

## PSYCHOLOGICAL ADJUSTMENT OF SOUTHEAST ASIAN REFUGEES: THE CONTRIBUTION OF SENSE OF COHERENCE

Yu-Wen Ying

*University of California at Berkeley*

Phillip D. Akutsu

*University of California at Berkeley and  
Pacific Graduate School of Psychology*

*This study examines the contribution of sense of coherence and resistance deficits and resources to the psychological adjustment of five Southeast Asian refugee groups (713 Vietnamese, 492 Cambodians, 551 Laotians, 231 Hmong, 245 Chinese-Vietnamese). It is hypothesized that sense of coherence (i.e., the experience of life as comprehensible, manageable, and meaningful), (Antonovsky, 1979, 1987) directly predicts psychological adjustment as measured by happiness and demoralization. Also, resistance deficits (being male, the experience of trauma, and cultural traditionalism) and resistance resources (a younger age at arrival and longer residence in the United States, higher education, employment, greater English competence, and living in an area with a greater co-ethnic density) are postulated to both directly and indirectly (through their effect on sense of coherence) predict happiness and demoralization. These hypotheses are generally supported by the results of this study, with sense of coherence emerging as a most powerful predictor of psychological adjustment for refugees. Implications of the findings are discussed. © 1997 John Wiley & Sons., Inc.*

This study was supported in part by National Institute of Mental Health Faculty Scholar Award 5TO1 MH19178 to the first author, by the National Institute of Mental Health Training Grant MH18828 to the second author, and the National Institute of Mental Health Grant R01 MH44331. Elizabeth Gong-Guy, formerly of Oakland Asian Community Mental Health Services, oversaw the data collection. Mimi Lee and Chua Chao assisted with the literature search. An earlier version of this paper was presented at the Second Annual Conference on Psychopathology, Psychopharmacology, Substance Abuse and Culture, Los Angeles, California, 1994. Requests for reprints should be addressed to Yu-Wen Ying, School of Social Welfare, 120 Haviland Hall, University of California, Berkeley, California 94720-7400.

The mental health consequences of the war, escape, and resettlement traumas suffered by Southeast Asian refugees have been well-documented (Carlson & Rosser-Hogan, 1991; Kinzie, Boehnlein, Leung, Moore, Riley, & Smith, 1990; Kinzie & Manson, 1990; Lin, 1986; Mollica, Wyshak, & Lavell, 1987; Westermeyer, Vang, & Lyfong, 1983). However, most of these earlier studies focused on the war's impact on the incidence and prevalence of psychiatric symptoms and disorders in Southeast Asian refugee groups. The present investigation contributes to the existing literature by 1) examining the psychological adjustment of Southeast Asian refugees as reflected in their experience of happiness and demoralization, and 2) assessing the contribution of the refugees' subjective and internal sense of coherence to their adjustment.

Although the majority of Southeast Asian refugees are free of long-standing psychiatric disorders, most have faced varying degrees of adjustment difficulties upon entering the United States (Rumbaut, 1985, 1991). It is likely that refugees who continue to experience poor adjustment will be at greater risk for developing psychiatric symptoms and disorders. As such, the determination of adjustment levels and the specification of their predictors serve as an important basis for the identification of high risk groups and targets for early intervention and prevention efforts.

Based on a salutogenic model, Antonovsky (1979, 1987) proposed that a person's health and well-being were largely determined by his or her sense of coherence or, in his words, a "global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that: (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges worthy of investment and engagement (Antonovsky, 1987; p. 19). Respectively, these three components of sense of coherence were identified as comprehensibility, manageability, and meaningfulness. Antonovsky (1979, 1987, 1993) proposed that sense of coherence would be strengthened by generalized resistance resources which included material possessions, knowledge, ego identity, cultural stability, social support, religion, and philosophy, but weakened by generalized resistance deficits such as life stressors that engendered feelings of chaos and disintegration.

Numerous studies have provided empirical support for Antonovsky's theoretical model. Collectively, sense of coherence has been found to be positively associated with higher self-esteem (Petrie & Azarish, 1990), general well-being (Carmel, Anson, Levenson, Bonne, & Maos, 1991; Larsson & Setterlind, 1990; Ryland & Greenfeld, 1990), physical health (Carmel et al., 1991; Larsson and Setterlind, 1990), and quality of life (Dahlin, Cederblad, Antonovsky, & Hagnell, 1990; Sagy, Antonovsky, & Adler, 1990).

The present investigation examines this proposed relationship between sense of coherence and psychological adjustment for five Southeast Asian refugee groups. As such, it makes a significant contribution to the literature on Southeast Asian refugees which has thus far been based primarily on a "stressors lead to distress and maladjustment" model (Ben-Porath, 1991; Rumbaut, 1991; Strand & Jones, 1985). In contrast, Antonovsky's model allows for the identification of the psychological process (i.e., sense of coherence) through which external stressors and resources may mediate psychological adjustment.

