, B. S. K., Atkinson, D. R., & Yang, P. H. (1999). The Asian values scale: Development, factor analysis, validation, and reliability. *Journal of Counseling Psychology*, *46*, 342-352.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, *30*, 41-62.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224-253.
- Marsella, A. J., & Dash-Scheuer, A. (1988). Coping, culture, and healthy human development: A research and conceptual overview. In P. R. Dasen, J. W. Berry, & N. Sartorius (Eds.), *Health and cross-cultural psychology: Toward applications* (pp. 162-178). Newbury Park, CA: Sage.
- McCarty, C. A., Weisz, J. R., Wanitromanee, K., Eastman, K., Suwanlert, S., Chaiyasit, W., et al. (1999). Culture, coping, and context: Primary and secondary control among Thai and American youth. *Journal of Child Psychology and Psychiatry*, *40*, 809-818.
- McCrae, R. R. (1984). Situational determinants of coping responses: Loss, threat, and challenge. *Journal of Personality and Social Psychology*, *46*, 919-928.
- Miller, D. C. (1991). Social status. In D. C. Miller (Ed.), *Handbook of research design and social measurement* (5th ed., pp. 327-365). Newbury Park, CA: Sage.
- Moos, R. H., & Swindle, R. W. (1990). Person-environment transactions and the stressor-appraisal-coping process. *Psychological Inquiry*, *1*, 30-32.
- Morling, B., & Fiske, S. T. (1999). Defining and measuring harmony control. *Journal of Research in Personality*, *33*, 379-414.
- Nam, C. B., & Terrie, E. W. (1988). *1980 based Nam-Powers occupational status scores* (Working paper series 88-148). Tallahassee: Florida State University Center for the Study of Population.
- Norasakkunkit, V., & Kalick, S. M. (2002). Culture, ethnicity, and emotional distress measures: The role of self-construal and self-enhancement. *Journal of Cross-Cultural Psychology*, *33*, 56-70.
- Oerter, R., Oerter, R., Agostiani, H., Kim, H. O., & Wibowo, S. (1996). The concept of human nature in East Asia: Etic and emic characteristics. *Culture & Psychology*, *2*, 9-51.
- Okazaki, S. (2000). Asian American and White American differences on affective distress symptoms: Do symptom reports differ across reporting methods? *Journal of Cross-Cultural Psychology*, *31*, 603-625.
- Okazaki, S., & Sue, S. (1998). Methodological issues in assessment research with ethnic minorities. In A. E. Kazdin (Ed.), *Methodological issues & strategies in clinical research* (2nd ed., pp. 263-281). Washington, DC: American Psychological Association.
- Peng, Y. (1995). Primary and secondary control in American and Chinese-American adults: Cross-cultural and life-span developmental perspectives. *Dissertation Abstracts International*, *5*, 7B. (UMI No. AAM9417712)
- Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean? *American Psychologist*, *9*, 918-927.
- Phinney, J. S., & Landin, J. (1998). Research paradigms for studying ethnic minority families within and across groups. In V. C. McLoyd & L. Steinberg (Eds.), *Studying minority adolescents: Conceptual, methodological, and theoretical issues* (pp. 89-109). Hillsdale, NJ: Lawrence Erlbaum.
- Preacher, K. J., & Leonardelli, G. J. (2001). *Calculation for the Sobel test*. Retrieved October 25, 2002, from <http://quantrm2.psy.ohio-state.edu/kris/sobel/sobel.htm>
- Rook, K. (1984). The negative side of social interaction. *Journal of Personality and Social Psychology*, *46*, 1097-1118.
- Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality & Social Psychology*, *42*, 5-37.
- Sears, D. O. (1986). College sophomores in the laboratory: Influence of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology*, *51*, 515-530.
- Seginer, R. (1998). Primary and secondary control in interpersonal and cultural settings. In G. Trommsdorff, W. Friedlmeier, & H. Kornadt (Eds.), *Japan in transition: Sociological and psychological aspects* (pp. 183-197). Berlin, Germany: Pabst Science.
- Seginer, R., Trommsdorff, G., & Essau, C. (1993). Adolescent control beliefs: Cross-cultural variations of primary and secondary orientations. *International Journal of Behavioral Development*, *16*, 243-260.
- Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality & Social Psychology Bulletin*, *20*, 580-591.
- Singelis, T. M., & Brown, W. J. (1995). Culture, self, and collectivist communication: Linking culture to individual behavior. *Human Communication Research*, *21*, 354-389.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology: 1982* (pp. 290-312). San Francisco: Jossey-Bass.
- Sodowsky, G. R., Kwan, K. K., & Pannu, R. (1995). Ethnic identity of Asians in the United States. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 123-154). Thousand Oaks, CA: Sage.

- Szapocznik, J., Scopetta, M. A., Kurtines, W., & Arandale, M. A. (1978). Theory and measurement of acculturation. *Interamerican Journal of Psychology, 12*, 113-120.
- Tanaka, J. S., Ebreo, A., Linn, N., & Morera, O. F. (1998). Research methods: The construct validity of self-identity and its psychological implications. In L. C. Lee & N. W. S. Zane (Eds.), *Handbook of Asian American psychology* (pp. 21-82). Thousand Oaks, CA: Sage.
- Trommsdorff, G., & Essau, C. A. (1998). Japanese and German adolescents' control orientation: A cross-cultural study. In G. Trommsdorff, W. Friedlmeier, & H. Kornadt (Eds.), *Japan in transition: Sociological and psychological aspects* (pp. 198-211). Berlin, Germany: Pabst Science.
- Trommsdorff, G., & Friedlmeier, W. (1993). Control and responsiveness in Japanese and German mother-child interactions. *Early Development and Parenting, 2*, 65-78.
- Tsamri, R. I. (1999). *Primary and secondary control in interpersonal relationships: Is it context dependent?* Unpublished master's thesis, University of Haifa, Haifa, Israel.
- Uba, L. (1994). *Asian Americans: Personality patterns, identity, and mental health*. New York: Guilford.
- Walen, H. R., & Lachman, M. E. (2000). Social support and strain from partner, family, and friends: Costs and benefits for men and women in adulthood. *Journal of Social and Personal Relationships, 17*, 5-30.
- Weisz, J. R., McCabe, M. A., & Dennig, M. D. (1994). Primary and secondary control among children undergoing medical procedures: Adjustment as a function of coping style. *Journal of Consulting & Clinical Psychology, 62*, 324-332.
- Weisz, J. R., Rothbaum, F. M., & Blackburn, T. C. (1984). Standing out and standing in: The psychology of control in America and Japan. *American Psychologist, 39*, 955-969.
- Zane, N., Sue, S., Hu, L., & Kwon, J. (1991). Asian American assertion: A social learning analysis of cultural differences. *Journal of Counseling Psychology, 38*, 63-67.

*Amy G. Lam, Ph.D., is a postdoctoral fellow in the Health Psychology Program at the University of California, San Francisco. The major focus of her research has been to examine adaptive and maladaptive behaviors, with specific attention to relatively unstudied cultural influences. Her present research involves the examination of cultural factors related to sexual health behaviors among Asian American young adults.*

*Nolan W. S. Zane, Ph.D., is director of the National Research Center on Asian American Mental Health and professor of psychology and Asian American studies at the University of California, Davis. His research interests include outcomes of culturally oriented treatments for ethnic minority clients, change mechanisms in mental health interventions, program evaluation of behavior-change programs, and the cultural determinants of addictive behaviors among Asians.*