

## **Effects of Combining Disparate Groups in the Analysis of Ethnic Differences: Variations Among Asian American Mental Health Service Consumers in Level of Community Functioning**

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*The Asian American population comprises historically, socially, and culturally diverse ethnic groups. Given this diversity, investigators caution that combining disparate ethnic groups together may lead to erroneous conclusions. Whether by choice or necessity, however, mental health studies still typically consider Asian Americans as a single ethnic category rather than as separate ethnic groups. Few investigations have addressed the consequences of this practice. This paper examines the implications of conceptualizing Asian Americans as an ethnic category versus ethnic groups, in an investigation of the community functioning status of clients in publicly funded mental health programs in King County, Washington. When treated as a single ethnic category in a multivariate linear regression model, Asian Americans are found to have a lower level of functioning difficulty than their white counterparts. However, when treated as separate ethnic groups (e.g., Vietnamese, Japanese), only one of five Asian ethnic groups has a significantly lower level of difficulty. In a separate analysis of the Asian American subsample, groups are found to differ significantly from one another with respect to functional status. Several factors, including refugee status, account for this difference.*

**KEY WORDS:** analysis of ethnic differences; ethnic category vs. ethnic groups; Asian Americans; functional status; refugee status.

Empirical investigations of Asian American mental health issues have lagged behind the volume of research conducted on other minority groups (Vega & Rumbaut, 1991). One obstacle has been the problematic nature of the ethnic category, "Asian American." By 1990, the population of Asian Americans reached 7.3 million, nearly doubling the 3.7 million figure in 1980 (U.S. Bureau of the Census, 1991). More than 20 different ethnic groups are placed under this label (U.S. Bureau of the Census, 1988). Whether by choice or necessity, mental health studies typically consider Asian Americans as a single ethnic category (Cheung & Snowden, 1990). The use of a single category to define all Asian American ethnic groups belies the important historical, social, and cultural diversity of this population (Chan, 1991; Takaki, 1989). For example, Japanese Americans first came to the United States in significant numbers in 1885 as immigrant workers, whereas Vietnamese Americans entered the United States as war refugees in 1975, following the fall of Saigon.

While the disaggregation of the Asian American ethnic category makes intuitive sense, there are pragmatic problems that make this practice difficult to execute. In community epidemiologic studies, the large number of ethnic groups that constitute the Asian American category and the geographic dispersion of these groups creates a host of sampling issues that are costly and time-consuming for researchers. Investigators must often choose to either omit Asian Americans from the sampling frame or treat the ethnic groups as one category to avoid sampling problems. Representative samples by nature yield a modest number of Asian American respondents since the proportion of Asian Americans in most communities is relatively small. For example, the Epidemiologic Catchment Area (ECA) studies included less than 200 Asian Americans in their total sample of over 18,000 adults in five geographic sites across the nation.

Analyses of specific Asian American ethnic groups is especially lacking in the area of mental health services research. Although community surveys have the potential to oversample specific groups, studies of mental health services typically employ data on individuals who actually use services. Since it is well documented that Asian Americans are underrepresented in mental health services, the number of any particular Asian American ethnic group who use mental health services is typically quite small. Thus, mental health services researchers are often limited to using the Asian American ethnic category.

Although investigators caution that treating Asian Americans as a single category may lead to erroneous conclusions (D. Sue & Sue, 1987; Yoshioka, Tashima, Chew, & Murase, 1981), few studies have addressed the consequences of this practice. Some community studies have demonstrated that Asian American ethnic groups vary in level of psychological function-

ing (Kuo, 1984; Sutherland, Avant, Franz, Monzon, & Stark, 1983; Westermeyer, Vang, & Neider, 1983) and alcohol and substance usage (Kitano, Hatanaka, Yeung, & Sue, 1985; McLaughlin, Raymond, Murakami, & Goebert, 1987). Variations in socioeconomic status (SES) and the experience of life stressors also differentiate Asian American ethnic groups. For example, while Indonesian, Chinese, and Japanese groups had average per capita incomes at or above the U.S. average in 1980, 14 of the 17 Asian American groups listed in the U.S. Census experienced poverty levels above the U.S. average; Laotians and Cambodians had poverty levels 45% above the average. Similarly, while the unemployment rate for Asian Americans was below the U.S. average, the Hmong, Laotians, Cambodians, and Samoans had unemployment rates in double figures (U.S. Bureau of the Census, 1988).

