# Ethnic-Specific Mental Health Services:
# Evaluation of the Parallel Approach for Asian-American Clients

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Little research has addressed whether ethnic-specific, parallel services would eliminate outcome inequities for ethnic minorities while at the same time not creating any for White clients. This study examined parallel services for Asian-American outpatients with respect to client characteristics, types of services utilized, and service effectiveness. The oft-mentioned heterogeneity of the Asian-American clientele was affirmed. Numerous Asian–White and inter-Asian differences were found in terms of demographic and clinical characteristics. There was little evidence of differential care provided to Whites and Asians as reflected in the types of services received. With respect to service effectiveness, few significant ethnic group differences were found in premature termination, early termination, treatment duration, or clinical outcome. These results were found even when the effects of certain demographic and clinical variables (that have tended to covary with ethnicity) were controlled. The notable exception involved Southeast Asian clients who were more likely to terminate early in treatment compared with other Asian groups and received significantly less individual therapy, the most intensive and expensive type of treatment, than White clients. The findings strongly suggest that for most Asian-American groups equitable care and service effectiveness can be achieved through the use of ethnic-specific services. However, even within the parallel configuration, further service modifications and innovations may be needed to better address the mental health needs of Southeast Asian refugee communities.

Two empirical trends have consistently implicated the unresponsiveness of mental health services to the needs and cultural nuances of Asian-American clients. Asian-American groups tend to underutilize mental health services provided by state mental health hospitals (Kitano, 1969; Okano, 1978), general hospitals (Yamamoto, James, & Palley, 1968), community mental health centers (Brown, Stein, Huang, & Harris, 1973; San Francisco Community Mental Health Service, 1982; Sue, 1977), and university psychiatric clinics (Sue & Kirk, 1975; Sue & Sue, 1974). However, other evidence indicates

that, contrary to previous belief, Asian Americans have mental health problems of frequency and severity that equal or surpass that of other ethnic groups (Berk & Hirata, 1973; Ikeda, Ball, & Yamamura, 1962; Sue & McKinney, 1975). Thus, this underutilization of mental health services reflects more problems in service delivery and treatment than a lower need for such services.

In a study of 17 community mental health centers, Asian Americans and Whites did not differ in the treatment received (as defined in terms of diagnosis, type of personnel seen during therapy, and type of service received), but they had poorer outcomes than Whites as measured by premature termination rates (Sue, 1977). The findings suggested that mental health services delivered from primarily mainstream programs have been less than satisfactory for Asian-American clients. In response to these problems, various strategies and solutions have been proposed to develop effective mental health services for Asian Americans. For example, Murase (1977) identified the following structural and organizational characteristics that facilitate the provision of culturally relevant services to Asian-American communities: (1) location of delivery site within the community itself; (2) involvement of a broad cross-section of the community in decisions concerning the service programs; (3) employment of bilingual and bicultural staff; (4) cultivation and utilization of existing indigenous formal and informal community care/support systems; and (5) development of innovative intervention methods. Such treatment approaches should recognize the family as an integral part of treatment; establish an active, highly personalized therapeutic relationship; focus on survival-related tasks to facilitate the engagement process; address the possible conflict between the cultural dynamic of "loss of face" and the confessional character of psychotherapy; differentiate between cultural behavioral propensities and pathology; reevaluate the self-determination construct; permit flexibility in session scheduling and duration; and recognize the ameliorative effect of a familiar and predictable cultural milieu.

It terms of program services, Sue (1977) recommended three alternative strategies for implementing such changes: (1) train personnel from existing agencies to be culturally sensitive, (2) develop independent but parallel services (i.e., service units or programs that are operationally and, at times, physically separate from mainstream agencies but remain similar in function and organizational structure) that are ethnic-specific in nature, or (3) establish new, nonparallel service programs and agencies that do not have comparable entities in the conventional mental health system. As Uba (1982) indicated, research has not determined the relative merit of the various alternative forms of service delivery. However, it has been demonstrated that when mental health services are provided by bilingual, bicultural personnel working from community-based agencies, such services are utilized by Asian-American clients. In Seattle, an Asian-American counseling and referral service served as many Asian Americans in 1 year as were served by 18 other community mental health centers over a 3-year period (Sue & McKinney, 1975). True (1975) found that in Oakland, a county outpatient and emergency mental health facility served 3 Chinese Americans out of a total of 500 clients. During the same year, an Asian-American community-based agency initiated operations and served 131 Chinese Americans. A community-supported mental health center in San Francisco saw more Asian-American clients in its first 3 months of operation than the total number of Asian Americans served in that catchment area during the previous 5 years (Wong, 1977).

