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Development of the Cross-Cultural Coping Scale: Collective, Avoidance, and Engagement Coping

Ben C. H. Kuo, Gargi Roysircar, and Ian R. Newby-Clark

The Cross-Cultural Coping Scale, a scenario-based instrument, was developed in 3 studies. Exploratory factor analyses with Chinese Canadian adolescents (N = 506) showed a 3-factor structure: Collective, Avoidance, and Engagement Coping. The model was reproduced very well in a confirmatory factor analysis. Participant acculturation, self-construals, and religious affiliations were related to coping dimensions.

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When in stress, individuals from North America may heed the advice to "pick your self up by your own bootstraps" or "take the bull by the horns." According to these North American idioms, the individual is the sole agent in the coping process. In contrast, there is increasing evidence that individuals from collectivistic societies, such as Asians, engage in coping that reflects their interdependent tendencies (Lam & Zane, 2004). For example, a stressed Chinese individual may take comfort in such aphorisms as "riding in the same boat," "sharing a common destiny," and "brotherhood in adversity." In Hindu and Buddhist philosophy, when the internal dialogue shifts from "What's in it for me?" to "How can I help?" the individual goes beyond the ego into the domain of social duty or *dharma*. These North American and Asian sayings reflect differences in the psychology of Westerners and Easterners along the lines of independent–interdependent self-construals (Markus & Kitayama, 1991). Studies on Asian self-construal (Cousins, 1989; Cross, 1995; Yeh, Inose, Kobori, & Chang, 2001) suggest a link between interdependent self-construal and collectivistic coping. In addition, relationships may exist between the acculturation of Asians to North American societies and their ways of coping (Roysircar & Maestas, 2002). We present the development of a coping scale that is conceptualized within the constructs of collectivism, self-construal, and acculturation.

Some authors (e.g., Dunahoo, Hobfoll, Monnier, Hulsizer, & Johnson, 1998) argued that coping research does not capture the diversity of coping among culturally diverse populations. Of late, preliminary findings suggest distinct preferences for self-directed (individualistic) versus other-directed (collectivistic) coping (Yeh, Chang, Arora, Kim, & Xin, 2003). The latter is exemplified in Asian individuals seeking familial guidance rather than professional counseling at a time of crisis (Yeh & Wang, 2000). There is a need to measure the extent to which culturally diverse individuals use collectivistic and individualistic coping and how these vary along acculturation levels and self-construals.

CULTURE AND COPING

Studies in Asian countries and in the United States suggest multidimensionality in Asian coping, but these studies universally include aspects of collectivism and a values orientation.

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Asian Internationals

Zheng and Berry (1991) reported that Chinese international students in Canada were more actively engaged in coping (such as implementing tension reduction and information-seeking strategies) and were less passive (such as engaging in wishful thinking and self-blame) than were non-Chinese Canadians. Neill and Proeve (2000) used assessment items that referred to others as resources, along with items that focused on the self. Neill and Proeve found that Southeast Asians used more "reference to others" coping strategies than did their Australian counterparts. Shek and Cheung (1990) found that working parents in Hong Kong coped by relying on themselves as well as by seeking help from others. Hwang (1979) found that Chinese men in Taiwan whose coping style was more collectivistic reported lower interpersonal stress and less symptomatology than did Chinese men who used more self-assertion. Both Anglo-American and Japanese study participants (Kawanishi, 1995) agreed that successful coping depends mostly on one's own effort. However, Japanese participants also agreed much more strongly than did White Americans that successful coping depends mostly on luck and that stressful events are brought on by bad luck. Thus, internal attributions were not exclusive of external attributions, and vice versa (Kawanishi, 1995).

Asian Americans

Lam and Zane (2004) found that Asian American college students coped with interpersonal stressors by using more strategies to change themselves to adjust to others and fewer strategies to change the environment or stressors than did their White American counterparts. These differences between Asian American and White American coping patterns were mediated by divergent self-construals: interdependence of Asians and independence of Whites. Although Japanese Americans were more likely than were White Americans to view mental illness as having social causes, they wanted to resolve the problems on their own, possibly with help from family and friends (Narikiyo & Kameoka, 1992).

One response to the need for a cultural understanding of coping is our development of the Cross-Cultural Coping Scale (CCCS). In designing the CCCS, we have incorporated methodological innovations by (a) conceptualizing and assessing coping along the dimensions of individualism and collectivism, (b) differentiating coping strategies within these two dimensions, (c) adopting scenario-based assessment, and (d) proposing a measure of coping for respondents ranging in age from adolescents to young adults and from diverse Asian groups. In this article, we detail the development of the CCCS in three studies and a pilot study.

STUDY 1: DEVELOPMENT OF THE CCCS AND EXPLORATORY FACTOR ANALYSIS (EFA)

Immigrant children and adolescents are the fastest growing segment of North America's child population (Zhou, 1997). Yet they remain one of the least studied populations (Aronowitz, 1992). In 2001, 34% of the entire Chinese Canadian population, which consisted predominantly of immigrants, were children and adolescents under the age of 24 years (Statistics Canada, 2001). By examining coping patterns of Chinese Canadian adolescents, we hoped to develop the CCCS, while also trying to fill in the gap in research on Asian immigrant youth. We also expected the large population of Chinese youth to be diversely acculturated (B. C. H. Kuo & Roysircar, 2004).

Coping and Acculturation

Acculturation has been found to be a critical variable in differentiating immigrants (Sodowsky, Lai, & Plake, 1991) and their patterns of coping (Frey & Roysircar, 2006; Mena, Padilla, &

Maldonado, 1987). Thus, acculturation appeared to be a relevant construct for testing the criterion validity of the CCCS. In Canada and the United States, there exists a dominant culture with a set of national values, behaviors, and social practices that foreign-born individuals are expected to adopt (Roysircar, 2004b). Enforced assimilation into the dominant culture increases stress for the foreign-born or children of immigrants whose values and behaviors observed at home are different from those of the host society (Roysircar-Sodowsky & Frey, 2003). Evidence has pointed to acculturation differences between generations and immigrant statuses (Sodowsky et al., 1991). Thus, newly arrived immigrants and international students can be expected to have lower acculturation scores than will those who were born in Canada or the United States (B. C. H. Kuo & Roysircar, 2004; Sodowsky & Plake, 1992).

Development of the CCCS Items

To assess coping as a cultural construct, we first generated the items for the CCCS through a review of the literature on general coping, cross-cultural coping, and ethnic minority coping (Hobfoll, 1998). Accordingly, we reviewed frequently used coping measures, including the Ways of Coping Checklist (Folkman & Lazarus, 1985) and the Adolescent Coping Scale (Frydenberg & Lewis, 1993), to identify items that focused on the personal thoughts and feelings of the person who is coping with a situation. We developed items suggesting collectivistic coping by reviewing cross-cultural studies (e.g., Mena et al., 1987; Shek & Cheung, 1990) and the literature on Asian values (e.g., Kim, Atkinson, & Yang, 1999; Sodowsky, Kwan, & Pannu, 1995).

