PREDICTORS OF PSYCHOLOGICAL DISTRESS AMONG SOUTHEAST ASIAN REFUGEES

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Abstract—This paper analyzed data from one of the first needs assessment projects on a representative non-clinical population of Southeast Asian refugees in the United States in order to test two hypotheses: (1) whether or not premigration experiences still have an effect on psychological distress beyond the initial resettlement period and (2) whether or not interethnic group differences existed in the predictors of psychological distress between three Southeast Asian refugee groups, the Vietnamese, Cambodians and Lao. The results of the analysis of 2180 subjects supported both hypotheses. Regardless of ethnicity and the number of years in the U.S., premigration trauma events and refugee camp experiences were significant predictors of psychological distress even 5 years or more after migration and significant group differences in the types of postmigration distress predictors were also found. Acculturation concerns for the Vietnamese and Lao were influenced by both premigration and postmigration variables. In contrast, the primary concerns of the Cambodians were still related to premigration issues. The results also indicated that Vietnamese and Lao women were more likely to experience distress than their male counterparts, but no gender differences emerged for the Cambodians. Age predicted distress for Vietnamese and Cambodians, but not Lao. Similar to previous findings in the literature, Cambodians reported the highest levels of distress, followed by Lao and then Vietnamese. Interpretations of these results for this community sample are proposed.

Key words—Southeast Asian refugees, distress predictors, psychological distress, resettlement

INTRODUCTION

Since 1975, substantial numbers of Southeast Asian refugees have escaped war, genocide, internal political turmoil, and famine in their home countries to seek refuge in the United States. In 1988, this population numbered nearly 900,000 and is comprised primarily of Vietnamese, Cambodians and Lao [1]. Southeast Asian refugees share many similarities in their pre- and postmigration experiences, due to geographic proximity of their homelands, socio-political circumstances forcing their flight, and the experience of enormous psychological as well as physical trauma. Although many have displayed remarkable motivation, resiliency and progress in overcoming the multifaceted pre- and postmigration obstacles of resettlement, for most, psychological distress has been marked and predictable. Those at high risk for developing serious psychiatric disorders have been identified as individuals who had (1) suffered greater degree of family loss or separation, (2) spent the longest time in refugee camps, (3) multiple traumatic experiences, (4) presently no employment, (5) the least education, (6) the least English proficiency and (7) fewer emotional and material resources [2–4]. The greatest high risk period for developing serious mental health disorders has been identified to be during the 'early' resettlement period, which ranges from 2 to 18 months [5–7].

In a 2 year study of Southeast Asian refugees who had been in the U.S. for approximately 3–4 years,

Rumbaut [8] found that premigration factors were the major contributors to the level of distress among this group at the first testing, and a year later he found that postmigration variables of economic and cultural adaptation became the major sources of distress. This led the author to conclude: "past losses and events seem to heal with time and recede in importance as present demands and challenges grew in psychological significance" [8]. Beiser *et al.* [9] also found that the impact of refugee camp experiences diminished within this same time frame of 4 to 5 years after resettlement. They speculated, however, that even though the painful memories of refugee camp internment can be kept out of awareness for a time, these memories may re-emerge into consciousness during later years. Beiser *et al.* [9] further postulated that other premigration experiences such as bereavement may be more powerful, longer-lived stresses than camp experiences.

Despite these intergroup similarities of geographic and socio-political circumstances, there are significant differences as well. For example, each group differs in its cultural heritage, specific circumstances of emigration, and socioeconomic resources and skills available to them during resettlement. Thus, the resettlement experience of Southeast Asian refugee groups to American society has not been uniform, and each has been faced with distinct obstacles. Yet much of the research on this population does not provide insight into these potential differences because the studies focus either on one ethnic group

alone or the different ethnic groups are clustered together as a total sample [8]. The results of the few comparative studies of intergroup differences indicate that Southeast Asian refugees differ significantly in both the degree and causes of psychological distress. Vietnamese have been found to be better adjusted and exhibit less psychological distress than other Southeast Asian refugee groups [2, 10]. A constellation of factors may explain this finding. The first wave of refugees who arrived in 1975 consisted mainly of well educated Vietnamese who were able to speak some English, and who managed fairly quickly to establish themselves economically. Although subsequent Vietnamese refugees were less educated and less financially stable, they, unlike the Cambodians and Lao, had established ethnic communities to enter upon their arrival in the U.S., which provided them both material resources and social support. Furthermore, the Vietnamese have had a longer history of colonization than the other two groups, and therefore have had greater exposure to Western culture.