It is now apparent that Asian-American mental health research has developed to the point of generating a number of possible solutions to the problem of unresponsive treatment and that Asian Americans will use ethnic-specific parallel mental health services

especially developed for them (Lee, 1980; Zane, Sue, Castro, & George, 1982). In a replication of the Sue (1977) study, O'Sullivan, Peterson, Cox, and Kirkeby (1989) found that the service outcomes of ethnic minority clients had improved and hypothesized that these improvements could be attributed to the advent of more parallel or ethnic-specific mental health centers. Despite these encouraging signs, the question of whether or not ethnic-specific parallel services have created equitable services for Asian clients remains largely unanswered. First, ethnic-specific services were implicated as facilitative factors, but the O'Sullivan et al. study did not actually examine the effects of a parallel clinic. Second, the results were mixed for Asian-American clients. Asians had a lower failure-to-return rate than Whites, but they also had fewer treatment sessions. Finally, the study did not identify or differentiate among separate Asian ethnic groups (e.g., Filipino, Japanese, Chinese, Korean) so it is unclear to which specific Asian groups the findings apply. The assumption that various Asian groups would have similar utilization patterns and clinical treatment outcome is questionable given the heterogeneity in mental health status and help-seeking patterns among Asian-American populations (Kitano & Daniels, 1988; Moon & Tashima, 1982; Sue & Morishima, 1982).

In its national plan for research to improve clinical services, the National Advisory Mental Health Council (National Institute of Mental Health, 1991) recommended that "More studies are needed to identify how to make service programs more culturally appropriate and sensitive. One question, for example, is whether minority group members are more likely to use and be comfortable with culturally specific mental health centers" (p. 24). Researchers are only now beginning to examine the effects of ethnic-specific centers (e.g., Snowden & Clancy, 1990; Snowden, Ulvang, & Rezentes, 1989). The present study constituted the first empirical test of one of the critical issues often posed about parallel services: Can ethnic-specific services reduce or eliminate service inequities (e.g., differential premature termination rates) for ethnic minorities while at the same time not creating any for White clients? Specifically, we examined this question with respect to six different Asian-American groups and a comparison group of White outpatients in terms of client characteristics, utilization patterns, and clinical outcomes.

## Method

### Sample and Service Setting

Data were collected on 885 clients who had been seen as outpatients at the Asian Pacific Counseling and Treatment Center (APCTC), a community mental health center in central Los Angeles. Of these clients, 186 were Chinese, 124 Japanese, 71 Filipino, 150 Korean, 84 Lao or Cambodian, 190 Vietnamese, and 80 White. Based on a parallel model of service delivery, APCTC was developed specifically to serve Asian Pacific communities in Los Angeles County. All therapists have been trained from a brief therapy psychodynamic orientation with some experience in cognitive-behavioral techniques. Clinical staff personnel include social workers, psychologists, psychiatrists, and rehabilitation therapists. Each therapist has a minimum of 3 years postgraduate experience working with Asian outpatients. Each clinical staff member is bicultural as well as bilingual in at least one Asian language. Languages spoken at the center include Korean, Japanese, Cantonese, Mandarin, Tagalog, Illocano, Vietnamese, Lao, and Cambodian.

*Measures*

The data collection instrument was developed based on a review of over 25 data forms used in various mental health outpatient facilities to obtain intake and clinical information. The following types of data were obtained:

*Sociodemographics.* Information was collected on the client's gender, age, ethnicity, birthplace, primary language, marital status, years of education, employment status, type of occupation (e.g., white collar, blue collar), and living situation.

*Clinical characteristics.* Therapists rated clients in terms of a DSM-III-R diagnosis at admission, the primary problem area (mental health vs. substance abuse), and general level of psychosocial functioning. Level of psychosocial functioning was measured by the Global Assessment Scale (GAS) both at admission and discharge. The Global Assessment Scale (GAS) (Endicott, Spitzer, Fleiss, & Cohen, 1976) is a single rating with scale values ranging from 1 to 100 in which the lower end of the scale represents poorer functioning. The rating is based on face-to-face interviews and relies on behavioral markers as evidence of impairment. The GAS is the most widely used measure of psychosocial adjustment and has demonstrated adequate reliability and validity (Endicott et al., 1976; Sohlberg, 1989).