In general, the experience of leaving one's country of origin exposes an individual to stressors not experienced by nonimmigrants. Thus, variations in stress differentiates U.S.-born and immigrant Asian Americans. At the same time, members of the latter group are differentiated by the conditions under which they have left their countries of origin (i.e., as immigrants or refugees) (Longres, 1991; Vega & Rumbaut, 1991). Whether Asians are "pulled" towards living in the United States to improve their standard of living, or whether they are "pushed" to seek asylum from traumatic conditions in home countries, makes a substantial difference in their subsequent health and well-being (Vega & Rumbaut, 1991). Thus Chinese, Filipino, and Indian migrants may differ dramatically in their experiences of stressors, stress, and adjustment from Vietnamese, Laotian, and Cambodian refugees. Since research consistently suggests the inverse relationship between poverty and health and stress and health (Kessler, Price, & Wortman, 1985), differences in SES and migration experiences among Asian groups suggest differential risk for psychological problems and psychosocial adjustment.

Despite census and other data that acknowledges inter-Asian differences, no previous study has systematically addressed the extent to which analytic results vary when Asian Americans are treated as a single category versus as specific ethnic groups. Accordingly, this paper explores the implications of treating disparate Asian American ethnic groups as a single, undifferentiated ethnic category in an investigation of the community functioning status of clients in publicly funded mental health programs in King County, Washington. We address two major questions:

1. Do Asian American consumers differ from white consumers with respect to functioning status? Does treating Asian Americans as a single ethnic category (vs. as separate ethnic groups) in statistical analysis lead to different conclusions about white/Asian differences?

2. Do Asian American ethnic groups differ in functioning status? If so, what appears to account for these group differences?

The focus on community functioning status is a potentially important innovation in Asian American mental health services research. Publicly funded mental health systems have begun to incorporate level-of-functioning assessments as a basis for determining client service and resource needs and evaluating service outcomes (Newman, Griffin, Black, & Page, 1989; Uehara, Smukler & Newman, in press; Willer & Guastafarro, 1989). Functioning status indicators have gained popularity for several reasons; for example: (a) when behaviorally specific, functioning status scales can be relatively easy to understand and administer; (b) a number of developed scales demonstrate good reliability, and predict important service outcomes (e.g., Ellis, Wilson, & Foster, 1984; Michigan Department of Mental Health, 1988; Pandiani, Gordon, Wilson, & Carling, 1983); (c) "level of functioning" more directly reflects the specific goals of contemporary community-based mental health programs, which tend to stress a wide range of psychological and community living skills; and (d) functioning status scales tend to place less emphasis on "pathology," and greater emphasis on positive social role functioning (Schneider & Struening, 1983). Given potential cross-cultural differences in the manifestation of illness and symptomatology, measures of functioning may provide a useful complement to data on primary diagnosis and psychiatric symptoms in studies of ethnicity and mental health. Thus, both researchers and system planners are beginning to recognize the potential utility of incorporating level of functioning in cross-ethnic comparisons (National Institute of Mental Health, 1991).

## METHOD

### *Sample*

This investigation relies on assessments of functional status and clinical characteristics of adults (age 18 years and older) diagnosed with a mental illness who are currently enrolled in the King County mental health system. All enrolled adults meet countywide criteria of having a severe and persistent mental illness that interferes with day-to-day functioning and have been receiving outpatient services for at least 90 days. In addition, virtually all consumers meet federal poverty status guidelines. The assessments were conducted by primary case managers, between the fall of 1991 and summer of 1992. The sample included consumers served by the two major types of mental health agencies represented in King County: (a)

"special mental health agencies" or those specializing in services to a particular ethnic/special need group (e.g., those serving ethnic- or age-specific groups, physically disabled consumers, deaf/hard of hearing consumers, or sexual minorities) and (b) "general mental health agencies" or those without such specialized population/need foci. Overall, seven special mental health agencies and eight general mental health agencies participated in carrying out the assessments. The sample includes 3,681 consumers, encompassing 60% of all ethnic minority consumers receiving publicly funded services in King County. Details of the sampling design are presented in Uehara, Smukler, and Bates (1992).