The second wave of refugees entered the U.S. in 1978, and were mainly Cambodians and Lao. A large proportion of this group was poor and illiterate, and had few resources and skills which could be readily transferred to the host country. Moreover, the Cambodians had suffered the concerted efforts of the Pol Pot regime to exterminate them, and had also suffered the longest time in some of the worst conditions in refugee camps. Therefore, this group of refugees has been found to exhibit the highest levels of distress followed by Hmong, Lao and Vietnamese [2].

To date, no clear delineation has been documented of either the longitudinal aspects of the resettlement process or any ethnic group differences within this Southeast Asian refugee population. Therefore, it would seem important to explore and identify the nature of the stresses which may be impeding psychological adjustment, because the threat of premigration issues to the mental health of Southeast Asian refugees may not be confined to the early years of resettlement. Moreover, a major limitation of much of the existing literature is that the samples have been conducted on clinical populations and the psychopathology noted has been identified within a self-selected group of patients.

The purpose of this paper is 2-fold: (1) to determine whether or not premigration experiences still have an effect on psychological distress beyond the initial resettlement period and (2) to identify whether or not there are group differences in pre- and postmigration sociodemographic predictors of psychological distress among the three Southeast Asian refugee groups used for this study: the Vietnamese, Cambodians and Lao. Thus we hypothesized that group differences would be found in the pattern of distress predictors between the three groups due to differences in both pre- and postmigration variables. We further antici-

pated that the prominent predictors of psychological distress for the Vietnamese would tend to be postmigration variables associated with economic stability, such as income, because they had less premigration trauma and also had established communities to enter upon their arrival to the U.S., and the prominent predictors for the Cambodians and Lao would tend to be premigration variables due to the nature of the premigration experiences.

This paper provides a unique insight into Southeast Asian refugee population, because it addresses the three deficits in the literature identified above: first, the data used is from one of the first statewide needs assessment projects on a *nonclinical* representative sample of Southeast Asian refugees; second, the sample was comprised of individuals who had been in the U.S. for an average of 5–6 years; and third, the analyses is specifically directed toward identifying intergroup differences.

METHOD

Sample

The data used in this study is from the California Southeast Asian Mental Health Needs Assessment study [11]. The total sample of 2180 in this study was comprised of Vietnamese ($N = 867$: male = 508, female = 359), Cambodians ($N = 590$: male = 300, female = 290) and Lao ($N = 723$: male = 423, female = 300), between the ages of 18–68, with a median age of 35. This sample was drawn from 9 counties in California which contain 90% of the Southeast Asian refugee population in the state. The Vietnamese had spent an average of 6.6 yr in the U.S., Cambodians 4.7 yr and Lao 6.3 yr. The Vietnamese were the most highly educated group with an average of 10.5 yr of education received in their home country, Cambodians with 5.9 yr and Lao with 7.2 yr of education. Occupations in the homeland were divided into three groups: professional/blue collar (Vietnamese 29.1%, Cambodians 14.8%, Lao 28.4%), farmer/fisherman (Vietnamese 4.6%, Cambodians 33.9%, Lao 18.3%) and military (Vietnamese 12.2%, Cambodians 8.3%, Lao 11.3%). The rest of the sample was coded as having no occupation in their homeland. Those who were presently unemployed consisted of 23.0% Vietnamese, 33.7% Cambodians and 30.6% Lao, and a large proportion of the total sample was still fully dependent on welfare (Vietnamese 49.7%, Cambodians 79.3%, Lao 61.4%). Both Cambodians and Lao had spent an average of 3 yr in refugee camps, and Vietnamese 1.4 yr.

Bi-lingual interviewers were recruited from within each of the targeted communities in each of the 9 counties. The Vietnamese sample was contacted by telephone using a random sampling technique. The Cambodian and Lao informants were contacted by a multi-cluster sampling strategy for face to face interviews and personal interviews with key community

informants, because many did not have telephones.* The questionnaire was translated into Vietnamese, Khmer and Lao by bilingual staff. Back translation procedures were followed and questions were then tested for accuracy through pilot interviews.