*Service utilization.* Service utilization variables included the source of referral (e.g., referred by a mental health agency, self-initiated or family-initiated referral), intent of service (assessment vs. improvement/maintenance), reason for discharge (e.g., if client initiated the termination or completed therapy), type of service used (e.g., individual therapy, medication visit), and units of service for each type of service used. One unit of service was equivalent to 15 minutes of service from a care provider.

*Effectiveness indices.* Four measures of service effectiveness were used: Premature termination, early termination, treatment duration, and change in psychosocial functioning. Consistent with the O'Sullivan et al. (1989) and Sue (1977) studies, premature termination was defined as the failure to return to treatment after one session. Because previous research has consistently found higher premature termination rates for Asian clients than for White clients, this index was of particular interest to the investigation. It is possible that termination following the initial session would not be sensitive to detecting clients who have continued past one session but have not stayed long enough to form an effective therapeutic relationship in treatment. It has been found that when clients were discriminated on the basis of termination before the fourth session, remainers differed from dropouts on a number of dimensions considered important to the formation of a therapeutic relationship (Saltzman, Luetgert, Roth, Creaser, & Howard, 1976). Consequently, another index of drop-out was developed. Early termination was defined as the failure to stay for four or more sessions. The third effectiveness criterion was duration of treatment as measured by the total number of service units received by the client. Treatment duration has been strongly associated with clinical outcomes for outpatient clients (Luborsky, Chandler, Auerbach, Cohen, & Bachrach, 1971). A direct index of treatment outcome was obtained by assessing psychosocial functioning as measured by the client's GAS score at discharge with the admission GAS serving as a covariate. Premorbid adjustment is one of the most consistent predictors of outcome (Mintz, Luborsky, & Christoph, 1979). By covarying out the initial level of functioning from the posttreatment GAS score, the adjusted score reflects a clinical outcome that is independent of the client's pretreatment level of functioning.

## Data Collection Procedures

The data were obtained from six sources: standard intake form, progress notes, intake summary report, client application form, financial status form, and discharge summary report. Oftentimes, the information desired was difficult to locate or found in different areas on different forms. Research assistants were trained to use a standardized sequence of searching procedures to obtain the data. Assistants were trained to 95% reliability using 20 client records prior to beginning formal data collection. Most disagreements occurred in the coding of service units. To optimize the accurate recording of service usage, units were calculated from the therapist's progress notes and cross-checked with the agency's utilization records. In most cases of discrepancy between these two sources the utilization record count was lower. In these cases, the count derived from the therapist's record was used. To minimize coding unreliability, the total sample of cases was coded once and then recorded. Coding was done by two different raters, and disagreements were resolved by the first investigator.

## Analysis

Ethnic group differences were examined by comparing each specific ethnic group (e.g., Korean, White, Filipino) with the others. For each continuous variable (e.g., age), 21 $t$-tests were performed for all possible pairwise comparisons among the seven ethnic groups. For each categorical variable (e.g., diagnosis), the number of proportion tests for significant difference between groups was 21 multiplied by the number of categories for that variable. To guard against inflated setwise Type I error rates for a particular variable, a multistage Bonferroni procedure was used in which the probability of making a Type I error in a family of tests or any subset of that family was set at $_{FW} <$ .05. Consequently, in the first stage the significance level for a total of k tests would be $_T <$ .05/k. If any pairwise comparisons were significant at this first stage, a second stage set of significance tests was made on the remaining comparisons not found significant at the first stage. The significance level used was $_T <$ .05/(k − $n_1$), where $n_1$ is the number of significance comparisons that were significant at the first stage. If no comparisons were significant at the second stage, no further comparisons were made. If significant comparisons were found in the second stage, a third stage set of comparisons was conducted using the *alpha* adjusted for the number of significant tests found in the first and second stages and so on. This multistage procedure achieves appropriate control for making Type I errors, but provides more power than the traditional, one-stage Bonferroni test (Larzelere & Mulaik, 1977).

The primary focus of this study was on the effectiveness of parallel services for Asian-American and White outpatients. Ethnic differences in service effectiveness were examined by using a regression analysis for each effectiveness index. Regression analyses were used to examine the effect of client ethnicity while controlling for the effects of demographics, clinical characteristics, etc. These analyses are especially informative because previous studies have tended to examine ethnic differences in utilization and outcome without controlling for variables that may have covaried with ethnicity. The predictor variables in each regression analysis included client age, gender, place of birth (U.S. vs. foreign born), marital status (never married vs. married at some time), employment status (unemployed vs. other), living arrangement (living with family vs. other), clinical diagnosis (psychotic vs. nonpsychotic), premorbid status (GAS score at admission to treatment), referral source (self/family-referred vs. other), and ethnicity. Specifically, multiple regression analyses were conducted on treatment duration and