Areas covered by the assessments include basic sociodemographic information (e.g., age, gender, ethnicity, primary language, English language proficiency, country of origin, and years spent in the U.S.), clinical/diagnostic data (e.g., primary diagnosis, frequency and duration of psychiatric hospitalizations during the past 12 months), and case manager assessment of the consumer's functioning status. The latter was measured by the Community Psychiatric Clinic's Problem Severity Summary scales (PSS). The PSS consists of 12 single-item scales intended to summarize the severity of consumer functioning difficulties in various areas of intra- and interpersonal behavior—for example, the ability to meet basic needs for food, shelter, clothing, and medical care (Basic Needs scale); the ability to shop, cook, launder, avoid common household hazards, and negotiate transportation (Community Living Skills scale); and the ability to regularly attend and participate in school/work activities (Work/School Productivity scale). All data were provided by the consumers' primary case managers, who participated in a standard 2-hour training session on the PSS prior to completing consumer assessments. Standardized assessment procedures and protocols were used for all consumers in the sample. Preliminary analysis suggests that the majority of the PSS scales demonstrate acceptable interrater reliability and concurrent validity for this population (Uehara et al., 1992).

Respondents in the current analysis are limited to whites and Asian Americans. Our sample includes 1,288 consumers: 1,106 whites and 182 Asian Americans. The latter comprised 28 Japanese Americans, 32 Chinese Americans, 39 Vietnamese Americans, 47 Laotian Americans, and 36 Filipino Americans. Some Asian American subgroups (e.g., Thais) were eliminated due to small sample size; Cambodians were eliminated due to the poor performance of the community-functioning indicator for this group. In addition, one mainstream agency was excluded due to questionable reliability on the PSS scales.

As Table I shows, the whites and Asian American ethnic groups included in the investigation are similar with respect to gender and age, with

Table I. Clinical and Demographic Characteristics of Sample, by Ethnic Group

	Gender		Mean age (yrs)	Primary diagnosis <sup>1</sup>			Psych. hospitalized in last yr. (%)
	M (%)	F (%)		Schiz. (%)	Major affec. (%)	Other (%)	
Whites (1106)	44	56	53	37	41	22	26
Asian Am. (182)	41	59	48	32	47	21	10
Japanese (28)	22	78	62	48	22	30	7
Chinese (32)	50	50	48	56	28	16	3
Vietnamese (39)	44	56	43	39	43	18	8
Laotian (47)	40	60	51	7	64	30	9
Filipinoe (36)	44	56	41	28	61	11	20
Total (1288)	44	56	50	36	41	23	22

<sup>1</sup>Percentages may not equal 100 due to rounding.

the exception of Japanese.<sup>1</sup> Males constitute 22% of the latter group, and between 40 and 50% of all other ethnic groups. Japanese are also somewhat older than members of other groups, with an average age of 62 versus 50 for the sample as a whole. At the level of ethnic category, whites and Asian Americans appear to have similar distributions across primary diagnosis categories. However, an examination of specific group distributions reveals more variability. For example, Laotians are most clearly underrepresented in the Schizophrenia category (7 vs. 32% for Asians overall). A smaller percentage of Japanese and Chinese consumers fall into the Major Affective Disorders category (22 and 28%, respectively) than do Vietnamese, Laotian, and Filipino consumers (43, 64, and 61%, respectively). Rates of inpatient psychiatric hospitalizations in the previous 12 months also differ across ethnic groups, with whites and Filipinos experiencing the highest rates (26 and 20%, respectively) and Chinese exhibiting the lowest rate (3%).

#### *Variables and Measures*

*Dependent Variable.* Global Community functioning: Preliminary analysis of the PSS for the Asian American ethnic groups in this sample suggested that the PSS Basic Needs, Community Living, and Work/School Productivity scales form a single factor. As Table II suggests, item loading patterns, percentage variance explained, and coefficients alpha for the

<sup>1</sup>For the sake of brevity, we refer to Japanese Americans as simply Japanese, and abbreviate all groups in this manner.