Measures

The major dependent measures were depression and anxiety symptoms derived from the Health Opinion Survey (HOS) [12]. The HOS has been validated with a general U.S. population in clinical and general epidemiological studies [13]. Although the use of the HOS with the Southeast Asian populations has been limited to a single previous epidemiological study [14], its utility in identifying at-risk populations in other ethnic groups, notably African-Americans and Hispanics has been previously demonstrated [11]. The Depression and Anxiety factors from this questionnaire were selected for analyses since it has been noted that these are the most commonly seen problems among Southeast Asian refugees [2–3, 15–19]. The Depression factor consisted of 11 items noting the frequency of depression symptoms (e.g. "How often do you feel that life is hopeless", "How often do you feel alone and helpless", "Do you sometimes wonder if anything is worthwhile any more"). The Anxiety factor consisted of 15 items which recorded the frequency of symptoms of anxiety (e.g. "Do your hands ever tremble enough to bother you", "Are you ever troubled by your hands or feet sweating so they feel damp and clammy". "Have you ever been bothered by your heart beating hard"). Before reliable comparisons could be made between the three different cultural groups, it was essential to establish comparable meaning among the three groups for each of the two factors. Principal components analyses and varimax rotations were performed for each group to examine whether the items loaded on the same factors for each of the three groups. Factor analysis is an appropriate method to validate measures for cross-cultural comparison because it identifies factor structures which are robust and replicable across cultural groups. It then enables comparisons and interpretations of results to be made. The results showed that the same items that made up the two separate factors loaded at least 0.30 or above for each of the three groups. The results suggested that the Depression and Anxiety factors were common for all three groups and implies that the measure has the same meaning for the Vietnamese, Cambodians and Lao. Overall the two factors were found to be highly reliable with

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*A detailed description of the sampling technique is available in the published report from the original study.
†0 = Yes, 1 = No.
‡Scored on a scale from 1 to 5 where 1 = excellent; 5 = very bad.
§Scale of 0 to 8 where 0 = no formal education; 8 = M.D./Ph.D.

an alpha coefficient of 0.85 for the Depression factor and 0.89 for the Anxiety factor.

Pre- and postmigration variables were selected according to the most frequently cited mediators of distress from the literature. A correlation of these variables and the two factors were also conducted. A significant relationship between these variables and the Depression and Anxiety factors were found. Thirteen independent variables were identified. These variables were classified as either pre- or postmigration variables. *Premigration variables* consisted of: (1) number of trauma events experienced, (2) number of years spent in refugee camps and (3) number of family members who died. 'Trauma' was defined in the California Southeast Asian Mental Health Needs Assessment study as having been a victim of physical and/or emotional torture or a forced perpetrator of, witness of, or having immediate knowledge of forced separation, torture, imprisonment or murder of loved ones. Although we realize that impact of trauma is dependent upon individual vulnerability, response and coping strategies available, this type of personal data was not elicited in the original study. Only the number of traumatic events was recorded and therefore available for the purpose of this study.

Postmigration variables consisted of: (1) presently working,† (2) receiving public assistance,† (3) attending English as a Second Language (ESL) classes,† (4) family income, (5) proficiency in speaking English‡ and (6) family size in the U.S. Gender (0 = males, 1 = females) and age were also included as independent variables. The number of years in the U.S. and the level of formal education received in their home country§ were included as controlling variables.

Statistical analyses

The depression and anxiety measures were relatively highly correlated (range 0.59–0.78), therefore, the multivariate regression analyses were used. This procedure takes into account the relationship between depression and anxiety. The total sample was divided into two groups. Those who had been in the U.S. for 5 years or more (Early Refugee Sample) and those who had been in the U.S. for less than 5 years (Recent Refugee Sample). In order to determine whether or not premigration experiences still have an effect after 5 years of resettlement, multivariate regression analyses were performed separately on the Early and Recent samples. Analyses of these samples included ethnic groups as a controlling variable to establish whether or not premigration stresses were related to depression and anxiety regardless of ethnicity and the number of years in the U.S. To include ethnicity as a controlling variable in the analyses, it was necessary to 'dummy' code the three ethnic groups using Vietnamese as the baseline group. The variable 'Lao' compared Lao and Vietnamese and the variable 'Camb' compared Cambodians and Vietnamese. Multivariate regression analyses was also performed separately on each of the three groups to

Table 1. Univariate model results for 2 waves of refugee groups and the 3 ethnic groups

Early Refugee sample
Depression $F(15,1047) = 13.15$, $R^2 = 0.40$, $P < 0.0001$
Anxiety $F(15,1047) = 17.52$, $R^2 = 0.44$, $P < 0.0011$