We developed an initial pool of 55 items (30 individualistic and 25 collectivistic items). Next, the first and second authors judged the content validity of the items independently, based on their counseling practice with Asian immigrants and internationals, research on Asians in the United States, and their lives within Asian communities in Canada and the United States. Then, the initial items were submitted to a measurement expert and an anthropologist for peer feedback. A pilot study was conducted with 7 Chinese Americans between the ages of 11 and 15 years who were students in a Chinese language school in a midwestern U.S. city. They answered the initial coping items. Then, in a focus group, they discussed the items' face validity and readability. On the basis of the focus group feedback, expert consultation, and the authors' assessment and research experience, a total of 29 items were retained for the initial CCCS. We reduced the CCCS items by more than 50% to eliminate ambiguities, promote the measure's readability for respondents whose first language is not English, and develop a brief measure. (It seemed sensible to develop a brief measure so that respondents would remember a presented scenario.)

There were 10 items depicting individualistic responses: (a) direct action, (b) persistence, (c) planning, (d) positive thinking, (e) recreation activities, (f) acceptance, (g) distractions, (h) disengagement, (i) thought blocking, and (j) wishful thinking. There were 19 items depicting collectivistic responses such as (a) group-referenced strategies, (b) interpersonal resources, and (c) values-based responses. Values-based responses included conformity to norms, family honor (e.g., filial piety), interdependence, social harmony (e.g., interpersonal conflict reduction), respect for hierarchy, emotional control, humility, and substitution of negative thoughts with concrete action.

Scenario-Based Coping Assessment

The use of hypothetical scenarios for Asian respondents has been shown to be more useful than the ranking and rating of attitudinal scales because scenario-based assessment minimizes effects of cultural and linguistic differences (Peng, Nisbett, & Wong, 1997). Scenarios illustrating values are superior to general inquiries about a person's values and attitudes (Liem, Lim, & Liem, 2000), and they increase the uniformity of the stimuli to which participants respond (Schwarzer & Schwarzer, 1996). The CCCS assesses coping by presenting

specific, stress-evoking scenarios and asking respondents how they would cope in those situations. No coping study that we know of has adopted such an approach in measuring coping in Asians.

CCCS Scenarios

Two scenarios exemplified acculturative stress situations that Asian youth commonly experience (Sodowsky et al., 1995; Sodowsky & Lai, 1997). The first scenario depicted an intergenerational conflict with parents over dating (see Lee, 1997), and the second scenario portrayed being a target of racial comments (Ying, Lee, & Tsai, 2000). The scenarios were as follows.

> *Intergenerational conflict (IC)*. You and your parents have an argument over dating. You want to go out on a date with someone you really like, but your parents do not approve dating. They hold more traditional Chinese values and think that you are too young to date. You are frustrated because your Caucasian Canadian friends are allowed to date by their parents. You believe that it is normal for teenagers to date. If this happens to you, how likely would you [be to] use the following methods to deal with this situation?

> *Racial tension (RT)*. Lately in school, you have been hearing some negative remarks about Chinese people that are made by some Caucasian Canadian students. Caucasian students have been poking fun at Chinese students and making stereotypical and insulting comments about what Chinese people are like and what they do. These racist behaviors of Caucasian students make you feel embarrassed and irritated because you are of Chinese origin. How likely do the following statements describe the ways in which you would handle the situation?

Hypotheses

Factor structure of the CCCS. On the basis of our literature review, we hypothesized that the factor structure of the CCCS would reflect collectivistic and individualistic coping strategies. We expected collectivistic coping to reflect group-referencing reactions and behaviors oriented toward others. Consistent with the current literature (Parker & Endler, 1996), we expected individualistic coping to take one of two forms: (a) confronting stressors (problem-focused coping) and (b) averting stressors (avoidance coping). However, we need to point out that at this stage the first two authors—who are Chinese and Asian Indian, respectively—were not fully convinced that avoidant behaviors are individualistically motivated and not a fearful response to Asian in-groupism. We also noted that nonaction—assumed to be individualistic, emotion-focused coping—might be intrinsic to Asian cultures as a form of forbearance, restraint, or fatalism (Kim et al., 1999; Sodowsky et al., 1995).

  Coping strategies and acculturation. With an eye toward finding criterion-related validity for the CCCS, we predicted acculturation differences among three cohorts of Chinese youth. The three cohorts were defined as follows. The Chinese Canadian cohort consisted of adolescents who were born in Canada, as well as those who immigrated to Canada prior to completing elementary school. The late-entry Chinese immigrant(s) cohort consisted of foreign-born, first-generation immigrants who arrived in Canada after completing elementary school. This distinction was made because age 12, which typically coincides with the last year of elementary school, indicates a demarcation between childhood and adolescence for immigrants (Tsai, Ying, & Lee, 2000). The Chinese sojourner(s) cohort consisted of nonimmigrant youth, most holding student visas to study in Canada. We expected Chinese Canadians to be more acculturated than immigrants and immigrants to be more acculturated than sojourners. If such acculturation differences were to be found, we hypothesized that less acculturated adolescents would report more collectivistic coping than would those who were more acculturated.

It was less clear, however, what to expect for individualistic coping. It might be expected that individualistic coping would be practiced to a greater extent by more acculturated individuals. Yet problem-focused coping, an individual-focused strategy, has been found to be prevalent among less acculturated immigrants and sojourners (e.g., Mena et al., 1987; Zheng & Berry, 1991). It was not clear whether more or less acculturated individuals would report more or fewer avoidance-coping strategies.

STUDY 1 METHOD

Study 1 Participants

Adolescents were recruited through Chinese/Taiwanese educational, social, community, and religious organizations and through the first author's personal contacts in the greater Toronto, Canada, area. Participants who were between 12 and 19 years of age provided signed assent forms and parent/guardian bilingual (English and Chinese) consent forms. They either responded in a school or an organization where the CCCS was administered, or they completed the questionnaire at home and sent it back in a stamped, return-addressed envelope. Of the 770 questionnaires given out, there was a 68% return rate, with 520 completed questionnaires, out of which 506 were usable.

The sample included 284 (56%) Chinese Canadians, 106 (21%) Chinese immigrants, and 108 (21%) Chinese sojourners. Eight (2%) participants did not report cohort status and were excluded. Male and female participants represented 54% ($n = 274$) and 46% ($n = 232$) of the sample, respectively. There was no significant difference in sex representation across the three cohort groups, $\chi^2(2, N = 497) = .74$, $p > .05$. No significant sex effect was found on coping, $t(468) = -1.71$, $p > .05$. However, male participants were found to be more acculturated than were female participants, $t(478) = 1.15$, $p < .01$.

The mean age of participants in the sample was 16.5 years ($SD = 1.90$). Chinese Canadians were the youngest group ($M = 15.7$, $SD = 1.78$), followed by immigrants ($M = 17.2$, $SD = 1.56$), and then sojourners ($M = 18.0$, $SD = 1.24$). Sojourners were the most recent arrivals to Canada ($M = 1.17$ years in the country, $SD = 0.93$), followed by immigrants ($M = 3.59$, $SD = 2.57$) and then by Chinese Canadians ($M = 10.37$, $SD = 5.04$).

Study 1 Measures

Minority–Majority Relations Scale (MMRS; Sodowsky et al., 1991). Although four types of acculturation adaptations have been proposed from a bilinear/bidirectional model of acculturation (Berry, 1980), only relative degrees of acculturation were of consideration to study the CCCS's criterion correlates; that is, acculturation was measured by the MMRS along a continuum, with individuals assessed to be more acculturated or less acculturated. Ryder, Alden, and Paulhus (2000) and Roysircar-Sodowsky and Maestas (2000) discussed the concept that, in measuring acculturation, cultural adaptation to the host society (acculturation) is independent of cultural identification with one's culture of origin (ethnic identity) and, therefore, acculturation may be appropriately measured along one continuum. The MMRS is one such nonorthogonal measure of ethnic minorities' acculturation levels.