Table II. Reliability and Concurrent Validity Statistics for Global Functioning Variable, by Ethnic Group

Ethnic group	# Factors	Eigenvalue	% Cum. var. explained	Coeff. alpha	Corr. w/ cog. diff. scale ( $r^2$ )
Whites	1	2.07	69	.77	.47 <sup>a</sup>
Japanese	1	1.92	64	.71	.42 <sup>a</sup>
Chinese	1	1.72	58	.66	.57 <sup>b</sup>
Vietnamese	1	2.06	69	.76	.37 <sup>a</sup>
Laotian	1	2.08	69	.78	.37 <sup>a</sup>
Filipino	1	1.86	62	.69	.55 <sup>b</sup>

<sup>a</sup> $p < .01$ .<sup>b</sup> $p < .001$ .

global measure are similar and acceptably high across all ethnic groups. Correlations between the global functioning measures and measures of cognitive difficulty and difficulty with medication management are positive and significant for all groups as well, suggesting that the global measure has concurrent validity. We therefore employed the consumer's summed scores on the Basic Needs, Community Living, and Work/School Productivity PSS scales as a global indicator of the consumer's ability to function in community (noninstitutionalized) settings. Higher scores on this scale indicate greater functioning difficulty, lower scores indicate less difficulty or impairment.

*Predictors of Community Functioning.* In addition to ethnicity, we considered a number of variables shown in previous research to predict consumer community functioning status, including age and associated physical difficulties associated with aging (Hazel, Herman, & Mowbray, 1991), primary diagnosis, related psychiatric symptoms, and history of psychiatric hospitalization (Drake & Wallach, 1992; Havassy & Hopkin, 1989), and level of substance abuse (Schmidt, 1992). Although little systematic assessment of functional status of ethnic minority clients exists, there is some suggestion in the literature that degree of acculturation (Hurr & Kim, 1988; Kuo, 1976; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987; Ying, 1988) and whether or not the consumer is served by an "ethnic-specific" agency or program (S. Sue & Morishima, 1982) may also affect functioning status. No specific acculturation scale or measure is available; however, we consider migrant status, degree of English language proficiency, and total number of years in the U.S. as proxy measures of acculturation. Consumers are thus categorized according to whether they are principally served by a mental health agency with a specialized or general population focus. White and Asian American consumers are represented in both categories, although a

disproportionately high percentage of Vietnamese and Laotians, and a disproportionately low percentage of whites, are served by specialized agencies.

### *Overview of Data Analysis*

Our data analysis proceeds in three major stages. First, we delineate a multivariate model that efficiently predicts community functioning status for the Asian and white sample, exclusive of any ethnicity constructs. Given the relatively small size of certain Asian groups, we attempt to restrict our predictive model to as few variables as possible. Next, we create two alternative multivariate models by adding ethnicity constructs to the basic predictive model. One model is created by the addition of an ethnic category construct (whites vs. Asians); the other by the addition of an ethnic groups construct (Japanese, Chinese, Vietnamese, Laotian, Filipino, or white). We compare the inferences about ethnic differences in functioning difficulty levels suggested by the two models. In the last stage of analysis, we focus on the Asian American subsample, once again using multivariate linear regression to analyze differences in functional status among Asian American ethnic groups. We speculate as to some of the factors that may account for these group differences.

## RESULTS

### *Basic Predictive Model*

Table III displays the partial correlation coefficients for the dependent variable and all independent variables examined. With the exception of age, all variables demonstrated a significant association with functioning difficulty. Given the relatively small size of some Asian American ethnic groups (e.g., Japanese), our goal was to delineate a basic predictive model with no more than three of these significant variables. We began by including the two variables that demonstrated the highest  $R^2$  values and low multicollinearity (physical status and psychotic symptoms). This two-variable model accounts for a little over 20% of the sample variance (adjusted  $R^2 = .213$ ). We then examined the predictive improvement attained by adding each remaining independent variable to this model. Because no other variables substantially improved upon this model, we employed the two-variable model in the subsequent analysis of Asian American-white differences in functional status.



Table III. Partial Correlation Coefficients Between Predictors and Functional Status

Predictor	Partial correlation coefficient
Age	-.02
Gender <sup>a</sup>	.09 <sup>e</sup>
Physical status	.30 <sup>e</sup>
Psychotic symptoms	.32 <sup>e</sup>
English proficiency <sup>b</sup>	-.10 <sup>e</sup>
Agency type <sup>c</sup>	-.11 <sup>e</sup>
Substance abuse	.24 <sup>e</sup>
Primary Diagnosis:	
Schizophrenia	.08 <sup>d</sup>
Major affective disorder	-.15 <sup>e</sup>
Other	.09 <sup>e</sup>
Psych. hospitalization in past year:	
Admitted (yes/no)	.11 <sup>e</sup>
No. days	.16 <sup>e</sup>

<sup>a</sup>0 = female; 1 = male.<sup>b</sup>0 = low proficiency; 100 = high proficiency.<sup>c</sup>1 = specialized focus; 0 = general focus.<sup>d</sup> $p < .01$ .<sup>e</sup> $p < .001$ .