In the present study, it was hypothesized that sense of coherence, resistance deficits, and resistance resources served as direct predictors of psychological adjustment for Southeast Asian refugees as measured by levels of happiness and demoralization. Based

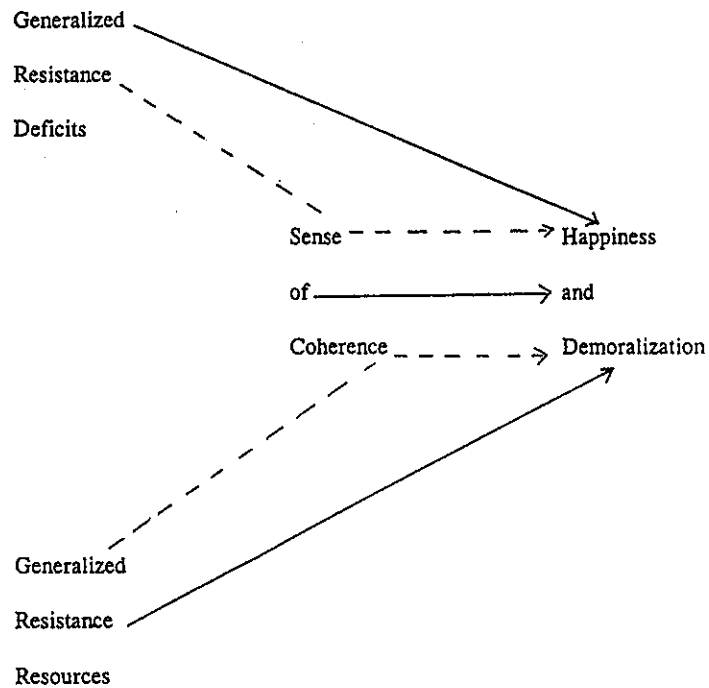


Figure 1. Psychological adjustment model. Solid lines indicate direct effects; broken lines indicate indirect effects.

on previous research, it was also hypothesized that resistance deficits and resources would additionally serve as indirect predictors of psychological adjustment for Southeast Asian refugees, i.e., they would affect coherence which, in turn, would predict psychological adjustment. This relationship between resistance deficits and resources, sense of coherence, and psychological adjustment is presented in Figure 1.

Specifically, if a low sense of coherence is found to be predictive of unhappiness and demoralization in Southeast Asian refugees, we would not only gain a better understanding of the underlying process of the development of psychological maladjustment, but also derive important implications for community-based interventions. That is, if one's subjective sense of coherence significantly influences one's psychological adjustment, then the promotion of coherence would be a worthy objective in prevention and early intervention programs for this population.

#### Model of Psychological Adjustment

Previous research provided empirical validation for using Antonovsky's model to explain the adjustment difficulties of Southeast Asian refugees. In a recent study, several generalized resistance deficits and resources were found to be significant predictors of coherence in Southeast Asian refugees (Ying, Akutsu, & Huang, 1996a). In terms of existing resources and deficits, prior to their migration, the Chinese-Vietnamese and Vietnamese were more likely to have been urban dwellers, better educated, had some English ability and experience with a Western lifestyle (Beiser, 1990; Gordon, 1990; Hung, 1985; Rumbaut, 1985). In contrast, the Laotians and Hmong were more likely to have been

rural people with limited exposure to Western culture (Barney, 1979; Dunningan & Olney, 1985; Gordon, 1990; Van Esterik, 1985; Westermeyer et al., 1983). The Cambodians had suffered the most traumas including forced evacuation, family separation, hard labor, and torture because of Pol Pot's regime of terror (Ebihara, 1985; Kinzie, Fredrickson, Ben, Fleck, & Karls, 1984). In a subsequent study, sense of coherence was found to be a stronger and more powerful predictor of symptoms related to depression, anxiety, and psychosocial dysfunction for Southeast Asian refugees than either resistance deficits or resources (Ying, Akutsu, & Huang, 1996b). Specifically, the Chinese-Vietnamese reported the strongest sense of coherence, followed by the Vietnamese, Cambodians, Laotians, and the Hmong who reported the lowest level of coherence (Ying et al., 1996a).

Given the experience of a stronger sense of coherence, fewer deficits and greater resources, it was hypothesized that the Vietnamese and Chinese-Vietnamese would report more happiness and less demoralization in their new lives in the United States. In contrast, it was hypothesized that the Cambodians, Laotians and Hmong would report greater unhappiness and demoralization because of limited resources, greater deficits, and a weaker sense of coherence.

## METHOD

### *Sample*

The sample consisted of 2,232 Southeast Asian refugees (713 Vietnamese, 492 Cambodian, 551 Laotian, 231 Hmong, 245 Chinese-Vietnamese) from nine California counties who had participated in a state-wide health and mental health needs assessment in 1986-87 (Gong-Guy, 1987). Although the Vietnamese and Chinese-Vietnamese respondents were recruited from telephone directories, the Cambodian, Lao, and Hmong respondents were selected through a multi-cluster sampling procedure as many of these Southeast Asian refugees did not own telephones at the time of the needs assessment (Gong-Guy, 1987). In order to ensure reliability in the data collection, the interviews were conducted in the respondents' primary language.

### *Instruments*

*Resistance Resources and Deficits.* The resistance resource variables consisted of age at arrival, years of residence in the United States, highest level of education, employment status, and English competence. The resistance deficit variables consisted of gender, number of war traumas, years in transit in escaping to the United States, number of separated family members, death in the family, and cultural traditionalism. Cultural traditionalism was defined as an inflexible clinging to one's culture of origin and the inability or unwillingness to engage with mainstream American society (Ying et al., 1996a). This construct was measured using seven items from the Cultural Adaptation Scale developed by Rumbaut (1991). These items were rated on a 7-point Likert scale (ranging 1 = strong disagreement to 7 = strong agreement) and higher scores on this measure indicated greater cultural traditionalism. The internal alpha reliability for this scale was .65 for this sample. Ethnic density was calculated as the percentage of people of the same ethnic group (i.e., co-ethnics) in the respondent's county of residence using the 1990 Census.