The MMRS has strong criterion-related validity. The MMRS showed acculturation differences by sociocultural variables (generational status, voluntary immigration vs. political asylum, and ethnic subgroups) for Hispanics/Latinos and Asian Americans (Sodowsky et al., 1991). MMRS scores were shown to be related to the cultural adjustment difficulties of Asian Americans (Sodowsky & Lai, 1997). An alternative form of the MMRS showed that acculturation scores distinguished East Asian and South Asian international students in their respective use of help resources (Frey & Roysircar, 2006). Native American

and African American women's MMRS scores were shown to be related to eating attitudes, body weight, and perceptions of beauty (Osvold & Sodowsky, 1995).

The MMRS consists of 43 items that measure three factors: Perceived Prejudice, Social Customs, and Language Usage. For the instrument development sample of Asian and Hispanic American college students (Sodowsky et al., 1991), Cronbach's alphas for the MMRS were .92, .89, and .94 for the Perceived Prejudice, Social Customs, and Language Usage subscales, respectively, and .95 for the full scale. Because of differences in race relations in Canada and the United States, the Perceived Prejudice subscale was not included in the current study. Only the Social Customs (12 items) and Language Usage (6 items) subscales of the MMRS were used. Furthermore, the terms *American* and *the U.S.* were replaced with *Canadian* and *Canada*, respectively. For 6 items, participants indicate the extent to which they agree or disagree with statements (e.g., "I adhere strictly to my ethnic cultural values") using a 6-point Likert-type scale, where 1 = *disagree strongly* and 6 = *agree strongly*. For the remaining 12 items, participants complete sentences (e.g., "When I think, my idea and images best operate . . .") by selecting from a list of five options that reflect varying degrees of acculturation. In the current study, responses were converted to a common metric by using weighted scores and scored such that higher values indicated more acculturation. The modified MMRS (18 items) was internally consistent ($\alpha = .89$) for the current study.

CCCS. The CCCS at this stage consisted of 29 items. On a 6-point Likert scale ranging from 1 *(a very inaccurate description of what I would do)* to 6 *(a very accurate description of what I would do)*, respondents indicated the extent to which the items accurately described their coping strategies.

STUDY 1 RESULTS

EFA of the CCCS

An EFA using principal components with an oblique rotation was conducted on all 29 CCCS items for the IC scenario. A criterion of .40 and above item loading was applied as the cutoff for item retention. A three-factor solution emerged according to the eigenvalue greater-than-one rule and the scree plot (31% of total variance accounted for). Inspection of the pattern matrix revealed that, of the 29 original items, 20 items had absolute loadings of .40 or higher on one, and only one, conceptually similar factor (see Table 1 for the 20 loaded items). Thus, a total of 20 items were retained for the CCCS.

We labeled the first factor Collective Coping because the items refer to obtaining guidance and support from one's family and coethnic group, and the items also apply to the norms of one's culture and ethnic group. We labeled the second factor Avoidance Coping because the items refer to attempts to physically or emotionally separate oneself from a stressor. We labeled the third factor Engagement Coping because the items refer to direct actions and personal adjustments on the part of the individual in the face of stress.

Subsequently, we conducted another EFA with participants' coping responses to the RT scenario. Despite a different stress scenario, a highly similar factor structure emerged, with 43% of total variance accounted for by the three coping factors. (In the interest of space, readers are referred to the first author to obtain the list of factor loadings for the RT scenario in Study 1.)

Criterion-Related Validity of the CCCS With Cohort Groups

An analysis of variance (ANOVA) on mean MMRS subscale scores revealed that the cohorts differed, $F(2, 495) = 78.04$, $p < .001$. As can be seen in the first row of Table 2, Chinese Canadians had significantly higher acculturation scores than did immigrants and sojourners.

Collective Coping. For each scenario, the Collective Coping subscale items were combined into an index ($\alpha = .74$ and $\alpha = .78$ for the IC and the RT scenarios, respectively). As hypothesized, an ANOVA showed significant cohort differences for both scenarios (both

TABLE 1

Results of the Exploratory Factor Analysis of the Cross-Cultural Coping Scale for the Intergenerational Conflict Scenario in Study 1

Item	Factor Loading		
	Collective	Avoidance	Engagement
Collective Coping			
Parent parcel[a]			
I talk with and get help from one or both of my parents.	**.71**	−.01	−.13
I deal with the problem by doing what my parents may do or say with regard to the situation.	**.60**	−.27	.20
Family parcel[a]			
I talk with and get help from other members of my family (e.g., siblings, cousins, aunts, uncles)	**.62**	−.07	−.26
I take the course of action that seems most acceptable to my family.	**.58**	.04	.08
Authority parcel[a]			
I seek advice and help from someone else whom I consider to be wiser than me (e.g., teachers, parents, or elders).	**.56**	.09	−.05
I take the course of action that seems most acceptable to my Chinese values.	**.52**	−.05	.30
Friendship parcel[a]			
I turn to friends who have a similar cultural or language background as me to obtain information or resources in dealing with my problem.	**.47**	.15	−.06
I turn to friends who have a similar cultural or language background as me to get their understanding and support.	**.45**	.20	−.13
Avoidance Coping			
Forget parcel[a]			
I try to block out or forget about what's bothering me.	−.06	**.67**	−.15
I tell myself that my problems will go away on their own.	−.02	**.62**	−.20
Unobtrusive parcel[a]			
I keep my emotions to myself and do not show them.	−.18	**.52**	.13
I choose to resolve my problems in ways that would attract the least attention to me.	.04	**.48**	.27
I just accept the fact that this happens and tell myself that I can't do much about it.	.29	**.44**	−.14
Distraction parcel[a]			
I get involved in other activities to keep my mind off the problem (e.g., study harder so as not to think about the problem).	.19	**.49**	.06
I engage in activities my parents would not approve to ease my anxiety or nervousness, such as smoking, drinking, and doing drugs.	−.17	**.42**	−.18
Engagement Coping			
Action parcel[a]			
I hold firm to my position and face the problem.	−.21	−.07	**.65**
I rely on myself to take action (e.g., finding out solutions) to deal with the situation.	−.23	.03	**.64**
I think about the situation carefully and think of options before I decide what to do.	.20	−.12	**.61**
Optimism parcel[a]			
I look for something good or positive in this difficult situation.	.28	.12	**.45**
Relaxation parcel[a]			
I engage in activities that will help me to relax or feel better (e.g., sports, listening to or playing music, getting online).	.15	.10	**.43**

Note. $N = 466$ (listwise deletion of missing values). Collective = Collective Coping; Avoidance = Avoidance Coping; Engagement = Engagement Coping. Loadings in bold designate to which factor an item was assigned for subsequent analyses.
[a]Designates item parcel groupings used in the confirmatory factor analysis for Study 2.