Recent Refugee sample
Depression $F(15,1321) = 11.07$, $R^2 = 0.33$, $P < 0.0001$
Anxiety $F(15,1321) = 23.83$, $R^2 = 0.46$, $P < 0.0001$

Vietnamese
Depression $F(13,557) = 5.71$, $R^2 = 0.34$, $P < 0.0001$
Anxiety $F(13,557) = 8.24$, $R^2 = 0.40$, $P < 0.0001$

Cambodians
Depression $F(13,428) = 11.90$, $R^2 = 0.60$, $P < 0.0001$
Anxiety $F(13,428) = 17.09$, $R^2 = 0.67$, $P < 0.0001$

Lao
Depression $F(13,422) = 5.06$, $R^2 = 0.37$, $P < 0.0001$
Anxiety $F(13,422) = 8.12$, $R^2 = 0.45$, $P < 0.0001$

determine if different variables would emerge as predictors for each of the groups. Analyses of variance (ANOVA) were also performed to establish group differences in the levels of depression and anxiety.

RESULTS

The results showed that both the overall multivariate regression analyses model (Early Refugee sample: Wilks Lambda $= 0.77$, $F(30,2094) = 9.79$, $P < 0.0001$; Recent Refugee sample: Wilks Lambda $= 0.76$, $F(30,2642) = 13.08$, $P < 0.0001$; Vietnamese: Wilks Lambda $= 0.81$, $F(26,1112) = 4.83$, $P < 0.0001$; Cambodians: Wilks Lambda $= 0.50$, $F(26,532) = 8.40$, $P < 0.0001$; Lao: Wilks Lambda $= 0.76$, $F(26,844) = 4.76$, $P < 0.0001$), and the univariate models were significant for both Early and Recent Refugee samples as well as for each of the three groups (see Table 1). The results of the comparison between the Early and Recent Refugee samples will be presented first, followed by the intergroup differences.

Depression

Comparison of Early and Recent Refugee samples. The results of the multivariate regression analyses for the Early and Recent Refugee samples on depression are presented in Table 2. The results showed that regardless of ethnicity and the number of years in the U.S., the number of trauma events experienced during premigration was a significant predictor of depression for both Early and Recent Refugee samples. The number of years in refugee camps also emerged as a significant premigration predictor of depression for the Early Refugee sample. The significant postmigration predictors for the Early Refugee sample were: being unemployed, low family income and low proficiency in speaking English. The only significant postmigration predictor for the Recent Refugee sample was receipt of public assistance. For both groups, women were more likely to experience depression than men. Interestingly, the number of years in the U.S. also emerged as a significant predictor for the Early Refugee sample; the greater the number of years in the U.S. the more likely they were to experience depression. For the Recent Refugee sample, receiving little or no education in Asia and age were also positively correlated with depression. By taking all the pre- and postmigration variables into account and using Vietnamese as the baseline group, Vietnamese were more likely to experience depression than Cambodians for the Early Refugee sample. No differences were found between Vietnamese and Lao.

Intergroup differences. Table 3 shows the results of the multivariate regression analyses for the three groups on depression. The number of trauma events experienced emerged as a major premigration predictor of depression for all three groups. However, the other pre- and postmigration predictors differed between the groups. For Vietnamese, receiving little or

Table 2. Results of the multivariate regression analysis for Early and Recent Refugee sample on Depression

Variables	Early Refugee sample		Recent Refugee sample	
	Beta	t	Beta	t
Gender	0.11	3.85***	0.07	2.63**
Age	0.01	0.26	0.11	3.67***
Years in U.S.	0.08	2.58*	−0.04	1.21
Education in Asia	−0.03	−1.02	−0.07	2.04*
Premigration				
Number of trauma events	0.18	5.98***	0.23	8.21***
Years in refugee camps	0.09	2.72**	0.01	0.40
Number of family member died	0.04	1.37	0.04	1.43
Postmigration				
Employment	0.12	3.31**	−0.03	0.95
Public assistant	−0.03	−1.22	−0.08	2.74**
ESL classes	−0.01	−0.47	−0.02	0.78
Family income	−0.08	−2.89**	−0.04	1.52
Speaking English	0.12	3.10**	0.02	0.60
Family size in the U.S.	−0.04	−1.31	−0.05	1.85
Lao	0.02	0.76	0.02	0.65
Cambodians	−0.13	3.94***	−0.03	0.99

*$P < 0.05$.
**$P < 0.01$.
***$P < 0.001$.

predictors for both groups were: receiving public assistance, low family income and a low proficiency in spoken English. Being unemployed also emerged as a significant predictor for the Early Refugee sample. Gender and age also emerged as significant predictors of anxiety for both groups, with women and older people more likely to experience anxiety than men and younger people. The number of years in the U.S. also emerged as a significant predictor of anxiety for the Early Refugee sample. If we again statistically take all the pre- and postmigration variables into account and use Vietnamese as the baseline group, the Lao were more likely to experience anxiety than Vietnamese for both Early and Recent Refugee samples. The Cambodians were more likely to experience anxiety than Vietnamese for the Early Refugee sample.