*Sense of Coherence.* Similar to Antonovsky's measure, Rumbaut's 22-item Sense of Coherence Scale (1991) was used to examine the level of coherence for the five Southeast Asian refugee groups. Responses to these items were scored on a 7-point scale (ranging from 1 = strong disagreement to 7 = strong agreement) and higher scores on this scale indicated a stronger sense of coherence. The internal alpha reliability for this scale was .77 for this sample.

*Psychological Adjustment.* Psychological adjustment was measured using the happiness and demoralization subscales of Rumbaut's Psychological Well-Being Scale (Rumbaut, 1985, 1991) which was adapted from the General Well-Being Schedule of the National Health and Nutrition Examination Survey (Dupuy, 1974). Initially, Rumbaut referred to the second subscale as "depression" (Rumbaut, 1985), but later changed this description to "distress" (Rumbaut, 1991). He explained that the construct under investigation was similar to "demoralization" as described by Jerome Frank (1973), suggesting the presence of "emotional and somatic distress" rather than a clinical disorder (Rumbaut, 1985, p. 445). In light of this information, we have chosen the term "demoralization" rather than "depression" to describe this second subscale for the present study.

The happiness subscale consists of 8 items which measure the presence of various pleasant conditions that have occurred in the past month such as: "How often has your daily life been full of things that were interesting to you?" and "How often have you felt happy, satisfied, or pleased with your present life?" The demoralization subscale also consists of 8 items which measure the presence of various disturbing conditions that have occurred in the past month such as: "How often have you been under, or felt you were under, strain, stress, or pressure?" and "How often have you felt tired, worn-out, used-up, or exhausted?" Responses to these items were measured using a six-point Likert type scale: "0" = never or none of the time, "1" = rarely, "2" = sometimes, "3" = often, "4" = very often, and "5" = constantly or all the time. The alpha reliability levels for these two subscales were consistently high for our sample: .84 for happiness; .85 for demoralization.

## RESULTS

### *Ethnic Variation in Sense of Coherence, Resistance Deficits and Resources, and Psychological Adjustment*

Between-group differences in sense of coherence and resistance deficits and resources were examined using analyses of variance (ANOVAs) with Scheffe post-hoc comparisons for continuous variables and chi-square tests of significant for categorical variables. Table 1 provides a descriptive summary of the resistance deficits and resources, sense of coherence, and psychological adjustment for the five Southeast Asian groups.

With regard to the deficit variables, women were found to represent less than half of each Southeast Asian group ( $\chi^2(4, N = 2234) = 15.84, p = .003$ ). The Cambodians had suffered the most trauma ( $F(4, 2227) = 63.42, p = .0001$ ), and spent the longest time in transit ( $F(4, 2227) = 192.96, p = .0001$ ) compared to the other Southeast Asian groups. The Laotians and Hmong also spent a longer time in transit than the Vietnamese and Chinese-Vietnamese ( $F(4, 2227) = 192.96, p = .0001$ ). The Chinese-Vietnamese reported being separated from a smaller number of family members than other Southeast groups; the Hmong also reported a smaller number of separated family members than the Vietnamese and Cambodians ( $F(4, 2227) = 21.53, p = .0001$ ). A higher percentage

Table 1. Descriptives of Resistance Deficits and Resources, Sense of Coherence, and Psychological Adjustment by Ethnic Group

Variable	Chinese-Vietnamese (n = 245)				Significant Differences
	Vietnamese (n = 713)	Cambodian (n = 494)	Laotian (n = 551)	Hmong (n = 231)	
Resistance Deficits					
Male	60.00%	50.40%	58.40%	53.20%	V > C
# of traumas	0.17	0.68	0.21	0.24	C > others
Years in transit	0.96	3.18	2.32	2.67	C > others; L, H > V, C, V
# of separated family members	1.13	1.25	1.12	0.90	C < V < others; H < V, C
Death in family	20.50%	77.00%	17.20%	26.80%	C > others; H > L, C, V; V > C, V
Cultural traditionalism	34.85	36.82	37.16	38.95	H > others; C, L > V, C, V; V > C, V
Resistance resources					
Age at arrival	28.44	33.90	33.08	32.07	V < others
Years in U.S.	5.67	3.75	5.30	5.86	C < others
No formal education	0.40%	22.50%	10.90%	57.60%	H > C > L; C, V > V
Elementary education	17.10%	45.30%	41.40%	24.20%	C, L > others; C, V > V
Secondary education	22.00%	15.00%	25.20%	3.00%	C, V > L, C, H; L, V > C, H; C > H
High school graduate	21.20%	6.50%	12.50%	6.90%	V > L, H, C; C < V, L > C
College or more	39.30%	10.70%	10.00%	8.20%	V > others
Employed	50.20%	18.90%	38.50%	14.30%	V > L, C, V > C, H
English competence	2.94	2.18	2.67	2.27	V > others; L, C, V > C, H
Ethnic density	1.54%	0.37%	0.27%	2.31%	C, V > H > V > C, L
Sense of coherence	103.63	100.96	98.74	92.13	C, V > others; V > C, L > H; C, L > H
Psychological adjustment					
Happiness	3.05	2.53	2.27	1.87	C, V > others; V > C, L, H; C > L, H; L > H
Demoralization	1.38	1.72	1.83	2.12	H > others; C, L > V, C, V

Note. For continuous variables, Scheffe post-hoc tests (ANOVAs) were performed ( $p < .05$ ). For categorical variables, chi-square tests for pairwise comparisons were performed ( $p < .005$ ).

of Cambodians reported a death in the family than the other Southeast Asian groups; the Vietnamese were also more likely to experience a death in the family than the Chinese-Vietnamese ( $\chi^2 (4, N = 2232) = 616.73, p = .0001$ ). The Hmong were the most culturally traditional group; and the Cambodians and Laotians were culturally more traditional than the Vietnamese and Chinese-Vietnamese ( $F (4, 2227) = 65.26, p = .0001$ ).