posttreatment GAS scores while logistic regression analyses were conducted on the two dichotomous dependent variables, premature termination (termination after one session vs. longer treatment stays) and early termination (termination before the fourth session vs. longer treatment stays). For the ethnic comparisons, two regression analyses were used for each effectiveness index. The first analysis compared Asian with White Americans. The second analysis examined inter-Asian variation by comparing the predominantly refugee Southeast Asian groups (i.e., Cambodian, Lao, and Vietnamese) with the other Asian-American groups (i.e., Chinese, Japanese, Filipino, and Korean). Numerous studies have suggested that this distinction is a useful one for examining inter-Asian differences because it is associated with important social and demographic differences (e.g., Sue & Morishima, 1982; Kitano & Daniels, 1988).

## Results

### Demographic Comparisons

Table 1 shows comparisons between each Asian group and the White group as well as between Asian groups. With respect to White outpatients, the most consistent and notable differences were with the recent refugee groups, the Vietnamese and Lao/Cambodians. Southeast Asians were younger, less educated, more frequently married, and held less professional jobs compared to Whites. There were several differences between most Asian groups and Whites. Asians were predominantly immigrant and non-English speaking (i.e., not sufficiently proficient in English such that therapy could be conducted in English). Except for the Japanese, close to 90% of the clients from each Asian group were foreign-born. With the exception of Japanese and Filipinos, two thirds of the clients in each Asian group were monolingual in a non-English language. This is probably an underestimate because at times clients who only spoke the most rudimentary English phrases were classified as English speaking by the center's staff. The oft-mentioned family connectedness of Asians (Shon & Ja, 1982) appeared to be supported empirically. Two thirds or more of the clients from each Asian group were living with their families compared to one third of the White clients. Also, except for the Japanese and Filipino groups, a greater proportion of Asians were married than Whites. Few employment and occupation differences were found between Whites and Asians. However, the Southeast Asian groups were less involved with professional jobs than Whites.

Reliable demographic differences among the Asian groups were also apparent. Japanese, Koreans, and Chinese tended to be older than the Southeast Asian groups. Japanese, Koreans, and Filipinos tended to have higher levels of education than Chinese and Vietnamese who, in turn, had more education than Lao/Cambodians. Almost all of the Korean, Lao/Cambodian, and Vietnamese clients were immigrants compared to 9 of 10 Chinese and Filipino clients while only slightly over a majority of the Japanese clients were foreign born. As expected, differences in English proficiency closely followed the inter-Asian pattern of immigrant status. Japanese and Filipinos were less likely to be married than the other Asian groups. Japanese also had a greater proportion of individuals living alone (close to one fourth) relative to other Asians. The most consistent inter-Asian variation in employment and occupation involved differences between Japanese and Filipinos relative to the Southeast Asian groups. There also were differences among the Southeast Asian groups. Vietnamese tended to have more education, more English-proficient speakers, and fewer persons married than Lao/Cambodians.

Table 1
*Demographic Characteristics*[1]

| | Ethnic group | | | | | | | Inter-Asian differences |
| | C | J | F | K | V | L/C | W | |
|---|---|---|---|---|---|---|---|---|
| Age (M) | 31.8 | 36.0 | 31.0 | 32.3 | 26.8* | 27.8* | 36.4 | C,J,K>V; J>L/C |
| Education (M) | 9.7* | 12.1 | 11.2 | 11.6 | 8.5* | 6.0* | 11.9* | J,K,F>V,L/C; J,K>C; C,V, >L/C |
| Gender (Female) | 49.5 | 59.7 | 52.1 | 58.7 | 37.9 | 50.0 | 50.0 | J,K>V |
| Place of birth (Foreign born) | 90.3* | 56.5* | 90.1* | 97.3* | 98.9* | 100.0* | 6.3 | V,L/C>C,J,F; C,F,K>J |
| Primary language (English) | 36.0* | 62.1* | 66.2* | 26.7* | 22.6* | 10.7* | 98.8 | J,F>C,K,V,L/C; C>V,L/C; K>L/C |
| Marital status (Married) | 32.4* | 24.8 | 24.3 | 34.5* | 25.6* | 41.7* | 11.0 | L/C>V |
| Employment status (Unemployed) | 41.9* | 29.8* | 39.4* | 46.7 | 54.7 | 60.7 | 63.8 | V,L/C>J |
| Occupation history (white collar) | 24.0 | 33.8 | 36.5 | 25.0 | 12.4* | 9.5* | 32.1 | F,J>V,L/C |
| Living arrangement (with family) | 86.0* | 63.7* | 85.9* | 81.3* | 78.4* | 83.3* | 35.0 | C,F,K,V,L/C>J |

*p < .05.
*Note.* Asterisks denote a significant difference with the White group.
[1] All figures, unless otherwise indicated, reflect percentages in that category.