TABLE 2

Mean Scores and Standard Deviations Across Three Cohort Groups of Chinese Adolescents on Measures of Acculturation (MMRS) and Coping (CCCS) for the Two Scenarios in Study 1

Measure	Chinese Canadians		Late-Entry Chinese Immigrants		Chinese Sojourners	
	M	*SD*	*M*	*SD*	*M*	*SD*
Acculturation (MMRS)	0.59a	0.12	0.47b	0.08	0.45b	0.10
Coping (CCCS)						
Intergenerational Conflict Scenario						
Collective Coping	3.57a	0.80	3.91b	0.76	4.01b	0.71
Avoidance Coping	3.02a	0.78	3.35b	0.75	3.38b	0.80
Engagement Coping	4.37	0.75	4.39	0.78	4.54	0.79
Racial Tension Scenario						
Collective Coping	3.80a	0.86	3.87a	0.81	4.09b	0.72
Avoidance Coping	2.92a	0.89	3.25b	0.78	3.43b	0.88
Engagement Coping	4.07	0.82	4.03	0.88	4.27	0.79

Note. Responses to MMRS items were converted to a common metric by using weighted scores and scored such that higher values indicated more acculturation. Within a row, means that do not share a common subscript differ at $p = .05$ (Fisher's least significant difference). There was no effect for Engagement Coping for either scenario. Thus, multiple comparisons were not conducted for this factor. MMRS = Minority–Majority Relations Scale; CCCS = Cross-Cultural Coping Scale.

Fs > 4.84, both ps < .01). As seen in Table 2, the less acculturated cohorts reported higher Collective Coping subscale scores than did the more acculturated cohort.

Avoidance Coping. For each scenario, the Avoidance Coping subscale items were combined into an index ($\alpha = .63$ and $\alpha = .74$ for the IC and RT scenarios, respectively). An ANOVA showed significant cohort differences for both scenarios (both Fs > 11.82, both ps < .001). As can be seen in Table 2, the pattern of differences was the same for both scenarios. The less acculturated cohorts used avoidance coping significantly more than did the more acculturated cohort.

Engagement Coping. For each scenario, the Engagement Coping subscale items were combined into an index ($\alpha = .59$ and $\alpha = .62$ for the IC and RT scenarios, respectively). An ANOVA showed no significant cohort differences on this factor (both Fs < 2.70, both ps > .05).

STUDY 1 DISCUSSION

The EFA results supported a three-factor solution. One factor (Collective Coping) is conceptually aligned with collectivistic coping, and one factor (Engagement Coping) is aligned with individualistic coping (Shek & Cheung, 1990). The Avoidance Coping factor may not be categorized easily. Avoidance coping may be interpreted from an individualistic perspective as well as from an Asian values perspective of forbearance and fatalism. Because we were assessing Asians, we chose the Asian interpretation.

Our prediction of an inverse relationship between acculturation and collectivistic coping was confirmed. The more acculturated Chinese Canadian group was less likely to resort to collective coping. The less acculturated groups favored avoidance coping strategies more. No difference was found in the use of engagement coping.

STUDY 2 CONFIRMATORY FACTOR ANALYSIS (CFA) OF THE CCCS

To extend our investigation, we first sought construct validity support by attempting to replicate the CCCS factor structure with a CFA on data obtained from a mixed ethnic/racial

sample. Then, we examined the CCCS's convergent and divergent/discriminant validities with a measurement of self-construals (Singelis, 1994).

Coping and Self-Construal

One's view of self has been found to vary across cultures. According to Markus and Kitayama (1991), the experiences of the independent self are organized in relation to the individual's "internal repertoire of thoughts, feelings, and actions" (p. 226), whereas the same experiences of the interdependent self are structured in relation to others' reactions and responses. By extension, this typology of self-construals has been linked to coping preferences. Collective identity among Japanese students predicted a coping strategy of seeking help from one's family members (Yeh et al., 2001). Conversely, independent self-construal of East Asian international students was positively related to direct, self-focused coping (Cross, 1995).

Study 2 Hypotheses

Confirmation of the CCCS factor structure. We expected that the three-factor solution of the CCCS would be reproduced in Study 2. Accordingly, it was anticipated that the CFA of the CCCS data on the Study 2 sample would support a model fit of the Collective, Avoidance, and Engagement Coping factors that emerged in Study 1.

Convergent and divergent/discriminant validities of the CCCS with self-construals. On the basis of previous research (e.g., Lam & Zane, 2004; Liem et al., 2000), we hypothesized that (a) Collective Coping would form a significant positive correlation with Interdependent Self-Construal scores but would not form a significant relationship with Independent Self-Construal scores, (b) Avoidance Coping would show a significant positive correlation with Interdependent Self-Construal scores and a significant negative correlation with Independent Self-Construal scores, and (c) Engagement Coping would show a significant positive correlation with Independent Self-Construal scores and would have a weaker relationship with Interdependent Self-Construal scores.

STUDY 2 METHOD

Study 2 Participants

Study 2 participants were ethnically and racially more heterogeneous than were the participants in the sample of Study 1. Students from diverse Asian and Caucasian Canadian backgrounds from a midsize university in Ontario, Canada, participated. They were undergraduate and graduate students recruited through the Psychology Department's research participant pool, the university's International Students Office, and various Asian student organizations on campus. All participants completed an individual consent form prior to the study. The participants either completed the questionnaires in the Psychology Department in groups or completed the questionnaires at home and returned them by mail.

There were a total of 174 participants, with 46 (26%) Asian international students, 63 (36%) Asian Canadians, and 65 (37%) Caucasian Canadians. (Percentages do not equal 100% because of rounding.) Foreign-born participants constituted 47.1% ($n = 82$) of the sample, whereas Canadian-born participants made up 52.9% ($n = 92$). Among the foreign-born participants (exclusively Asians), 47% reported their place of birth to be in Chinese-speaking countries, 13% in South Korea, 11% in Japan, and the remaining 29% in six different Southeast Asian countries. Male and female participants represented 46% ($n = 80$) and 54% ($n = 94$) of the sample, respectively. There was no significant difference in sex representation across the three groups (Asian internationals, Asian Canadians, and Caucasian Canadian), $\chi^2(2, N = 174) = 0.14$, $p > .05$. No significant sex effect was found on

coping, $t(171) = -0.86$, $p > .05$, and self-construal, $t(164) = -1.28$, $p > .05$. The mean age of participants in the sample was 22 years ($SD = 3.53$).

Study 2 Measures

Self-Construal Scale (SCS; Singelis, 1994). The SCS assesses interdependent and independent self-construals in terms of individuals' current thoughts, feelings, and behaviors in relation to others versus self. The original scale was developed on a sample of ethnically mixed undergraduate students in Hawaii (Singelis, 1994) and was used subsequently in numerous studies with culturally diverse populations (e.g., Lam & Zane, 2004). The SCS has a total of 24 items, with 12 items each on the Interdependent Self-Construal subscale (e.g., "I will sacrifice my self-interest for the benefit of the group I am in") and the Independent Self-Construal subscale (e.g., "I am comfortable with being singled out for praise or rewards"). The Cronbach's alphas for the Interdependent Self-Construal and Independent Self-Construal subcales in the instrument development study were .74 and .70, respectively (Singelis, 1994). On the recommendation of the test developer (T. M. Singelis, personal communication, October 2, 2002) who also provided them, 6 items were added to the SCS (3 in each subscale) for the present study to increase the scale's overall internal consistency reliability. The SCS items are rated on a 7-point Likert scale, ranging from 1 = *strongly disagree* to 7 = *strongly agree*. In the current study, Cronbach's alphas were .72 and .77 for the Interdependent Self-Construal and Independent Self-Construal subscales, respectively.