In terms of the resource variables, the Vietnamese were younger at the time of arrival in the United States than other Southeast Asian groups ( $F (4, 2227) = 19.94, p = .0001$ ). The Cambodians had spent the shortest time residing in the United States ( $F (4, 2227) = 50.20, p = .0001$ ). The Vietnamese and Chinese-Vietnamese had completed a higher level of education than the Laotians, Cambodians, and Hmong ( $\chi^2 (16, N = 2232) = 883.36, p = .0001$ ). The Vietnamese were more likely to be employed than other Southeast Asian groups; the Laotians and Chinese-Vietnamese were, in turn, more likely to be employed than the Cambodians and Hmong ( $\chi^2 (4, N = 2232) = 174.83, p = .0001$ ). The Vietnamese reported the greatest English competence compared to the others, and the Laotians and the Chinese-Vietnamese also surpassed the Cambodians and the Hmong in English competence ( $F (4, 2229) = 92.32, p = .0001$ ). The Chinese-Vietnamese lived in an area with the greatest co-ethnic density, followed by the Hmong, who, in turn, lived in a community with more co-ethnics than the Vietnamese, with the Cambodians and Laotians living in communities with the smallest number of co-ethnics ( $F (4, 2229) = 423.03, p = .0001$ ).

The Chinese-Vietnamese and Vietnamese reported higher levels of sense of coherence than other Southeast Asian groups ( $F (4, 2227) = 50.90, p = .0001$ ). The Chinese-Vietnamese and Vietnamese reported the highest levels of happiness ("often" to "very often") and the lowest levels of demoralization ("rarely" to "sometimes"), followed by the Cambodians and Laotians who also experienced relatively high levels of happiness ("sometimes" to "often") and low levels of demoralization ("never" to "rarely"), and the Hmong, in contrast, reported the lowest levels of happiness ("rarely" to "sometimes") and highest levels of demoralization ("sometimes" to "often") ( $F (4, 2229) = 161.28, p = .0001$ ;  $F (4, 2228) = 54.60, p = .0001$ , respectively).

#### ***Multiple Regressions Predicting Happiness and Demoralization***

To examine the effects of sense of coherence and the resistance deficits and resources as direct predictors of happiness and demoralization, multiple regression analyses were performed for each Southeast Asian group. Also, to calculate the effects of resistance deficits and resources as indirect predictors of happiness and demoralization as mediated by sense of coherence, Sobel's (1982) procedure was used to calculate the joint effect of each of the resistance deficit and resource variables in the models described above and its contribution to coherence. These indirect effects were calculated from the results of multiple regression analyses that were completed on each ethnic group where sense of coherence served as the dependent variable and the resource and deficit variables served as the predictor variables. In these multiple regression analyses, females, those with no deaths in their family, those with an elementary school education, and the unemployed served as the deleted baseline comparison group.

*Happiness.* Table 2 presents the standardized beta weights of the independent predictors of happiness for each Southeast Asian group using a two-tailed test. A stronger sense of

Table 2. Direct and Indirect Effects of Sense of Coherence, Resistance Deficits, and Resource Variables on Happiness Across Ethnic Groups

Variable	Vietnamese		Cambodian		Laotian		Hmong		Chinese-Vietnamese	
	D	I	D	I	D	I	D	I	D	I
Sense of coherence	.41***	—	.50***	—	.36***	—	.46***	—	.37***	—
Resistance deficits										
Male <sup>1</sup>	-.01	-.04**	.06	-.04*	.03	-.01	-.01	-.06	-.01	.01
# of traumas	-.07*	-.01	.02	-.15***	-.05	-.05**	.08	-.06	.11*	-.04
Years in transit	.03	.02	.01	-.08**	.08	-.02	.01	-.04	.02	.01
# of separated family members	-.07*	-.01	.04	-.01	.09*	.02	.03	-.01	-.19***	.03
Death in family <sup>1</sup>	-.11**	-.02	-.01	-.01	.03	.02	-.07	-.04	-.14**	-.01
Cultural traditionalism	-.08*	-.08***	-.03	-.01	.01	-.05**	-.01	-.09*	-.05	-.13***
Resistance resources										
Age at arrival	-.08*	-.01	-.12**	-.04	-.02	.02	.06	-.02	-.05	.02
Years in U.S.	-.07*	.02	-.01	-.03	-.04	-.01	-.10	.06	-.12*	-.06*
No formal education <sup>1</sup>	-.01	.01	-.15***	-.05*	-.10*	-.01	-.08	.09*	.14*	-.02
Secondary education <sup>1</sup>	-.07	-.02	-.03	.04	.01	.05**	.06	.04	-.02	.03
High school graduate <sup>1</sup>	-.07	.01	.02	.05*	.02	.05**	.07	-.01	.02	-.02
College or more <sup>1</sup>	-.07	.05	-.01	-.01	.06	.07***	.07	.02	-.01	.03
Employed <sup>1</sup>	.20***	-.01	.08*	-.04*	.08	.01	-.07	-.02	.01	.01
English competence	.07	.04*	.06	.10***	-.08	.04*	-.07	.09*	-.01	.06*
Ethnic density	.07*	.02	-.10**	-.08***	-.06	.07***	-.03	.03	-.40***	.08**

<sup>1</sup>Females, those without any deaths in their family, those with an elementary school education, and the unemployed make up the deleted comparison group. Using two-tailed tests: \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



coherence predicted a higher level of happiness across all ethnic groups. Specifically, the beta coefficients revealed sense of coherence to be the most significant and powerful predictor of happiness across the Southeast Asian refugee groups, except for the Chinese-Vietnamese, for whom ethnic density was a more powerful direct predictor.