## Clinical Characteristics

Asian–White differences as well as inter-Asian differences in diagnoses are presented in Table 2. There were few diagnostic differences between Asians and Whites. Lao/Cambodians had a lower rate of psychotic disorders than Whites. However, important diagnostic differences between the Asian groups were found. The Lao/Cambodians and Vietnamese tended to have more anxiety-based disorders than the other Asian groups. This difference was mostly due to the relatively high rates of adjustment disorder in these two groups. Close to half of the Lao/Cambodians and over one fourth of the Vietnamese clients were diagnosed as having adjustment disorders. Relative to other Asian groups, Japanese and Filipinos tended to have higher rates of nonpsychiatric disorders but lower rates of anxiety-based disorders whereas Koreans had the highest rate of psychotic disorders and the lowest rate of nonpsychiatric disorders. Diagnostically, it appears that different Asian groups tend to have different types of clinical problems that require outpatient services. The diagnostic patterns were at times complex, not varying systematically along traditional clinical dimensions (e.g., severity). For example, although Japanese had the highest prevalence of a severe disorder, schizophrenia, they also had one of the highest rates of the least severe disorder, nonpsychiatric difficulties.

Table 2
*Clinical Characteristics*[1]

| | Ethnic group | | | | | | | Inter-Asian differences |
|---|---|---|---|---|---|---|---|---|
| | C | J | F | K | V | L/C | W | |
| Clinical diagnosis | | | | | | | | |
| Psychotic disorders[2] | 33.9 | 34.7 | 33.8 | 42.7 | 28.9 | 11.9* | 45.0 | C,J,K>L/C |
| Anxiety-based disorders[3] | 34.4 | 21.8 | 23.9 | 36.7 | 38.4 | 53.6 | 22.5 | L/C>J,F |
| Other psychiatric disorders[4] | 20.4 | 14.5 | 11.3 | 15.3 | 16.8 | 22.6 | 21.3 | — |
| Nonpsychiatric disorders | 11.3 | 29.0 | 31.0 | 5.3 | 15.8 | 11.9 | 11.3 | J,F>C,K |
| Admissions GAS (M) | 51.8 | 54.9 | 49.0 | 48.8 | 49.8 | 49.5 | 53.3 | J>F,K,V,L/C; |
| Axis IV (M) | 4.2 | 4.2 | 4.2 | 4.9* | 4.2 | 4.4 | 3.9 | K>L/C,F,J,C,V |
| Axis V (M) | 4.2 | 4.0* | 4.2 | 4.4 | 4.3 | 4.5 | 4.4 | L/C,K>J |

*$p < .05$.
*Note.* Asterisks denote a significant difference with the White group.
[1]All figures, unless otherwise indicated, reflect percentages in that category.
[2]Psychotic disorders include schizophrenia, paranoid disorders, and major affective disorders.
[3]Anxiety-based disorders include anxiety, dissociative, somatic, and adjustment disorders.
[4]Other psychiatric disorders include mental retardation, organic mental disorders, personality disorders, psychosexual disorders, substance abuse, and childhood disorders.

GAS scores indicate that the level of psychosocial adjustment of Asian and White outpatients is similar before therapy. However, Koreans appeared to have entered treatment under significantly more psychosocial stress (Axis IV), and Japanese had a significantly lower level of premorbid adaptive functioning (Axis V) compared with Whites. There were several inter-Asian differences of note. It appeared that pretherapy psychosocial stressors were more severe for Koreans compared to other Asians. The Japanese had the lowest premorbid level of adaptive functioning, significantly lower than that for the Lao/Cambodians and Koreans. The higher pretherapy GAS scores of the Japanese may attest to the bimodal distribution of severity in the types of disorders for this population. As noted before, Japanese clients had the second highest rate of psychotic disorders among the Asian groups but also the second highest rate of nonpsychiatric disorders.