CCCS. Given our interest in assessing the adaptability of the CCCS across various stressful situations, we selected a stress scenario that differed from those of Study 1 but retained the theme of unfairness and injustice of the RT scenario. A classroom scenario was provided as follows.

> *Classroom interpersonal conflict.* In one of your university courses, your professor pairs you up with another student to do a major research paper, which counts toward a large proportion of your final grade. You are assigned a topic and instructed to divide the research up between the two of you. Your partner does not take great interest in doing his/her share of the project. After a few weeks you feel that you are doing all the work and begin to get frustrated with your partner. Given that everyone is expected to do the same amount of work, you believe that this is unfair. You will both be graded on the final product, and no credit will be given for your effort. If this happens to you, how likely would you [be to] use the following methods to deal with this situation?

STUDY 2 RESULTS

Parcels

It has long been noted that using single items in a CFA can result in a bad fit for spurious reasons (for an overview, see Kishton & Widaman, 1994). That is, single items tend to have low reliability and other measurement problems that, independent of the quality of the model being tested, negatively affect fit indices (Russell, Kahn, Spoth, & Altmaier, 1998). Using *item parcels* (i.e., combinations of single items) reduces the effects of idiosyncratic characteristics of individual items. In addition, *parceling* reduces the chance of violating the multivariate normality assumption and reduces the case-to-parameter ratio (Russell et al., 1998). Accordingly, 18 of the 20 items of the CCCS were combined into parcels (for this CFA methodology, see Pope-Davis, Vandiver, & Stone, 1999). Each parcel consisted of an average of 2 to 3 items. The CCCS items were put into parcels based on conceptual similarity. For example, "I talk with and get help from one or both of my parents" and "I deal with the problem by doing what my parents may do or say with regard to the situation" were subsumed under the Parent

parcel, for Collective Coping. The parcels are noted in Table 1, and a correlation matrix of the parcels is provided in Table 3.

CFA

We conducted a CFA using the measurement model depicted in Figure 1. As can be seen from the figure, the model fit the data very well. The chi-square to degrees of freedom ratio was excellent (1.93). The goodness-of-fit index (.93), and root mean square error of approximation (.07; 90% confidence interval was between .045 and .101) were at the acceptable levels (see Kline, 1998). The comparative fit index was somewhat lower than is desired (.76). All of the latent to observed variable loadings were large and significant except for one (the Action parcel). Also, as indicated in Figure 1, the correlations between the latent variables were sensible, with the only significant correlation occurring between Engagement Coping and Avoidance Coping ($p < .001$). This significant correlation might make sense if avoidance and engagement were seen as individualistic responses. Consistent with our prediction, the results substantiated a stable, three-factor structure of the CCCS with Collective, Avoidance, and Engagement Coping.

Convergent and Divergent/Discriminant Validity of the CCCS

To study the construct validity of the CCCS, mean Interdependent Self-Construal and Independent Self-Construal subscale scores were calculated and correlated with Collective, Avoidance, and Engagement Coping scores. As can be seen from Table 4, which also reports instrument alphas, the pattern of correlations was consistent with our hypotheses for Interdependent Self-Construal; that is, its highest correlation was with Collective Coping (convergent validity). There was no significant correlation between Independent Self-Construal and Collective Coping (divergent/discriminant validity). Independent Self-Construal was significantly correlated with Engagement Coping (convergent validity). Comparisons of dependent and overlapping correlations (see Howell, 2002) showed that the correlation between Interdependent Self-Construal and Collective Coping was significantly higher than the correlation between Independent Self-Construal and Collective Coping, $t(171) = 3.04$, $p < .01$. Also, the correlation between Interdependent Self-Construal and Collective Coping was higher than the correlation between Interdependent Self-Construal and Engagement Coping, $t(171) = 2.02$, $p < .05$.

TABLE 3

Zero-Order Correlations, Means, and Standard Deviations for Parcels Used in the Confirmatory Factor Analysis in Study 2

Parcel	1	2	3	4	5	6	7	8	9	10
1. Parent	—									
2. Family	.63	—								
3. Authority	.45	.48	—							
4. Friendship	.20	.30	.42	—						
5. Forget	−.01	.00	.02	.17	—					
6. Unobtrusive	−.10	−.01	−.05	.15	.49	—				
7. Distraction	−.03	.06	−.03	.07	.53	.34	—			
8. Action	.18	.09	.07	−.13	−.27	−.20	−.28	—		
9. Optimism	.06	.09	.13	.09	.19	.15	.18	.14	—	
10. Relaxation	.06	.10	.01	.07	.26	.21	.40	.03	.37	—
M	3.68	3.45	3.74	3.37	2.64	3.32	2.60	4.90	4.06	4.33
SD	1.27	1.16	0.97	1.42	1.27	1.04	1.09	0.77	1.35	1.39

Note. $N = 174$. Correlations greater than or equal to .15 in absolute magnitude are significant at $p = .05$.
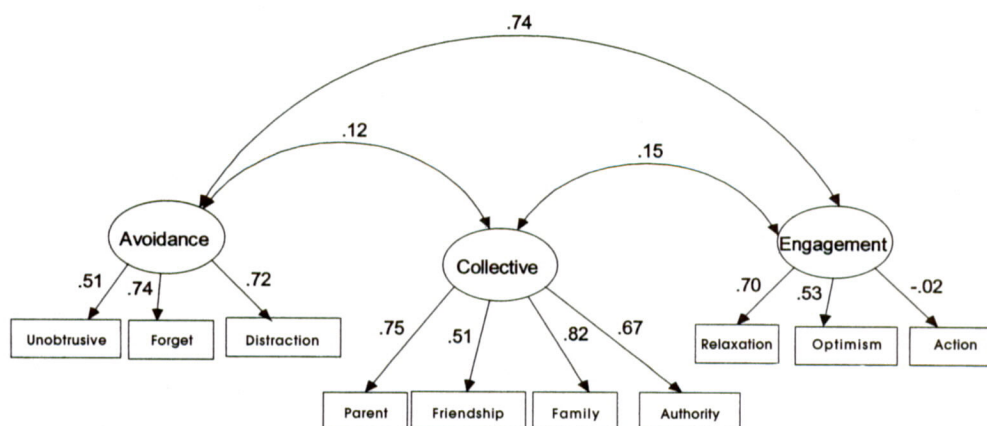
FIGURE 1

Confirmatory Factor Analysis for Study 2

Note. Avoidance = Avoidance Coping; Collective = Collective Coping; Engagement = Engagment Coping. Standardized estimates are shown. $\chi^2(32) = 61.77$; goodness-of-fit index = .93; root mean square error of approximation = .07; comparative fit index = .76.

STUDY 2 DISCUSSION

Even though Avoidance Coping is conceptualized as an individual's emotion-focused characteristic in the mainstream literature, Avoidance Coping formed a significant positive correlation with Interdependent Self-Construal, suggesting possible convergent validity. Avoidance Coping had no relationship with Independent Self-Construal, pointing to possible divergent/discriminant validity. These correlations of Avoidance Coping raise questions about Avoidance Coping being seen as simply a type of individualistic coping. Avoidance Coping, we suggest, may intrinsically carry unique cultural significance for diverse populations.