For the Vietnamese, exposure to fewer traumas, being separated from fewer family members, not experiencing a death in the family, and being less traditional increased their sense of happiness. Being younger at the time of arrival, living in the U.S. for fewer years, being employed, and living in an ethnically dense area also directly predicted greater happiness. Being female, less traditional, and having greater English competence indirectly predicted (through the mediating effect of coherence) greater happiness.

For the Cambodians, relative youth at the time of arrival in the United States, better education (a primary school education versus no education), employment, and a smaller ethnic density significantly predicted greater happiness. Also, being female, experiencing fewer traumas, spending fewer years in transit, having a primary school education versus no education, being a high school graduate (compared to having a primary school education), being employed, having greater English skills, and living in an ethnically less dense area indirectly predicted (via their effect on coherence) greater happiness.

Laotians who were separated from more family members and had a primary school education instead of no formal education enjoyed greater happiness. Laotians who were exposed to fewer traumas, were less traditional, had a secondary school education, graduated from high school, or attended college or more (as compared to those with an elementary school education), enjoyed greater English competence, and lived in an ethnically more dense area also reported higher levels of happiness as these variables emerged as significant indirect predictors.

For the Hmong, sense of coherence was the sole direct predictor of happiness. However, being less traditional, having no formal education versus a primary school education, and having greater English competence were found to be significant indirect predictors (through their mediating effect on coherence) of greater happiness.

Chinese-Vietnamese who experienced more traumas, were separated from fewer family members, suffered fewer deaths in the family, had resided in the U.S. for a shorter period of time, had no formal education versus a primary school education, and lived in an ethnically dense area reported higher levels of happiness. In addition, being less traditional, having more recently arrived, possessing greater English competence, and living in an ethnically dense area also served as significant indirect predictors (through their effect on coherence) of greater happiness.

*Demoralization.* Table 3 presents the standardized beta weights of the independent predictors of demoralization for each Southeast Asian group using two-tailed tests. Sense of coherence again emerged as the most significant and powerful predictor of demoralization for all Southeast Asian groups. The negative direction of this relationship suggested a stronger coherence was associated with lower levels of demoralization.

For the Vietnamese, living in an ethnically less dense area directly predicted greater demoralization. Being male, more traditional, and reporting poorer English skills also indirectly predicted (through their effect on coherence) demoralization.

For Cambodians, experiencing more traumas, spending more years in transit, being older at the time of arrival, and having no formal education versus an elementary school education were significant direct predictors of greater demoralization. In addition, be-

Table 3. Direct and Indirect Effects of Sense of Coherence, Resistance Deficits, and Resource Variables on Demoralization Across Ethnic Groups

Variable	Vietnamese		Cambodian		Laotian		Hmong		Chinese-Vietnamese	
	D	I	D	I	D	I	D	I	D	I
Sense of coherence	-.34***	—	-.39***	—	-.36***	—	-.51***	—	-.31***	—
Resistance deficits										
Male <sup>1</sup>	.02	.04*	-.02	.03*	.08	.01	-.01	-.06	-.06	-.01
# of traumas	.04	.01	.18***	.12***	.08*	.05**	.06	.06	-.02	.03
Years in transit	-.05	-.02	.12*	.06**	.02	.02	.14*	.04	-.10	-.01
# of separated family members	-.03	.01	.04	.01	.10*	-.02	.10	.02	.24***	-.02
Death in family <sup>1</sup>	.05	.02	-.07	.01	.09*	-.02	-.02	.04	.12*	.01
Cultural traditionalism	.07	.07***	.03	.01	.07	.05**	.01	.09**	.14*	.11***
Resistance resources										
Age at arrival	.01	.01	.15***	.03	.05	-.02	-.12	.02	.12	-.01
Years in U.S.	-.06	-.02	-.01	.03	.10*	.01	.21***	-.06	.13*	.05*
No formal education <sup>1</sup>	-.01	-.01	.18***	.04*	-.03	.01	.25**	-.10*	-.10	.02
Secondary education <sup>1</sup>	.04	-.02	.07	-.03	.02	-.05**	-.01	-.05	.04	-.02
High school graduate <sup>1</sup>	-.03	-.01	.01	-.04*	-.02	-.05**	.01	.02	.01	.01
College or more <sup>1</sup>	.04	-.04	-.02	.01	.04	-.07***	.02	-.02	.10	-.03
Employed <sup>1</sup>	.02	.01	-.01	-.03	-.01	-.01	-.15*	.02	-.05	-.01
English competence	-.02	-.04*	-.02	-.08***	-.01	-.04*	.09	-.10*	-.09	-.05
Ethnic density	-.09*	-.02	-.05	.06***	.08	-.07***	.12	-.03	-.10	-.07**

<sup>1</sup>Females, those without any deaths in their family, those with an elementary school education, and the unemployed make up the deleted comparison group. Using two-tailed tests: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

ing male, experiencing more traumas, spending more years in transit, having no formal education versus an elementary school education, having an elementary school education rather than being a high school graduate, possessing poorer English skills, and living in an ethnically dense area were significant indirect predictors (as mediated by their effect on coherence) of increased demoralization.