*Utilization.* Table 3 displays the utilization patterns of each ethnic group. Asians and Whites tended to differ in the manner by which they entered treatment. Mental health agencies served as the primary referral source for Whites, whereas social services or the family constituted the primary sources for Asians. It is interesting to note that health agencies were seldom the source of referrals despite emphasis in the literature that Asians may utilize health services for mental health problems due to their perception that such problems are highly interrelated (Cheung, Lau, & Waldmann, 1981).

The results suggest that the pathway to services among Asian clients was somewhat similar with some isolated differences. Although social service agencies served as the major referral source for all Asian groups, Lao/Cambodians also made heavy use of

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Table 3
*Utilization Indices*[1]

| | Ethnic group | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | C | J | F | K | V | L/C | W | Inter-Asian differences |
| Referral source | | | | | | | | |
|   Mental health agency | 17.5* | 14.7* | 21.6 | 25.3 | 17.7* | 6.3* | 40.2 | K>L/C,J |
|   Health service | 13.4 | 6.3 | 5.4 | 5.9 | 8.4 | 4.2 | 3.7 | — |
|   Social service | 45.6 | 40.6 | 37.8 | 38.8 | 50.7 | 46.9 | 29.3 | — |
|   Client/Family | 23.5 | 38.5 | 35.1 | 30.0 | 23.3 | 42.7 | 26.8 | L/C>V; L/C,J>C,V |
| Type of service | | | | | | | | |
|   Individual (*M*) | 51.7 | 58.6 | 53.0 | 47.8 | 33.6* | 37.1 | 64.7 | — |
|   Medication (*M*) | 13.6 | 12.9 | 8.9 | 10.9 | 6.1 | 6.3 | 12.6 | — |
|   Other (*M*) | 9.0 | 37.4 | 25.8 | 17.9 | 10.2 | 4.2 | 14.8 | J>C,V,L/C |

*$p < .05$.
*Note.* Asterisks denote a significant difference with the White group.
[1] All figures, unless otherwise indicated, reflect percentages in that category.

the family to initiate contact with mental health services. Once in treatment it appears that the type of mental health service delivered was fairly similar among Asian and White outpatients. Southeast Asian clients were the exceptions. The Vietnamese had significantly less individual therapy sessions than Whites, and there was a similar pattern for the Lao/Cambodians that approached significance. With respect to other measures of the service experience (i.e., the use of medication, other types of treatment), no differences were found between Asians and Whites.

Among Asian groups, there were no differences in their use of the most intensive and expensive form of treatment, individual therapy. When the service category denoted as "Other" was disaggregated, it was found that Filipino clients received more family therapy, and Japanese clients received more group therapy than other Asian-American outpatients.

*Service effectiveness.* As previously indicated, four indices of service effectiveness were examined. For premature termination, the proportions of clients failing to return after one session were as follows: Chinese, 15.6; Japanese, 15.3; Filipino, 9.9; Korean, 13.3; Vietnamese, 21.67; Lao/Cambodian, 15.5; and White, 16.3. No ethnic differences were found in the pairwise comparisons on this effectiveness index. Table 4 presents the summary of the regression analyses in which the ethnicity variable constituted the comparison between the Asian- and White-American groups. Table 5 presents the summary of the regression analyses in which the ethnicity variable constituted the comparison between the Southeast Asian groups and other Asian groups. The tables display for each predictor variable its standardized beta-weight and significance for the multiple regression analyses and its estimated effect and significance for the logistic regression analyses. The beta-weights and estimated effects show the predictor's effect while controlling for

the effects of the other predictors. The estimated effect can be understood as the factor of a predictor variable by which the odds of an event occurring (i.e., the dependent variable) increase or decrease. Tables 4 and 5 indicate that there were no differences between Asian- and White-American clients in premature termination after controlling for demographic and clinical variables. Also, no inter-Asian differences in premature termination were found. For early termination, the proportions of clients terminating before the fourth session were as follows: Chinese, 19.4; Japanese, 17.7; Filipino, 14.1; Korean, 16.7; Vietnamese, 33.7; Lao/Cambodian, 22.6; and White, 18.8. Pairwise comparisons indicated that the Vietnamese had higher early termination rates than Whites, Chinese, Japanese, Filipinos, and Koreans. More important, the logistic regression analyses indicated that there was no difference in early termination after controlling for other predictor variables. However, a significant difference in early termination occurred between older Asian groups and the predominantly refugee Asian groups in which the former had a lower termination rate (see Table 5). The estimated effect indicated that Southeast Asian clients were 1.5 times more likely to terminate before the fourth session than other Asian clients.