Intergroup differences. The results of the multivariate regression analyses for each of the three groups on anxiety are presented in Table 5. Group differences emerged in the pattern of pre- and postmigration predictors of anxiety. The most significant premigration predictor of anxiety for both Cambodians and Lao was consistently, the number of trauma events experienced. The greater the number of years spent in refugee camps was also a significant premigration predictor for Cambodians. In contrast, this variable had an inverse relationship for the Vietnamese which also occurred for depression. That is, the fewer number of years in the camp predicted higher levels of anxiety. The number of family members who died, and having received little or no formal education in their home country were also significant premigration predictors of anxiety for Vietnamese.

Significant postmigration predictors for each of the groups were: low family income and large family size in the U.S. for Vietnamese; attending ESL classes for Cambodians; and receiving public assistance and being unemployed for Lao. Gender recurred as a significant predictor for both Vietnamese and Lao,

with women more likely to experience anxiety than men. Age again emerged as a predictor of anxiety for Vietnamese and Cambodians and was positively correlated with anxiety.

ANOVA results showed significant group differences ($F(2,2177) = 43.53$, $P < 0.0001$) with Cambodians reported the highest level of anxiety (mean = 18.73, SD = 12.74) followed by Lao (mean = 16.84, SD = 12.15) and Vietnamese (mean = 13.09, SD = 10.93).

DISCUSSION

The overall multivariate regression analyses model used for predicting psychological distress was significant for both Early and Recent Refugee samples, as well as for each of the three groups. The results supported the first hypothesis: regardless of the ethnicity of the group, premigration stresses were still strong predictors of depression and anxiety for Southeast Asian refugees even after 5 years or more in the U.S. This finding is contrary to previous studies which suggest that the effect of premigration stresses on psychological well-being and adjustment fade after 4–5 years, and postmigration stresses become more prominent [8, 9]. Postmigration concerns did emerge as significant predictors of distress, but premigration stresses clearly have not faded with time. Instead, they still appear to play a prominent role in the well-being and adjustment of this group even after 5 years of resettlement. In fact, regardless of ethnicity for the Early Refugee group, the greater the number of years in the U.S. was positively correlated with distress. One explanation could be that adjustment and establishing financial self sufficiency are strongly interrelated, since the postmigration variables which emerged as significant predictors of distress were related to this objective: unemployment, low family income, in receipt of public assistance and low proficiency in speaking English.

Table 5. Results of the multivariate regression analysis for each of the 3 groups on Anxiety

Variables	Vietnamese		Cambodians		Lao	
	Beta	t	Beta	t	Beta	t
Gender	0.09	2.38**	0.04	0.83	0.15	3.40**
Age	0.15	3.52**	0.23	4.38***	0.07	1.45
Years in U.S.	−0.01	0.31	0.08	1.26	0.07	1.23
Education in Asia	−0.09	1.99*	−0.07	1.10	0.03	0.53
Premigration						
Number of trauma events	0.06	1.41	0.30	6.24***	0.28	5.95***
Years in refugee camps	−0.12	2.92**	0.33	4.86***	0.05	0.96
Number of family members died	0.10	2.52**	0.08	1.77	−0.03	0.70
Postmigration						
Employment	0.01	0.20	0.10	1.65	0.13	2.31**
Public assistant	−0.05	0.16	−0.07	1.16	−0.15	2.98**
ESL classes	−0.03	1.65	−0.13	2.52**	0.04	0.89
Family income	−0.15	3.53***	−0.05	0.92	0.05	1.04
Speaking English	0.08	1.54	0.08	1.17	−0.03	0.44
Family size in the U.S.	0.10	2.44*	−0.04	0.83	0.08	1.70

*$P < 0.05$.
**$P < 0.01$.
***$P < 0.001$.