In the case of Laotians, experiencing more traumas, being separated from more family members, having a death in the family, and living in the United States for a longer period of time directly predicted demoralization. Also, experiencing more traumas, being more traditional, having an elementary school education (versus a secondary school education, being a high school graduate or having a college education or more), reporting poorer English competence, and living in an ethnically less dense area indirectly predicted greater demoralization via their effect on sense of coherence.

For the Hmong, spending more years in transit, living longer in the United States, having no formal education versus an elementary school education, and being unemployed were significant direct predictors of higher levels of demoralization. In addition, cultural traditionalism, an elementary school education (versus no formal education), and poor English skills indirectly predicted greater demoralization.

Chinese-Vietnamese who were separated from more family members, had a death in the family, were culturally more traditional, and had lived in the United States for a longer period of time suffered greater demoralization. Also, cultural traditionalism, longer residence, and lower co-ethnic density predicted greater demoralization.

## DISCUSSION

These results revealed ethnic variation in the level of sense of coherence and exposure to resistance resources and deficits. Most notably, the Chinese-Vietnamese and Vietnamese experienced fewer traumas and greater access to resources (i.e., enjoyed better education and familiarity with a Western, urban lifestyle) than the other three Southeast Asian groups. In contrast, the previously illiterate, hill-tribal Hmong who came from a geographic setting that was most divergent from urban America were the most likely to suffer the greatest cultural dissonance upon arrival in the United States.

### *Happiness*

As predicted, sense of coherence emerged as the most significant direct predictor of happiness for all ethnic groups, except for the Chinese-Vietnamese, where the contribution of ethnic density surpassed that of coherence. Thus, while resistance resources and deficits also directly contributed to the prediction of happiness, a comparison of the beta coefficients suggested that coherence was generally the most important direct predictor across all ethnic groups. Thus, a refugee's subjective sense of his or her world as comprehensive, manageable, and meaningful significantly impacted his or her level of happiness.

Several resistance resources and deficits were also found to be significant direct and indirect predictors of happiness for these Southeast Asian refugees. Vietnamese and Cambodian men were less happy than the women in their respective groups secondary to their lowered sense of coherence. These Southeast Asian men may have suffered a greater loss of social status when they arrived in the United States, which, in turn, could have severely impaired their capacity to comprehend, manage, and find meaning in their new lives and setting.

The trauma variables were found to be significant direct predictors of lower levels of happiness in the Vietnamese and Chinese-Vietnamese and also significant indirect predictors of unhappiness in Cambodians and Laotians. The particularly high beta weights in the case of Cambodians suggested the circuitous and profound effect of accumulated traumas in altering their internal, subjective sense of coherence, and the latter, in turn, diminished their happiness. Contrary to expectation, the Laotians who were separated from more family members and the Chinese-Vietnamese who had experienced more traumas reported higher levels of happiness. Both findings are in need of further investigation.

Cultural traditionalism served primarily as an indirect predictor of unhappiness for the Southeast Asians. As hypothesized, refugees who clung to their traditional culture and rejected the mainstream American culture reported lower coherence which led to a lower level of happiness. Cultural traditionalism, however, failed to be a significant indirect predictor for the Cambodians, possibly because it competed with the trauma variables in accounting for the variance.

Turning to the resource variables, relative youth at time of arrival was a significant predictor of happiness for only the Vietnamese and Cambodians. In contrast, higher education and employment were associated with happiness across most groups. In general, those with a better education and were employed reported being happier and/or enjoyed a stronger sense of coherence which, in turn, led to greater happiness. Contrary to expectation, the Chinese-Vietnamese who had no formal education were happier than those with a primary school education. This deserves further investigation.

Greater English competence served as a significant indirect predictor of happiness across all ethnic groups by strengthening the refugees' ability to comprehend, manage, and find meaning in their new lives.

Finally, living in an ethnically more dense area directly mediated happiness for the Chinese-Vietnamese and the Vietnamese, and indirectly for the Laotians. It held a negative relationship for the Cambodians. The Chinese-Vietnamese were the only refugees who arrived in California to find existing and thriving Chinese communities, and were thus likely to enjoy an easier transition and greater emotional well-being secondary to the support they obtained from co-ethnics. The Vietnamese and the Laotians had among them better educated co-ethnics who could assist with the transition to the Western world, but the Cambodians on the whole were less educated (over one-fifth had no formal education), and were less likely to benefit from the presence of co-ethnics in facilitating a smoother transition and better well-being.

### *The Demoralization Models*

Sense of coherence was once again found to be the most significant direct predictor of demoralization for all ethnic groups. Its impact on demoralization far surpassed the contributions of the other variables. As predicted, a lowered coherence predicted a higher level of demoralization.

Parallel to the finding that Vietnamese and Cambodian men suffered from a lowered sense of coherence which, in turn, diminished their capacity for happiness, it was also found that these men suffered from greater demoralization. Again, this reflected an ever-increasing inability to perceive the world as comprehensible, manageable, and meaningful because of insurmountable hardships and the loss of social status upon arrival in the United States.