The following average number of treatment units were found for each ethnic group: Chinese, 75.1; Japanese, 111.0; Filipino, 89.4; Korean, 78.3; Vietnamese, 51.3;

Table 4

*Summary of Regression Results of Service Effectiveness Indices for Total Sample*

| Predictor variables | Standardized beta-weights | | Estimated effects | |
|---|---|---|---|---|
| | Treatment duration | Termination GAS | Premature termination[a] | Early termination[b] |
| Age | −.03 | −.04 | .99 | 1.00 |
| Gender[1] | .04 | −.03 | .71 | .80 |
| Place of birth[2] | −.16*** | .04 | .96 | 1.21 |
| Primary language[3] | .02 | .01 | .92 | .90 |
| Marital status[4] | .04 | .04 | 1.20 | .84 |
| Employment status[5] | −.08* | −.03 | 1.42 | 1.59* |
| Living arrangement[6] | .05 | .00 | .82 | .70 |
| Clinical diagnosis[7] | .29*** | −.07** | .50** | .42*** |
| Admission GAS | .06 | .76*** | .98 | .99 |
| Referral source[8] | .02 | .03 | .68 | .78 |
| Ethnicity[9] | .04 | .00 | 1.12 | 1.12 |

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

[a]0 = No Premature Termination; 1 = Premature Termination.
[b]0 = No Early Termination; 1 = Early Termination.

[1]0 = Male; 1 = Female.
[2]0 = Born in America; 1 = Foreign-Born.
[3]0 = Other Language; 1 = English.
[4]0 = Married at Some Time; 1 = Never Married.
[5]0 = Employed, Student, Homemaker, or Retired; 1 = Unemployed.
[6]0 = Other Living Arrangement; 1 = With family.
[7]0 = Non-Psychotic; 1 = Psychotic.
[8]0 = Mental Health Agency/Social Services; 1 = Self/Family.
[9]0 = White; 1 = Asian.

Table 5
*Summary of Regression Results of Service Effectiveness Indices for Asian Sample*

| | Standardized beta-weights | | Estimated effects | |
|---|---|---|---|---|
| Predictor variables | Treatment duration | Termination GAS | Premature termination[a] | Early termination[b] |
| Age | −.04 | −.05 | .99 | 1.00 |
| Gender[1] | .02 | −.04 | .76 | .83 |
| Place of birth[2] | −.13*** | .04 | 1.06 | 1.26 |
| Primary language[3] | .00 | .01 | .97 | 1.02 |
| Marital status[4] | .03 | .04 | 1.32 | .91 |
| Employment status[5] | −.06 | −.02 | 1.49 | 1.63* |
| Living arrangement[6] | .04 | .00 | .89 | .75 |
| Clinical diagnosis[7] | .29*** | −.07** | .49** | .42** |
| Admission GAS | .04 | .76*** | .99 | .99 |
| Referral source[8] | .01 | .02 | .72 | .83 |
| Ethnicity[9] | −.08* | .03 | .91 | .66* |

*p < .05; **p < .01; ***p < .001.

[a]0 = No Premature Termination; 1 = Premature Termination.
[b]0 = No Early Termination; 1 = Early Termination.

[1]0 = Male; 1 = Female.
[2]0 = Born in America; 1 = Foreign-Born.
[3]0 = Other Language; 1 = English.
[4]0 = Married at Some Time; 1 = Never Married.
[5]0 = Employed, Student, Homemaker, or Retired; 1 = Unemployed.
[6]0 = Other Living Arrangement; 1 = With family.
[7]0 = Non-Psychotic; 1 = Psychotic.
[8]0 = Mental Health Agency/Social Services; 1 = Self/Family.
[9]0 = Southeast Asian; 1 = Other Asian.

Lao/Cambodian, 48.0; and White, 93.4. Vietnamese had shorter treatment stays than Whites, Chinese, Japanese, Koreans, and Filipinos. However, Table 4 shows that after controlling for demographic and clinical variables, no difference in treatment duration was found between Asian and White Americans. The inter-Asian regression analysis supported the univariate results in that the older Asian groups tended to stay longer than the Southeast Asian groups even after controlling for other predictors (see Table 5). This effect was quite small (.08). An inspection of the data revealed that the significant difference in total service units may have resulted from the inclusion of 10 extreme outliers, all of whom were Japanese clients. These chronic Japanese patients had been seen at the center for years and had accumulated an inordinate number of service units (550–977) compared with the average number of units for the total sample ($M = 72.0$, $SD = 123.6$). When these outliers were removed from the regression analysis, no significant differences were found in treatment duration among the Asian groups.