Our decision to limit analysis to the two-variable model is not meant to negate the potential importance of other factors. An important consideration, for example, is the direct and indirect effects of gender on level of functioning. The results of regression analyses not shown here suggest that for whites, the effect of gender on functioning is significant, controlling for psychotic symptoms and physical health (male status was associated with greater functioning difficulty). The same direct effect was not found for Asian Americans as a category. However, Ethnic category  $\times$  Gender effects were significant; and adding an "Ethgender" dummy variable (white male vs. white females, Asian males, and Asian females) to the basic two-variable model produced an adjusted  $R^2$  value of .23. Separate regression analyses for each of the four ethgenders suggest that our basic regression model is most efficient for white males (adjusted  $R^2 = .29$ ) and least efficient for Asian males (adjusted  $R^2 = .15$ ). Unfortunately, we were not able to further explore gender and ethgender effects at the level of individual Asian American ethnic groups, due to extremely small samples. However, these results suggest that the role of gender in explaining differences both between and within the white and Asian American groups should be the focus of future analyses.

*Asian American-White Differences in Functional Status*

Table IV summarizes the results from the three multivariate linear regression analyses. Column 1 displays the results using our basic model, which includes only physical status and psychiatric symptoms as predictors of community functioning difficulty. Column 2 displays results using Model II, which includes physical status, psychiatric symptoms, and the ethnic category construct (Asian American and White). Column 3 summarizes results using Model III, comprising physical status, psychiatric symptoms, and the ethnic groups construct (Japanese, Chinese, Vietnamese, Laotian, Filipino, and White). In Models II and III, the ethnicity constructs are represented by dummy variables, with Whites used as the reference group. Probabilities associated with the  $F$  statistic for the overall significance of each regression model suggest that all effectively predict community functioning [see row 11, Prob ( $F$ )]. For Models II and III, we computed additional  $F$  statistics to determine whether adding an ethnicity construct to the basic model significantly improves the prediction of functional status (Polissar & Diehr, 1982). These Model  $F$  statistics, displayed in the final row of Table III, suggest that both ethnicity constructs are significant predictors of functional status.<sup>2</sup> The adjusted  $R^2$  values for the three models suggest that the addition of ethnicity constructs—whether defined at the category or group level—does not substantially improve our ability to predict community functioning. However, a comparison of Models II and III suggests that use of the ethnic category and ethnic groups constructs lead to *somewhat different* inferences about Asian-White differences in functional status.

The results of the regression analysis using the ethnic categories construct (Model II) suggest that, controlling for levels of psychiatric symptoms and physical problems, Asian American consumers experience significantly less difficulty functioning in the community than their white consumer counterparts ( $\beta = -.07, p = .0001$ ). Without further analysis of Asian ethnic group differences, this result might be interpreted as an indication of a relatively lower level of social and mental service need among the Asian American clients. Such an interpretation might appear particularly logical in light of other data suggesting that Asian Americans tend to use fewer outpatient and inpatient mental health services than other ethnic groups.

Although also suggesting significant differences between groups, the results of the regression analysis using the ethnic groups construct (Model III) lead to somewhat different conclusions. Under this model, the use of

<sup>2</sup>A comparison of the adjusted  $R^2$  values for Models II and III suggests that the ethnic groups construct accounts for a slightly larger percentage of variance than does the ethnic category construct, and is thus a slightly better predictor.

Table IV. Standardized Regression Coefficients Predicting Community Functioning, by Ethnic Group (Total Sample)

Predictors	Model I (no ethnic variable) Beta	Model II (grouping Asians) Beta	Model III (separating all Asians) Beta
Physical status	.33 <sup>d</sup>	.32 <sup>d</sup>	.32 <sup>d</sup>
Psych. symptoms	.34 <sup>d</sup>	.34 <sup>d</sup>	.35 <sup>d</sup>
Ethnic Group: <sup>a</sup>			
Asian American	—	-.07 <sup>c</sup>	
Japanese	—	—	-.04
Chinese	—	—	-.07 <sup>d</sup>
Vietnamese	—	—	-.04
Laotian	—	—	.02
Filipino	—	—	-.04
Adjusted R <sup>2</sup>	.213	.217	.220
Prob. (F)	.0000	.0000	.0000
Model F		F(1, 1280) 6.67 <sup>b</sup>	F(5, 1276) 2.33 <sup>b</sup>

<sup>a</sup>In Models II and III, "Caucasian" is the reference group.