Table 3. Results of the multivariate regression analysis for the 3 groups on Depression

Variables	Vietnamese		Cambodians		Lao	
	Beta	t	Beta	t	Beta	t
Gender	0.12	2.93**	0.08	1.54	0.17	3.59***
Age	0.14	3.19**	0.18	3.19**	−0.03	0.51
Years in U.S.	−0.00	0.03	0.14	1.90	0.11	2.12*
Education in Asia	−0.11	2.44**	−0.15	2.35**	0.00	0.05
Premigration						
Number of trauma events	0.09	2.18*	0.25	4.90***	0.18	3.58***
Years in refugee camps	−0.10	2.42*	0.33	4.48***	−0.01	0.25
Number of family members died	0.07	1.84	0.05	0.95	−0.00	0.09
Postmigration						
Employment	0.03	0.63	0.10	1.61	0.18	3.04**
Public assistant	−0.01	0.26	−0.09	1.52	−0.14	2.58**
ESL classes	−0.05	1.29	−0.14	2.60**	0.00	0.05
Family income	−0.16	3.83***	−0.07	1.30	0.10	2.09*
Speaking English	0.01	0.14	0.01	0.07	−0.07	1.13
Family size in the U.S.	−0.01	0.13	−0.11	2.12*	0.05	0.97

*$P < 0.05$.
**$P < 0.01$.
***$P < 0.001$.

no formal education in their home country was a significant premigration predictor of depression, and, unexpectedly, the fewer number of years spent in a refugee camp was also significant. Only low family income emerged as a postmigration predictor of depression for Vietnamese. In addition to the trauma experiences, the two other significant premigration predictors for Cambodians were: greater the number of years spent in a refugee camp and receiving little or no formal education in their home country. Significant postmigration predictors were: attending ESL classes and small family size in the U.S. For the Lao, only the postmigration predictors of receipt of public assistance, being unemployed, the greater the number of years in the U.S. and high family income were significant for depression.

Gender emerged as a significant predictor for Vietnamese and Lao, with women more likely to experience depression than men. Age also emerged as a significant predictor for Vietnamese and Cambodi-

ans and was positively correlated with depression.

Results of the analyses of variance (ANOVA) found significant group differences ($F(2,2177)$ $= 20.21$, $P < 0.0001$). Cambodians (mean $= 12.01$, SD $= 8.03$) reported experiencing the highest level of depression, followed by Lao (mean $= 11.84$, SD $= 6.81$) and Vietnamese (mean $= 9.95$, SD $= 6.75$).

Anxiety

Comparison of Early and Recent Refugee samples. Table 4 shows the results of the multivariate regression analyses for the Early and Recent Refugee samples on anxiety. The results showed that regardless of ethnicity and the number of years in the U.S., the number of trauma events experienced also emerged as a significant premigration predictor of anxiety for both the Early and Recent Refugee samples. The number of years spent in refugee camps also emerged as significant predictor of anxiety for the Early Refugee sample. Significant postmigration

Table 4. Results of the multivariate regression analysis for Early and Recent Refugee sample on Anxiety

Variables	Early Refugee sample		Recent Refugee sample	
	Beta	t	Beta	t
Gender	0.11	4.19***	0.09	3.30**
Age	0.08	2.79**	0.17	6.35***
Years in U.S.	0.08	2.50*	−0.03	1.11
Education in Asia	0.00	−0.03	0.06	1.78
Premigration				
Number of trauma events	0.20	6.49***	0.25	9.45***
Years in refugee camps	0.10	3.31**	−0.01	0.46
Number of family member died	0.05	1.82	0.03	1.04
Postmigration				
Employment	0.09	2.72**	0.03	1.14
Public assistant	−0.07	−2.45*	−0.09	3.37**
ESL classes	0.02	0.96	−0.00	0.16
Family income	−0.09	−3.15**	−0.07	2.52*
Speaking English	0.10	2.79**	0.12	3.54***
Family size in the U.S.	0.00	0.00	0.02	0.94
Lao	0.08	2.66**	0.09	3.05**
Cambodians	0.07	2.01*	0.06	1.92

*$P < 0.05$.
**$P < 0.01$.
***$P < 0.001$.