The analysis of the posttreatment GAS scores constituted the most direct examination of clinical outcomes. After covarying out the pretherapy GAS scores from the GAS posttreatment scores, there were no significant ethnic differences in clinical outcome for any of the pairwise comparisons. Similarly, the regression analyses found no significant effects for ethnicity predictors.

## Discussion

Previously, there had been no direct empirical support for the claim that ethnic-specific parallel services would eliminate outcome inequities for ethnic minorities. The study strongly suggests that, at least for most Asian-American groups, equitable service and treatment outcome can be achieved using a parallel service delivery model. Few ethnic differences in service effectiveness were found when comparing White with Asian clients or one specific Asian group with another. These results were found even when the effects of certain demographic and clinical variables (that have tended to covary with ethnicity) were controlled. Earlier studies have tended to examine ethnic differences in the utilization and effectiveness of parallel services without controlling for these influences. Indeed, in the current study numerous Asian–White and inter-Asian differences were found with respect to clinical and demographic characteristics.

The findings are not surprising but definitely reassuring. They tend to support O'Sullivan et al.'s (1989) contention that ethnic minority client dropout rates have been reduced largely through the development of more ethnic-specific mental health centers. It is also important to note that ethnic-specific parallel services appeared to have eliminated service inequities for Asians while at the same time not creating any for White clients. The exception to this trend involved the Southeast Asians. Southeast Asian clients were more likely to terminate early in treatment and had shorter treatment stays compared with other Asian groups, and they received significantly less individual therapy, the most intensive and expensive type of treatment, than White clients. It is possible that the finding with respect to treatment duration is an artifact of outliers involving a small number of chronic, Japanese clients who made inordinate use of outpatient services. Nevertheless, even within the parallel configuration, further service modifications and innovations may be needed to better address the mental health needs of Southeast Asian refugee populations.

The demographic findings corroborate previous studies (e.g., Sue, 1977) which indicate that Asian clients represent quite different clients compared to Whites. As expected, the most distinct differences occurred between Whites and the most recent immigrant Asian groups, particularly the Lao/Cambodians. The use of predominantly bilingual, bicultural staff was needed in that with the exception of the Japanese, for each Asian group 90% or more of the clients were foreign born and two thirds or more were monolingual in a non-English language. It is also evident from the findings that Asian clients constitute a very heterogeneous group. Most inter-Asian differences occurred between the Japanese and Southeast Asians, but significant variation also was found among the specific Southeast Asian refugee groups. Despite certain similarities between the Vietnamese and Lao/Cambodians, there were significant differences in education, English proficiency, marital status, and work history.

The diagnostic and clinical characteristic findings strongly suggest that the treatment needs of each Asian group are somewhat different. Significant diagnostic and clinical differences were found among Asians. For example, Lao/Cambodians and Vietnamese may especially benefit from interventions targeted for stress-related disorders given the high rate of adjustment disorders. These findings are expected given the highly stressful, traumatic nature of the Southeast Asian refugee migration experience (Chung & Okazaki, 1991). On the other hand, those working with Japanese must be prepared to work with two distinct types of clients: Those who are chronically ill and those with problem-specific nonpsychiatric disorders. Koreans tended to have more psychotic disorders and fewer

nonpsychiatric difficulties while Japanese and Filipinos had more nonpsychiatric difficulties.

Because the study was conducted at one site, there is an obvious need to replicate its findings. First, it is possible that the differences found are specific to the Los Angeles area. Second, differences in diagnosis, GAS scores, and other staff-derived ratings (including those made by clerical personnel) may actually reflect differences between ethnic staff. Third, the White clients seeking services at a center specifically targeted for Asians may not be representative of this population. Finally, certain differences may have resulted from the particular method of data collection used at the center (i.e., clerks obtaining some of the demographic and utilization information while therapists obtained other information).

The results of this study have provided initial supportive evidence for the effectiveness of parallel services developed for a particular ethnic minority population. What remain unidentified and unexamined are the specific service features or mechanisms by which parallel services achieve their effectiveness. Are parallel services more effective because they involve more community outreach to overcome the shame and stigma associated with mental illness in many ethnic communities? Deliver more comprehensive case management that minimizes hospitalization for severely mentally ill patients? Are better integrated into community support systems? Employ more culturally competent therapists who can work effectively with ethnic minority families? Or operate more efficiently because they tend to be small, nonprofit agencies who receive contracted work? It will be informative to investigate some of these questions in the context of evaluating the various service delivery models that have been proposed as particularly more effective in serving ethnic minority clients and their communities.

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