<sup>b</sup>p < .05.

<sup>c</sup>p < .005.

<sup>d</sup>p < .001.

separate dummy variables for each Asian American ethnic group clarifies that only one of these (i.e., Chinese) have significantly lower functioning difficulty scores than whites (see column 3, Table IV). In fact, although not statistically significant, the positive beta associated with the Laotian group indicates that their average group score was actually higher than that of whites (indicating a greater level of difficulty in community functioning). In contrast to the results from Model II, these findings do not support the conclusion that Asian American consumers as a whole experience less difficulty in the community than their white counterparts.

#### *Asian American Ethnic Group Differences in Functioning Status*

The results of the regression analysis using Model III suggests that Asian American ethnic groups may differ from one another with respect to community functioning. To determine whether there are significant differences among the groups, we conducted a separate regression analysis on the Asian subsample, using only the Asian American ethnic group dummy variables as predictors. Because the Chinese group was shown to

Table V. Standardized Regression Coefficients Predicting Community Functioning, by Asian Ethnic Group (Asians Only)

Predictors	Model I (Asian groups variable only) Beta	Model II (Asian groups & other vars)) Beta
Asian Group <sup>a</sup>		
Japanese	.18 <sup>b</sup>	.13
Vietnamese	.19 <sup>b</sup>	.16
Laotian	.34 <sup>d</sup>	.34 <sup>d</sup>
Filipino	.14	.14
Physical status		.25 <sup>c</sup>
Psych. symptoms		.25 <sup>c</sup>
Adjusted R <sup>2</sup>	.044	.131
Prob. (F)	.02	.0000

<sup>a</sup>"Chinese" is the reference group.

<sup>b</sup> $p < .05$ .

<sup>c</sup> $p < .005$ .

<sup>d</sup> $p < .001$ .

be significantly different from the white, we employed it as the reference group in this case. The results, shown in column 1 of Table V, indicate that the Japanese, Vietnamese, and Laotian groups have significantly higher functioning status scores than Chinese. However, only the Laotian-Chinese difference remains significant once we add the physical status and psychotic symptoms variables (see column 2, Table V).

#### *The Significance of "Refugee" Status*

What accounts for the substantial difference between Chinese and Laotians with respect to functional status? None of the alternative predictors described earlier successfully accounted for this variation. We thus speculated that the difference in global functioning scores between Chinese and Laotians might actually reflect some intragroup differences, for example, whether members could be classified as immigrants or refugees. We reasoned that Southeast Asian refugees might have significantly higher functioning difficulty scores than immigrants from other areas, given the extraordinary stressors experienced by the former, including war-related trauma and its sequelae. We reasoned that more recently arrived refugees, those who were ethnic minorities in their own countries of origins, and/or those from rural environments (such as the Hmong or Mien) might have

the highest scores of all. Although group size and data limitations did not permit a thorough testing of our hypotheses, we were able to further divide the Chinese and Laotian ethnic groups according to primary language spoken and country of origin (U.S. or other). The Chinese ethnic group could be divided into three subgroups: (a) Mandarin- or Cantonese-speaking Chinese from "other" countries of origin, (b) Vietnamese- or Cambodian-speaking from "other" countries, and (c) "other." The last category includes a heterogeneous mix of individuals, some of whom speak English and are from the U.S., some from "other" countries who speak "other Asian," or "other" languages. The Laotian group could be analyzed into two groups: (a) Laotian-speaking and (b) Mien-speaking. Both were from "other" countries of origin. We make the assumption that Mandarin/Cantonese-speaking Chinese are primarily immigrants rather than war refugees, and would therefore demonstrate lower average scores on the global functioning measure. We further assume that those ethnic Chinese who speak Vietnamese or Cambodian are likely to be war refugees from Southeast Asia, and would therefore on average have higher functioning difficulty scores than their Mandarin/Chinese-speaking counterparts. Finally, we assume that both Laotian subgroups are composed of war refugees, but that the Mien-speaking group would have the highest scores of all subgroups. The average scores for these subgroups appear to support our hypotheses. Mandarin/Cantonese-speaking Chinese have the lowest scores of all subgroups (8.4), while the Mien-speaking Laotians have the highest (14.0).