It was unexpected, but not surprising, to find that this *nonclinical*, representative sample of Southeast Asian refugees exhibited patterns of distress consistent with studies of their clinical counterparts [22]. Southeast Asian refugees are displaced from their countries by events outside of their control such as war, genocide and turbulent political situations, and they have fled their homelands to save their lives. Other refugee populations, such as, Central American, Eastern European, African and Soviet Union refugee populations, have experienced similar upheaval and subsequent psychological distress, and many experience catastrophic stress and later experience posttraumatic stress disorder (PTSD) [26, 27]. According to Mollica [28], the majority of refugees have experienced "social earthquakes" and, at the minimum, their vulnerability to psychiatric illness has been increased [28, p. 254]. "Loss of control of the world" is an essential feature of the trauma/torture experienced by refugees [28, p. 254]. Even though refugees are a diverse group of people from widely different cultural backgrounds who exhibit a full range of psychiatric disorders, they still manifest a striking similarity among the symptoms of emotional distress and psychiatric illness [29]. It has been suggested [28, 29] that much of the psychological distress and symptoms may result from the experience of forced migration and subsequent difficulties in acculturation to a new environment and creation of a new identity. Therefore the results of the present study may be relevant to other refugee populations.

Gender differences were also identified within and across the three groups. Vietnamese and Lao women were more likely to experience depression and anxiety than their male counterparts. However no gender differences were found in the level of distress for Cambodians. The reason for this is unclear. A possible explanation could be that both Cambodian women and men may have experienced such extreme levels of trauma that the enormity of the experiences overrides gender differences. The conflict in the literature on gender differences in levels of distress for Southeast Asian refugees does not shed light onto this finding [9]. Studies which have found gender differences used samples of refugees who attended health and mental health clinics. Therefore, some researchers speculate that gender differences found may be attributed to differential tendencies in seeking help [9]. However, as noted, the present study reveals findings from a representative, non-clinical community sample, and therefore, the gender differences which did emerge may well indicate a real finding which warrants closer examination.

Age was also a predictor of distress for Vietnamese and Cambodians. This result supports the findings of other studies that age is a risk factor in psychological distress [30–32]. Older refugees suffer from an increasing sense of isolation as younger members of their families become socialized into the majority culture at a pace much faster than their own, and they witness a diminution of the values of their native culture. It is unclear why age differences were not found for Lao.

SUMMARY AND IMPLICATIONS

In summary, the results strongly indicate that for the majority of Vietnamese, Cambodian and Lao refugees, premigration stresses associated with resettlement may not resolve and fade within the 'early' years of resettlement as originally speculated. These prolonged effects of premigration variables on psychological distress clearly underscores the necessity for ongoing services and support in order to assist Southeast Asian refugees to cope with both pre- and postmigration stress beyond the first few years of resettlement. These findings also demonstrate clear differences within the Southeast Asian refugee groups. The differences between the three groups in the types of pre- and postmigration predictors of psychological distress suggest that services need to be tailored to the unique inter- and intra-group differences as well as to high-risk groups, such as women and older people, in order to support efforts to overcome both the practical and emotional tasks still facing them in their continuing progress towards successful adjustment. For example, job training and business management skills more commensurate with premigration status are needed for the Vietnamese and Lao. The postmigration predictors of distress for the Cambodians were small family size in the U.S. and the attendance of ESL. These two predictors indicate specific areas that directly impair adjustment for this group.

The literature on the Cambodians has thus far focussed primarily on the degree of distress this group has experienced. The present study indicates that day-to-day activities and their social environment should also be taken into consideration in order to mitigate ongoing acculturation problems, and also to identify methods which would be effective in assisting this group in their adjustments. Examples of interventions could be to design more creative and effective ESL programs, and since Cambodians reported the highest levels of distress and also suffered the greatest loss of family members, efforts to promote a sense of community may prove to be useful as a preventive mental health measure, such as supporting ethnic self-help organizations or by supporting the development of substitute families for those who must live with little hope of reunification with their own extended families.

Finally, this study highlights the necessity for ongoing research with Southeast Asian refugees. Before proceeding further, however, it must be noted that a majority of the measures used for this population and other ethnic groups have been standardized using White populations. The cross-cultural validity and reliability of presently available tools are questionable and may not be culturally sensitive to

The second hypothesis was also supported: group differences were found in the overall pattern of pre- and postmigration predictors of depression and anxiety. The significant premigration predictors were as follows: for Vietnamese, the number of trauma events was a significant predictor of depression and the number of family members who died was a significant predictor of anxiety. For Cambodians, the number of trauma events experienced and the greater the number of years spent in refugee camps were significant predictors of both depression and anxiety, and for the Lao, the number of trauma experiences was the only premigration predictor of both depression and anxiety.