The trauma variables did not emerge as significant predictors of demoralization for

the Vietnamese. However, for the Cambodians and Laotians, they were found to be both direct and indirect predictors of demoralization. The size of the beta weights suggested that this was particularly true for the Cambodians. Thus, in addition to directly increasing demoralization, these experiences may have also reduced their ability to perceive the world as coherent which, in turn, may have fueled their feelings of demoralization. In contrast, for the Hmong who spent more years in transit and the Chinese-Vietnamese who were separated from more family members, their increased level of demoralization was not mediated by their sense of coherence. Thus, the traumas probably had the most profound effect on the Cambodians as they altered their general orientation to life.

As was the case with the happiness models, cultural traditionalism served primarily as an indirect predictor of demoralization for the five ethnic groups, i.e., it diminished the refugees' ability to experience the world as comprehensible, manageable, and meaningful, and, in turn, increased their feeling of demoralization.

Cambodians who were older at the time of arrival in the United States experienced greater demoralization. Contrary to expectation, increased length of residence was found to be associated with greater demoralization among the Laotians, the Hmong, and the Chinese Vietnamese. This suggested that after an initial sense of relief upon arrival in the United States, these refugees became increasingly more aware of, and daunted by, the magnitude of the difficulties that they had to confront in creating a comfortable life for themselves in their new home country.

As hypothesized, increased education and employment served as significant direct protectors from demoralization in Cambodian and Hmong refugees. In addition, they helped to mediate an increased sense of coherence in the Cambodians and Laotians, thereby decreasing the risk for demoralization. Contrary to expectation, the elementary-educated Hmong reported greater demoralization secondary to diminished sense of coherence, compared to those without an elementary education. They were more likely to be in the position of cultural brokers for the other Hmong refugees, and this finding may have reflected their feeling of inadequacy in playing this role.

As was found in the happiness models, English competence was a negative indirect predictor of demoralization by increasing the refugees' sense of coherence. Understandably, effective communication increased one's ability to successfully negotiate one's environment (i.e., increased one's sense of coherence) which likely decreased feelings of demoralization.

Consistent with the happiness models, a greater ethnic density served to buffer the Vietnamese, Chinese-Vietnamese, and the Laotians from greater demoralization, while it increased demoralization in the Cambodians. The former may be explained by the support gained from other co-ethnics in the community. In the case of the Chinese Vietnamese, the contribution of the existing Chinese community was likely to be significant, while for the Vietnamese and the Laotians, the better educated community members were likely to serve as important resources. For Cambodians, however, due to the limited education, and significant experience of traumas among the co-ethnics, living in an ethnically dense community appeared to serve as a reinforcer for feelings of demoralization. This inter-ethnic variation is very interesting and deserves further investigation.

### ***Conclusion***

The results of this study support Antonovsky's theory (1979, 1987) that sense of coherence serves as a significant and important predictor of psychological adjustment. While resource deficits and resources were found to be both direct and indirect predictors of

happiness and demoralization for the five Southeast Asian refugee groups, it was coherence which captured the most variance in nine out of the ten models of happiness and demoralization. Also, as predicted, sense of coherence was found to be a mediator of the significant indirect effects of such key variables as trauma (especially for Cambodians), cultural traditionalism, and English competence on the refugees' experience of happiness and demoralization. By and large, these did not directly affect happiness and demoralization, but served to change the refugees' sense of coherence, which, in turn, impacted their psychological adjustment. The presence of these indirect effects supported the profound impact of these objective conditions in altering the refugees' orientation to the world, which was manifested through their adjustment.

These findings may be used to benefit the planning of interventions aimed at promoting the adjustment of Southeast Asian refugees. The refugees' diminished sense of coherence may be promoted by programs which aim to increase their English competence, broaden their cultural orientation, and, in the case of Cambodians, work through their war-related traumas. It is likely that many existing programs have already incorporated these components. However, if the programs also recognize the central role of sense of coherence, and aim to promote the refugees' ability to comprehend, manage, and find meaning in their new homeland, it is likely that these interventions will increase their effectiveness in facilitating the refugees' overall adjustment. In addition, they are also likely to effectively reduce the risk of further decompensation in the refugees.

## REFERENCES

- ANTONOVSKY, A. (1979) *Health, stress, and coping*. San Francisco, CA: Jossey-Bass.
- ANTONOVSKY, A. (1987) *Unraveling the mystery of health: How people manage stress and stay well*. San Francisco, CA: Jossey-Bass.
- ANTONOVSKY, A. (1993) The structure and properties of the sense of coherence scale. *Social Science and Medicine*, 36 (6), 725-733.
- BARNEY, L. (1979) *The Hmong: Their history and culture*. New York: Lutheran Immigration and Refugee Services.
- BEISER, M. (1990) Mental health of refugees in resettlement countries. In W. H. Holtzman & T. H. Bornemann (Eds.), *Mental health of immigrants and refugees* (pp. 51-65). Austin, TX: Hogg Foundation for Mental Health, University of Texas.
- BEN-PORATH, Y. S. (1991) The psychosocial adjustment. In J. Westermeyer, C. L. Williams, & A. N. Nguyen (Eds.), *Mental health services for refugees* (DHHS Publication No. ADM 91-1824, pp. 1-23). Washington, DC: U.S. Government Printing Office.
- CARLSON, E. B., & ROSSER-HOGAN, R. (1991) Trauma experiences, post-traumatic stress, dissociation, and depression in Cambodian refugees. *American Journal of Psychiatry*, 148 (11), 1548-1551.
- CARMEI, S., ANSON, L., LEVENSON, A., BONNEH, D. Y., & MAOS, B. (1991) Life events, sense of coherence and health: Gender differences on the kibbutz. *Social Science and Medicine*, 32, 1089-1096.
- DAHLIN, L., CEDERBLAD, M., ANTONOVSKY, A., & HAGNELL, O. (1990) Childhood vulnerability and adult invincibility. *Acta Scandinavia Psychiatrica*, 82, 228-232.
- DUNNIGAN, T., & OLNEY, D. P. (1985) Hmong. In D. W. Haines (Ed.), *Refugees in the United States: A reference handbook* (pp. 111-126). Westport, CT: Greenwood Press.
- DUPUY, H. J. (1974) Utility of the National Center for Health Statistics' General Well-Being Schedule in the assessment of self-representation of subjective well-being and distress. In *National Conference on Education in Alcohol, Drug Abuse, and Mental Health Programs*. National Center for Health Statistics. Washington, DC: U.S. Government Printing Office.