In a final linear regression model, we further subdivided the Laotian group into Laotian and Mien. (Unfortunately, there are too few cases in the Chinese subgroups to permit formal analysis along these lines.) The results (not presented here) suggest that the Chinese-Laotian group differences found earlier might be accounted for by the Mien subgroup. Laotian group global functioning status does not differ significantly from that of the Chinese. On the other hand, the standardized beta value for the Mien subgroup (.39,  $p = .001$ ) suggests that the Chinese-Mien difference is significant and substantial.

## DISCUSSION

Oftentimes, the decision to treat Asian Americans as a single ethnic category is made in an atheoretical manner. Researchers combine Asian American ethnic groups to enhance statistical power in their efforts to analyze differences between Asian Americans and other broad ethnic categories. Indeed, the present analyses are also restricted by the small samples of each Asian ethnic group. However, as this study demonstrates, the ana-

lytic strategy of combining diverse Asian American ethnic groups can produce misleading results. The consequences of this strategy may be particularly unfortunate if results are used in service planning and resource allocation. We therefore propose that mental health services researchers systematically examine the heterogeneity of Asian American ethnic groups prior to treating them as a single ethnic category. Clearly, such an approach can only be used when the characteristics of data sets and samples permit the disaggregation of the population into ethnic groups. One strategy for examining ethnic group variability is to analyze the within-group variance on the outcome measure(s) of interest—the method followed in this study. Other strategies might include the use of cluster analysis to empirically determine whether or not (and which) groups actually exhibit similar scores on measures of interest.

Our analysis also suggests that researchers should conceptualize ethnicity constructs with care, taking into consideration both the dependent measure of interest and the conceptual significance of the categorization scheme. In this paper, refugee versus immigrant status appears to be a meaningful way of categorizing Asian American consumers, since it both explains a substantial proportion of Asian American variance in community functioning and makes good conceptual sense, given differences in refugee and immigrant adjustment to life in a host society. A primary distinction between immigrants and refugees is the amount of time and resources each group has available to prepare for life in a new country (Gold, 1992; Portes, 1984). Immigrants can plan for their settlement in the U.S. by accumulating capital and learning some English prior to their journey to the U.S. Conversely, refugees must often desperately flee their homeland to survive war, internal political conflicts, famine, or other tragic circumstance. In the case of Laotians, many who resettled in the United States were poor and illiterate (Chung & Okazaki, 1991). Voluntary immigrants also retain the hope of returning to their homeland to reestablish family, social, and business ties and to immerse themselves back into their culture (Gold, 1992). Refugees, on the other hand, may share a strong sense of loss because of the suddenness of their departure and the unlikelihood that they can return unless substantial political and economic changes occur to their home country (Huang, 1991). These and other related factors contribute toward making the refugee adjustment in the United States even more difficult.

This study's findings support the results of other researchers that critical differences in well-being exist among Asian American ethnic groups (see Zane, Takeuchi, & Young, 1993). Our analyses reinforce the idea that interventions must be tailored to meet the diverse needs of Asian American groups. Cross, Bazron, Dennis, and Isaacs (1989) suggest that modifications to interventions need not be costly, but require flexibility and creativity.

They argue that the essential point is to rely less on stereotypic responses to ethnic group needs and more on understanding the commonalities that exist among ethnic minority groups as well as the factors that make each group distinct. The ability to blend universal approaches with techniques specific to a particular group is essential to effective work with ethnic populations (Gibbs & Huang, 1991; Kim, McLeod, & Shantzis, 1992). This general principle is consistent with community psychology's paradigm on the match or fit between the person and the environment (Rappaport, 1977).

The issues discussed apply to other populations besides Asian Americans. The application is perhaps most clearly made to Hispanic Americans and American Indians, as it is generally acknowledged that these populations also consist of diverse ethnic or tribal groups. Although often overlooked, there is also considerable group heterogeneity within the African American and Caucasian populations, particularly given recent immigration from African, West Indian, and ex-Soviet Union regions (Takaki, 1993). Moreover, social scientists have not fully explored the cultural differences that may exist within native-born African American and Caucasian groups (Jackson, 1991; Waters, 1990). It is thus likely that these same issues apply to African Americans and Caucasians as well. We suggest that whether ethnic groups should be considered a single ethnic category—and the appropriateness of a particular race/ethnicity construct—should be the product, and not the presumption, of investigation.

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