The Action parcel, whose latent to observed variable loading was small, could be interpreted to be inversely related to Engagement Coping. It is possible that a team project, as

TABLE 4

Means, Standard Deviations, and Correlations of the Cross-Cultural Coping Scale Coping Factors and Self-Construals (SCS) in Study 2

Variable	α	M	SD	1	2	3	4	5
1. Collective Coping	.78	3.56	0.89	—	.04	.13	.34**	.05
2. Avoidance Coping	.71	2.92	0.90		—	.01	.16*	.02
3. Engagement Coping	.52	4.62	0.68			—	.15*	.24**
4. Interdependent Self-Construal	.72	4.64	0.65				—	.16*
5. Independent Self-Construal	.77	4.86	0.67					—

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

depicted in the stress scenario, demands collaboration with one's project partner; therefore, independent actions would seem counter to the spirit of teamwork. As such, the coping strategy of independent action may not have the same positive direction that can be seen in the relationships of the Relaxation and Optimism parcels with Engagement Coping.

STUDY 3: USE OF THE CCCS IN THE UNITED STATES

The CCCS's applicability to culturally diverse individuals in the United States was tested in Study 3. Members of collectivistic societies endorse religious norms to a greater extent than do members of individualistic societies (Almeida, 1996; Roysircar, 2003, 2004a). Some collectivistic societies regard religion as a viable worldview that fosters healthy functioning (Dawson, 1948). The members of a religious community may find in religion ways to deal with the crises of living, guidance for personal growth and social change, and opportunities for renewed hope and trust (Pruyser, 1968; Roysircar, 2003, 2004a). Study 3 investigated the coping of international students in the United States who reported different religious faiths. Acculturation was also taken into account because research indicates that acculturation mediates the psychological well-being of international students and foreign-born immigrants (Roysircar-Sodowsky & Maestas, 2000).

STUDY 3 METHOD

Study 3 Participants

International students ($N = 375$) who attended a major midwestern university in the United States were the participants in Study 3. They were Chinese (Mainland China, Taiwan, and Hong Kong; $n = 103$), South Asians (India, Pakistan, and Sri Lanka; $n = 102$), Southeast Asians (Malaysia, Indonesia, Singapore, and Thailand; $n = 88$), Northeast Asians (South Korea and Japan; $n = 51$), and Middle Easterners (Arab countries and Egypt; $n = 31$). They had lived in the United States for a median of 2 years. Their median age was 23 years, and their median annual income was $7,000. Although there were more men ($n = 236$, 63%) than women ($n = 139$, 37%), randomly selected equal samples showed no sex differences in the variables of interest: religious groups, acculturation, and cross-cultural coping. Among the participants, 141 said in open-ended statements that they pursued faith in personalized or spiritual ways. Others said they were Muslims ($n = 83$), Hindus/Buddhists/Sikhs/Jains ($n = 82$), and Christians ($n = 69$).

Study 3 Procedure

Contact information on 500 international undergraduate and graduate students from Asian and Middle Eastern countries was released by the International Students Office of a midwestern university. There were two mailings. Mailing 1 consisted of an anonymous CCCS with one stress scenario (intimacy concern); the American-International Relations Survey (AIRS; Sodowsky & Plake, 1991); a demographic sheet; a cover letter informing participants about the study and seeking their voluntary participation; and a postage-paid, return-addressed envelope or campus envelope. After the completed Mailing 1 questionnaires from a participant were received, Mailing 2 was sent, which consisted of an anonymous CCCS with a second stress scenario (racism concern) and other measures (not relevant to the present study). We followed up with an e-mailed message and one telephone call as a reminder after each mailing. The second author, a faculty adviser to an international student association, visited various such associations and invited their members to participate in the study. Mailings 1 and 2 were sent out over a period of 3 to 6 weeks. We received 375 completed questionnaires, a return rate of 75%.

Study 3 Measures

CCCS. For Study 3, the Study 1 stress scenarios were adapted to suit Asian and Middle Eastern university students who are reported to have dating/relationship as well as campus racism concerns (Erickson & al-Timimi, 2001; Inman & Tewari, 2003; Roysircar, 2003, 2004b). The two scenarios providing stimuli for the CCCS items were as follows.

> *Intimacy concern.* You and your parents have arguments because you want to live with your girlfriend/boyfriend. You want to live with someone you really like, but your parents do not want the two of you to live together. They hold traditional values about marriage. Until marriage, people are expected to live separately. In addition, your parents believe you're too young to be in a committed relationship and to share a household. You're frustrated because in the United States live-in partners are quite common. If this situation happens to you, how likely would you use the following methods to deal with it?

> *Racism concern.* Lately, at the university, you have been hearing and reading negative comments by American students about international students. Stereotypical statements have been made about international students. For instance, it has been said that the science faculty prefer to teach Asian students, thereby decreasing admission opportunities for White males. You have heard comments that Muslims from foreign countries sympathize with terrorists. You're angry, disappointed, and cautious. If this situation happens to you, how likely would you [be to] use the following methods to deal with it?

The phrase "Chinese values" in one CCCS item was changed to "cultural values." The test–retest reliability for an average lag time of 4 weeks for the two CCCS administrations was .88. For each of the two scenarios, Cronbach's alphas were .78 and .80 (Collective Coping), .68 and .77 (Avoidance Coping), and .63 and .65 (Engagement Coping), respectively. Engagement Coping had higher Cronbach's alphas in Study 3 than in the previous two studies.

AIRS. The AIRS, a 34-item, Likert-type self-report instrument, provides a linear measurement of acculturation to U.S. society. The AIRS has been used extensively with international students and new immigrants. It has been related to measurements of worldviews (Frey & Roysircar, 2004), mental health diagnosis and cultural adjustment difficulties (Mehta, 1998; Sodowsky & Lai, 1997), depression (Rahman & Rollock, 2004), and use of help resources (Frey & Roysircar, 2006). The AIRS has the advantage of permitting comparisons across different cultural groups (Roysircar-Sodowsky & Maestas, 2000).

The AIRS consists of three subscales: Social Customs, Language Usage, and Perceived Prejudice. Because Study 3 did not intend to investigate the separate contributions of the language and social customs aspects of adaptation, the relevant subscales were collapsed into one subscale labeled "Acculturation" (14 items), as has been done in previous studies (e.g., Frey & Roysircar, 2004; Sodowsky & Lai, 1997). An example of an Acculturation subscale item is "Americans are too assertive and verbal for my liking." The response format for the Acculturation subscale ranges from 5 or 6 (*agree strongly;* i.e., rejection of the White dominant culture's values and behaviors) to 1 (*disagree strongly;* i.e., acceptance of the White dominant culture's values and behaviors).

The response format for the Perceived Prejudice subscale (20 items) ranges from 6 (i.e., higher perceptions of prejudice) to 1 (i.e., lower perceptions of prejudice). An example of a Perceived Prejudice item is "Americans try to fit me into the stereotypes that they have about my nationality group." Research has shown that international students report strong racism experiences (Klineberg & Hall, 1979; Roysircar, 2004b; Sodowsky & Plake, 1992). Therefore, the full AIRS (both the Acculturation and the Perceived Prejudice subscales) was used. The Cronbach's alpha for the full AIRS was .89. All participants scored between 2.57 and 4.86. The mean score was used as the cutoff point to differentiate between the more acculturated group ($n = 193$, score range = 2.57–3.86, $M = 3.38$) and the less acculturated group ($n = 182$, score range = 3.92–4.86, $M = 4.53$).