- EBIHARA, M. (1985) Khmer. In D. W. Haines (Ed.), *Refugees in the United States: A reference handbook* (pp. 127-147). Westport, CT: Greenwood Press.
- FRANK, J. (1973) *Persuasion and healing*. Baltimore, MD: Johns Hopkins University Press.
- GONG-GUY, E. (1987) *The California Southeast Asian mental health needs assessment*. Oakland, CA: Asian Community Mental Health Services.
- GORDON, L. W. (1990) Southeast Asian refugee migration to the United States. In J. T. Faucett & B. V. Carino (Eds.), *Pacific bridges: The new immigration from Asia and the Pacific Islands* (pp. 153-173). Staten Island, NY: Center for Migration Studies.
- HUNG, N. M. (1985) Vietnamese. In D. W. Haines (Ed.), *Refugees in the United States: A reference handbook* (pp. 195-208). Westport, CT: Greenwood Press.
- KINZIE, J. D., BOEHNLEIN, J. K., LEUNG, P. K., MOORE, L. J., RILEY, C., & SMITH, D. (1990) The prevalence of post-traumatic disorder and its clinical significance among Southeast Asian refugees. *American Journal of Psychiatry*, 147 (7), 913-917.
- KINZIE, J. D., FREDRICKSON, R. H., BEN, R., FLECK, J., & KARLS, W. (1984) Post-traumatic disorder among survivors of Cambodian concentration camps. *American Journal of Psychiatry*, 141, 645-650.
- KINZIE, J. D., & MANSON, S. (1990) The prevalence of post-traumatic stress disorder and its clinical significance among Southeast Asian refugees. *American Journal of Psychiatry*, 147 (7), 913-917.
- LARSSON, G., & SETTERLIND, S. (1990) Work load/work control and health: Moderating effects of heredity, self-image, coping and health behavior. *International Journal of Health Science*, 1, 79-88.
- LIN, K. M. (1986) Psychopathology and social disruption in refugees. In C. Williams & J. Westermeyer (Eds.), *Refugee mental health in resettlement countries* (pp. 61-73). Washington, DC: Hemisphere Press.
- MOLLIKA, R. F., WYSHAK, G., & LAVELL, J. (1987) The psychosocial impact of war trauma and torture on Southeast Asian refugees. *American Journal of Psychiatry*, 144 (12), 1567-1572.
- PETRIE, K., & AZARIAH, R. (1990) Health-promoting variables as predictors of response to a brief pain management program. *Clinical Journal of Pain*, 6, 43-46.
- RUMBAUT, R. (1985) Mental health and the refugee experience: A comparative study of Southeast Asian refugees. In T. C. Owan (Ed.), *Southeast Asian mental health: Treatment, prevention, services, training, and research* (DHHS Publication No. ADM 85-1399, pp. 433-486). Rockville, MD: National Institute of Mental Health.
- RUMBAUT, R. (1991) The agony of exile: A study of the migration and adaptation of Indochinese refugee adults and children. In F. L. Ahearn, Jr. & J. L. Athey (Eds.), *Refugee children: Theory, research and services* (pp. 53-91). Baltimore, MD: Johns Hopkins University Press.
- RYLAND, E. K., & GREENFELD, S. (1991) Work stress and well-being: An investigation of Antonovsky's sense of coherence model. *Journal of Social Behavior and Personality*, 6, 39-54.
- SAGY, S., ANTONOVSKY, A., & ADLER, I. (1990) Explaining life satisfaction in later life: The sense of coherence model and activity theory. *Behavioral Health and Aging*, 1, 11-25.
- SOBEL, M. (1982) Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-310). San Francisco, CA: Jossey-Bass.
- STRAND, P. J., & JONES, W., JR. (1985) *Indochinese refugees in America: Problems of adaptation and assimilation*. Durham, NC: Duke University Press.
- VAN ESTERICK, J. L. (1985) Lao. In D. W. Haines (Ed.), *Refugees in the United States: A reference handbook* (pp. 149-165). Westport, CT: Greenwood Press.
- WESTERMEYER, J., VANG, T. F., & LYFONG, G. (1983) Hmong refugees in Minnesota: Characteristics and self-perceptions. *Minnesota Medicine*, 66, 431-439.
- YING, Y., AKUTSU, P. D., & HUANG, L. N. (1996a) *Sense of coherence in Southeast Asian refugees*. Manuscript submitted for publication.
- YING, Y., AKUTSU, P. K., & HUANG, L. N. (1996b) *Psychological dysfunction in Southeast Asian refugees: The contribution of sense of coherence*. Manuscript submitted for publication.