Differences in postmigration predictors were also significant. For Vietnamese, low family income emerged as a predictor of both depression and anxiety. This finding suggests that postmigration concern for the level of family income was a major focus for Vietnamese. Vignes and Hall [18] found that those who had the most difficulties in adjustment were those who had high socioeconomic status in Vietnam and were least able to accept their downward mobility in status in the U.S. Larger family size in the U.S. was also associated with greater anxiety. An interpretation of this correlation might be that the greater the family size the more financial demands were made upon the heads of the households to support the large number of dependents. However, an opposite finding regarding family size emerged for Cambodians. Smaller family size in the U.S. was related to higher levels of depression. Disruption and changes in the family unit and loss of family support may be one explanation why this variable predicted depression. Sixty-three per cent of Cambodians in this study (compared to 17% Vietnamese, 13% of the Lao) experienced loss of close family members through either separation or death, and only 10% had been reunited with lost family members.

It is generally assumed that learning English would assist in the adjustment process of resettlement. Yet the results showed that attendance at ESL classes was a significant predictor of both depression and anxiety for Cambodians. These classes would appear to be increasing rather than decreasing distress. Moreover, only 28% of Cambodians compared to 70% Vietnamese and 49% Lao reported having fair to good English literacy, which suggest Cambodians in this study are in greater need of ESL classes compared to the other groups. These results suggest that an evaluation of the effectiveness of ESL classes would be strongly recommended to establish why these classes are not achieving their aim. One reason may be due to the finding that this group may have impaired memory and concentration due to traumatic experiences [21] but perhaps the location, class scheduling, format, teaching methods and/or curriculum may need to be designed to address the specific needs of this group.

For the Lao, significant postmigration predictors of both depression and anxiety were currently receiving public assistance and being unemployed. Although a large proportion of all three groups was fully dependent on welfare (Vietnamese 49.7%, Cambodians 79.3%, Lao 61.4%), receiving public assistance was significant only for the Lao in predicting psychological distress. This may be due to the dissonance between the relatively high level of education they receive in their homeland (Vietnamese 10.5 yr of education, Cambodians 5.9 yr and Lao 7.2 yr), compared to their employability in the U.S. This concept is further supported by the strong focus of the Lao on attaining employment and being financially self sufficient. This would be consistent with the finding, as noted earlier, that the greater the number of years in the U.S. for the Lao was positively correlated with higher levels of depression. If they have been unable to find stable employment or employment commensurate with their educational and social standing in Laos, being dependent on welfare even 6 yr and more after resettlement would be highly frustrating. The difference between the Lao and Cambodians in the level of education received in their homeland, premigration employment status (e.g. professional/blue collar: Cambodians 14.8%, Lao 28.4%), the present unemployment level (Cambodian 33.7% and Lao 30.6) and, also the high degree of trauma experienced by Cambodians (75%) compared to Lao (23%) might also explain why the predicted similarity between Cambodians and Lao in the types of significant distress predictors was not found.

Overall, premigration predictors of distress for each of the three groups were similar, but postmigration predictors of distress highlight the heterogeneity of the Southeast Asian refugees. Even though they had been in the U.S. for a similar period of time, the groups were at different levels of adjustment. The Cambodians were primarily concerned with premigration areas, while the concerns of Vietnamese and Lao were on both premigration and postmigration issues. The results show significant differences in the patterns of predictors and suggest that these variations are due to differences in their socio-historical background as well as their current resources.

The Cambodians report the highest level of both depression and anxiety followed by Lao and Vietnamese. As described earlier, the Vietnamese had access to more resources, such as jobs and social support in the U.S. compared to the other two groups. This could possibly explain why Vietnamese reported the lowest level of distress and appear to be better adjusted than the Cambodians and Lao. It has previously been demonstrated that even marginally employable refugees found it easier to secure employment within their alike-ethnic community than unlike-ethnic refugees [23]. Furthermore, it has also been found that access to a 'critical mass' of persons from alike-ethnic background is also a buffer for mental health [24, 25].

detect the actual pathology of these groups, since different ethnic and cultural groups exhibit symptoms in culturally specific styles [33–36]. Thus a multidisciplinary approach is vital to gain understanding of the experiences of these groups in order to develop a deeper, more definitive and culturally sensitive understanding of group and gender barriers to adjustment. We will then be able to design effective programs to assist these individuals in the transition to the life in the U.S.

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