STUDY 3 RESULTS

The CCCS subscale means for the two scenarios were similar for each religious group and, therefore, were aggregated and averaged. Acculturation (more acculturated vs. less acculturated) was used as a covariate in analyses of covariance for Collective, Avoidance, and Engagement Coping to study the effect of religious groups. A probability level of $p \leq .01$ was used to protect against inflation of Type I error due to multiple univariate tests. After controlling for acculturation, we found that there were significant differences between the religious groups for all three CCCS subscales: Collective Coping, $F(3, 372) = 34.22$, $p < .001$, $\eta^2 = .60$; Avoidance Coping, $F(3, 372) = 15.90$, $p < .001$, $\eta^2 = .40$; and Engagement Coping, $F(3, 372) = 15.07$, $p < .001$, $\eta^2 = .40$ (see Table 5). Tukey/Kramer post hoc procedures determined the following differences between groups. On Collective Coping, the means for Muslims ($M = 4.50$, $SD = 0.70$), Christians ($M = 4.42$, $SD = 0.78$), and Hindus/Buddhists/Sikhs/Jains ($M = 4.35$, $SD = 0.72$) were significantly higher than was the mean for those who chose a personalized/spiritual faith ($M = 3.40$, $SD = 0.90$) at the .01 level. On Avoidance Coping, the means for Muslims ($M = 3.95$, $SD = 0.80$), Christians ($M = 3.80$, $SD = 0.78$), and those who chose a personalized/spiritual faith ($M = 3.74$, $SD = 0.82$) were significantly higher (78% of the sample) than was the mean for Hindus/Buddhists/Sikhs/Jains ($M = 2.95$, $SD = 0.87$) at the .01 level. On Engagement Coping, the mean score for Hindus/Buddhists/ Sikhs/Jains ($M = 5.15$, $SD = 0.72$) was significantly higher than were the mean scores for Muslims ($M = 4.12$, $SD = 0.84$), Christians ($M = 4.25$, $SD = 0.86$), and those who chose a personalized/spiritual faith ($M = 4.52$, $SD = 0.77$) at the .01 level. In summary, Muslims and Christians from Asian and Middle Eastern countries were most similar in cross-cultural coping. The greatest amount of difference in coping was between Muslims and Hindus/Buddhists/Sikhs/Jains. Regarding the acculturated groups, the less acculturated group used more collective as well as more engagement coping strategies than did the more acculturated group at the .01 level, whereas there was no difference between the two groups in the use of avoidance coping strategies.

TABLE 5

Collective, Avoidance, and Engagement Coping as a Function of Religion With Acculturation as a Covariate in Study 3

Source	ANCOVA				Post Hoc Tests[a]
	SS	df	MS	F	
Collective Coping ($\alpha = .78, .80$)					
More/less acculturated					
grouping	20.07	1	20.07	56.39***	Less accult > more accult**
Religious groups	24.36	3	8.12	34.22***	1, 2, 3 > 4**
Avoidance Coping ($\alpha = .68, .77$)					
More/less acculturated					
grouping	4.39	1	4.39	7.64	Less accult = more accult
Religious groups	19.80	3	6.60	15.90***	1, 3, 4 > 2**
Engagement Coping ($\alpha = .63, .65$)					
More/less acculturated					
grouping	10.80	1	10.80	36.50***	Less accult > more accult**
Religious groups	15.75	3	5.25	15.07***	1, 3, 4 < 2**

Note. For each Cross-Cultural Coping Scale subscale, the first alpha is for the intimacy concern scenario and the second alpha is for the racism concern scenario. For the full American-International Relations Survey that measured acculturation, $\alpha = .89$. For religious groups, 1 = Muslims, 2 = Hindus/ Buddhists/Sikhs/Jains, 3 = Christians, and 4 = personalized/spiritual faith. ANCOVA = analysis of covariance; less accult = less acculturated group; more accult = more acculturated group.
[a]Bonferroni tests were the method of correction used for multiple comparisons.
**$p < .01$. ***$p < .001$.

STUDY 3 DISCUSSION

International students' coping with stressful situations was studied. Participants in the sample for Study 3 were from the United States, whereas participants in the samples for Studies 1 and 2 were from Canada. After acculturation (a significant variable in foreign-born individuals' mental health) was controlled for, the self-reported religious/spiritual affiliations of international students from Asian and Middle Eastern countries showed varied relationships with Collective, Avoidance, and Engagement Coping. Most cross-cultural or multicultural studies focus primarily on acculturation rather than control for acculturation to understand the mental health of immigrant populations (Frey & Roysircar, 2004). We broadened the scope of cross-cultural assessment by adding another participant variable: self-reported religious affiliations. Because members of societies in collectivistic, developing countries lead faith-based lives (Roysircar, 2003, 2004b), we investigated whether participants from such countries would self-report that their religions had a relationship to their coping strategy.

The CCCS had strong test–retest reliability over a 4-week period. Unlike Study 1, Study 3 showed significant differences in the use of engagement coping. Hindus/Buddhists/Sikhs/Jains's use of engagement coping strategies was similar to what Cross (1995) found with East Asian international students in her study. Perhaps expanding the Asian sample by including various nationality and faith groups increased the variance in the CCCS. Self-identified religious groups in Study 3 showed noteworthy differences in coping strategies. Although it was not surprising that the majority (61%) of Asian and Middle Eastern religious groups used collectivistic resources and values-based responses, a new finding was that those who chose a personalized/spiritual faith (38%) showed lower Collective Coping subscale scores. The majority (78%) of the participants in Study 3 used avoidance coping strategies, but Hindus/Buddhists/Sikhs/Jains reported fewer Avoidance Coping subscale responses and significantly higher Engagement Coping subscale scores than did the other three groups. To avoid stereotypes that international students are exclusively collectivistic, it is important to note that those who chose a personalized/spiritual faith endorsed fewer collective coping strategies as indicated by lower scores on the Collective Coping subscale, whereas Hindus/Buddhists/ Sikhs/Jains made high use of both collective and engagement coping strategies as indicated by scores on the Collective and Engagement Coping subscales. Thus, the Hindus/Buddhists/Sikhs/Jains reported both collectivism and individualism.

The less acculturated group reported more cultural values–based coping (collective), as was also shown in Study 1. However, unlike participants in Study 1, those who were less acculturated more often preferred engagement coping strategies, as was also found both in a sample of Chinese international students in another study (Zheng & Berry, 1991) and in less acculturated Hispanics (Mena et al., 1987). Less acculturated immigrants and international students who have been in the host society for a short period of time do not have large social networks and, therefore, may need to be active and individualistic to survive. Perhaps active coping strategies that engage newcomers with the host society influence them to become more acculturated or "Americanized" with time.

GENERAL DISCUSSION

At the group level, distinctions between North Americans and Asians are often characterized by American/Canadian individualism and Asian collectivism (Markus & Kitayama, 1991). However, at the individual level, the interdependent and independent selves coexist within the same person of any culture but may vary in degree because of enculturation in one's cultural heritage and acculturation to the host society (Roysircar, 2004b). Our model of coping, as operationalized by the CCCS, appears to support this view of contextualized identities. The CCCS showed that the extent to which culturally diverse individuals adopted individualistic as well as collectivistic coping strategies was influenced by their self-construal, acculturation,

or religious affiliations. Collective, avoidance, and engagement coping strategies were found in culturally diverse samples at different developmental stages as well as for age-appropriate variations in stress scenarios. The CCCS's criterion-related, convergent, and divergent/discriminant validities were suggested by the relationships of its subscales with various measures of cultural variables: acculturation, self-construals, and self-assigned religions.

Our operationalization of collective coping broadens the literature's understanding of interpersonal or social help as being limited to advice, information giving, and emotional support (Parker & Endler, 1996). Instrumental gains are seen in the literature as the primary focus of interpersonal help (Hobfoll, 1998). However, the Collective Coping subscale of the CCCS includes appraisal of coping action relative to one's cultural and familial norms as well as a reference to the behaviors and perspectives of significant others. This weighing process preceding one's response reflects culturally shaped social cognition and motivation in the coping process (Dunahoo et al., 1998; Phillips & Pearson, 1996). It is consistent with Smith's (1991) notion of ethnic reference group. Smith contended that an ethnic reference group functions as (a) an individual's point of comparison for evaluating his or her status and self-image, (b) the group to which an individual seeks membership, and (c) a "self-anchoring point or social frame" (p. 182) that defines an individual's perceptual field.

Collective Coping

Collective coping rooted in group-referencing and cultural values might be particularly relevant for acculturating immigrants and international students. Family, coethnic peers, and the ethnic community might serve as an essential cognitive and behavioral frame of reference when the individual is facing novel cultural situations (Roysircar & Maestas, 2002). The collective coping of less acculturated Chinese adolescents in Study 1 and of organized/institutionalized religious groups in Study 3 suggested a preference to reduce the impact of stress, while maintaining social harmony and relational obligations (see also Dunahoo et al., 1998). Study 2 corroborated this interpretation in that those who scored higher on the Interdependent Self-Construal subscale scored higher on the Collective Coping subscale.

Avoidance Coping

From the perspective of locus of coping in the mainstream coping literature, avoidance and engagement coping are attempts originated in the one who is coping himself or herself. However, in Study 2, scores on the Avoidance Coping subscale were found to have a positive relationship with scores on the Interdependent Self-Construal subscale, $r(174) = .16$, $p < .05$. The less acculturated (Study 1) and more religiously conservative (Study 3) groups scored higher on the Avoidance Coping subscale. One possible cultural interpretation is that avoidant behaviors may be inherent in Asian values (Kim et al., 1999). In Eastern philosophy, one accepts things as they are, not as one wishes things could be at this very moment, even though one can wish for things in the future to be different (Sodowsky et al., 1995). In addition, avoidance may be motivated by an Asian preference for interdependence and preservation of social harmony (Lam & Zane, 2004; Markus & Kitayama, 1991), which serve to prevent direct confrontation with others, to adapt oneself to one's in-group, and to not "rock the boat" (Sheu & Sedlacek, 2004). Sheu and Sedlacek revealed that Asian American students implemented avoidance to cope with stress more often than did African American and White American counterparts. However, as a caveat, we point out that in Study 3, those who chose a personalized/spiritual faith also scored higher on the Avoidance Coping subscale, which may, in this case, be interpreted as individualistic coping. Thus, avoidance may be influenced by a society's normative injunctions or by an individual's traits of denial or withdrawal.

Engagement Coping

There were mixed findings for the Engagement Coping factor. Although there was no significant difference for Engagement Coping in Study 1 with regard to acculturation levels, in Study 3 the less acculturated group and the Hindus/Buddhists/Sikhs/Jains used more engagement coping strategies. Psychometrically, mixed findings may be partially attributed to the small item set (five items) of this factor, which gave rise to alphas in the .60s and less. Phenomenologically, defining self from an individualistic perspective is more universal and habitual than viewing self in relation to others (Rosenberger, as cited in Liem et al., 2000). In other words, there is greater cultural variation in the other-directed tendency (collectivism) because of its specific relevance to Asians than in the ego-centered tendency that is present across cultural groups (Liem et al., 2000).

Limitations of the Study

We covered diverse age spans (young adolescents, adolescents, and young adults), which might be viewed as a constraint on the results because of potential differences in stress responses across developmental periods. We note, however, that similarities do exist in acculturative stressors for both Asian teenagers and college-age students. Take, for instance, experiences with prejudice and injustice (P. Y. Kuo & Roysircar-Sodowsky, 1999; Sodowsky & Plake, 1992; Yeh & Inose, 2002; Ying et al., 2000) that were illustrated by variations of a prejudice scenario in each study, and intergenerational conflicts over dating and marriage owing to acculturation differences within the family (Inman & Tewari, 2003; Lee, 1997; Roysircar-Sodowsky & Maestas, 2000) that were illustrated by variations of a family scenario in Study 1 and Study 3. We wanted to investigate how Asians from different cultural groups and at different developmental stages coped with similar stressors. We consider the model fit of the CCCS factors in Study 2 as statistical support for similarities in the underlying coping patterns between Asian youth and Asian young adults, suggesting scale generalizability. Nonetheless, despite current empirical support for the CCCS, we recommend that future users of the scale use a developmental framework to support their study's choice of a particular age cohort.

Despite the advantages of scenario-based assessment of coping (Peng et al., 1997; Schwarzer & Schwarzer, 1996), the stress scenarios, although relevant to the population under study, were not actually happening. Therefore, we could not ascertain whether responses represented actual coping behaviors. Future research could compare measuring coping by having respondents recall an actual stressful event versus using a standardized vignette. Also, because responses might be constrained by the details of the scenarios, future users of the CCCS are advised to base scenarios on common and broad social problems in collectivistic societies, as indicated by the research literature and as illustrated by our studies.

The CCCS has not yet been correlated with other coping measures; therefore, its construct validity must be viewed with caution. Recently developed culture-specific coping measures, such as the Chinese Coping Scale (Shek & Cheung, 1990), the Collective Coping Scale (Yeh et al., 2003), and the Strategic Approach to Coping Scale–Dispositional (Dunahoo et al., 1998), can test the CCCS's construct validity.

The three CCCS factors accounted for a moderate amount of variance: 31% for the IC scenario and 43% for the RT scenario in Study 1. One possible explanation is that stable personality characteristics and temperaments (e.g., resilience) are likely to be factors to moderate individuals' stress responses (see Schwarzer & Schwarzer, 1996). Thus, the remaining, unaccounted variance in the sample might have been explained by individual traits; however, it was beyond the scope of the current study to research this hypothesis. A future study could examine the differential roles that coping strategies versus personality traits play in the stress management process.

The three-factor structure of the CCCS offered evidence that coping can be seen as a culturally mediated process. Three preliminary studies of the CCCS suggested its potential for

clinical and research use in a multicultural context. By incorporating a cultural perspective of coping into counseling with diverse clients, counselors could provide counseling and assessment in a balanced manner. As such, clients can be encouraged to adopt a wide-ranging repertoire of coping strategies, both self-focused and relationally oriented.

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