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Asian American Mental Health Clients: Effects of Ethnic Match and Age on Global Assessment and Visitation

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Effects of client-counselor ethnic match (i.e., match, no match) and client age group (child, adult) on counselor-evaluated Global Assessment of Function (GAF) and visitation were investigated. The sample consisted of 253 Asian-American outpatient clients (24.9% children 75.1% adults) of a community mental health center. Unadjusted results indicated that ethnically matched clients had more positive GAF evaluations and more clinic visits than nonmatched clients. When adjusted for eight covariates, results showed ethnically matched clients continued to show higher levels of visitation. Analysis of separate diagnostic categories showed that ethnically matched mood-disorder clients had higher levels of visitation. Conversely, nonethnically matched anxiety disorder clients showed higher GAF evaluations than their ethnically matched counterparts. Implications are discussed.

Many books, book chapters, and articles have been published on Asian-American mental health, but there is still a dearth of adequate empirical studies (Serafica, 1999; Sue & Morishima, 1982). Ethnicity has proven difficult to define, research samples are inadequately described, external validity has been underemphasized, and the adequacy of assessment methods and clinical diagnostic categories have been questioned in repeated critiques of ethnic minority research methodology (e.g., Alvidrez, Azocar, & Miranda, 1996; Cauce, Coronado, & Watson, 1998; Dana, 2000; Okazaki & Sue, 1995; Sue, 1999). More specifically for Asian-American research, Kurasaki, Sue, Chun, and Gee (2000) call for a new

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generation of research that goes beyond the descriptive level of identifying ethnic differences in counseling outcomes. Research that systematically examines the responsiveness of the mental health system to multicultural populations is now needed. Such research must not only acknowledge historic deficiencies in methodology but also should stem from the development and application of relevant models to systematically investigate the entire process of access and treatment for mental health problems.

A next step described by Kurasaki et al. (2000) is to identify cultural elements in the treatment process that affect treatment outcomes. As a preliminary undertaking in this direction, Zane, Enomoto, and Chun (1994) examined short-term outpatient treatment outcomes for 20 Asian Americans and 65 White Americans using client and counselor variables often confounded with ethnicity in a multiple regression design. These authors found poorer outcomes, less satisfaction, and increased symptomatology for Asian-American clients that could not be accounted for by cultural differences and were attributed to an absence of culturally responsive therapy.

The ethnic responsiveness hypothesis (i.e., the expectation of the beneficial effects of client-counselor ethnicity, language, and gender match variables upon clinical outcomes) has received sufficient support—from improved treatment outcomes as a consequence of matching clients and counselors and from services provided in culture-specific mental health settings—to warrant systematic research in greater depth (Sue, Fujino, Hu, & Takeuchi, 1991; Takeuchi & Uehara, 1996; Yeh, Eastman, & Cheung, 1994). Matching clients and clinicians for ethnicity can now be contextualized into a matrix of other relevant cultural elements to provide the necessary depth for increased understanding of the processes and outcomes of mental health services to ethnic populations.

The identification of these additional elements affecting ethnic responsiveness has been accomplished using a MANCOVA model with covariates for age, gender, marital status, Medi-Cal, (i.e., state insurance), education, citizenship, primary language, trauma, referral source, language match, gender match, and diagnosis (Gamst, Dana, Der-Karabetian, & Kramer, 2000). Using 4,554 adult clients from four major ethnic groups, this study specified some of the conditions under which matching was effective and necessary or of equivocal relevance for each ethnic group in this diverse Southern California outpatient population. A second analogue study of 1,946 children and adolescents from three major ethnic groups receiving services in the same mental health center used eight

covariates (gender, socioeconomic status, U.S. citizenship, trauma, referral source, language match, and diagnosis). In this study, the effects of ethnicity and ethnic match on treatment outcomes were considerably diluted (Gamst, Dana, Kramer, & Der-Karabetian, submitted). Consistent with earlier findings (e.g., Matsuoka, Breau, & Ryujin, 1997), these studies also underrepresented Asian Americans. In addition, available research samples have also been reduced because many seriously disturbed persons, especially children, receive only family care at home (Dana, 1998a). In our adult study, approximately one half of the estimated eligible clients in the catchment area received treatment, while Asian-American children and adolescents were excluded in the second study due to insufficient sample size. Recognizing a need for adequate reporting of data from Asian-American adult and child/adolescent outpatient clients, this chronically underrepresented population is examined separately in this study.

Based on the foregoing, it seems reasonable to expect that ethnically matched Asian-American clients will garner higher (i.e., more positive) clinical outcomes and better client retention (i.e., more visitation) than clients who are not ethnically matched. Further, it is also predicted that adult Asian-American clients will have lower clinical outcomes and require more mental health visits than their children counterparts due to the chronicity found among the adult population of this community mental health center.

METHOD

Participants were child (6–18 years) or adult (19 years or older) Asian-American clients who utilized Tri-City Mental Health Center outpatient services between January 1994 and July 1998. (The TCMHC serves residents of the cities of Pomona, La Verne, and Claremont within the eastern portion of Los Angeles County.) Client and counselor ethnicity was based on self-report. Precise ethnic matches for the Asian-American classification were not obtained because this category contained clients of Asian-Pacific (53.5%), Southeast-Asian (33.1%), and Filipino (13.4%) descent.

The data reflect a complete census during this 5-year period for all clients on whom a nearly complete set of variables was available. The 253 Asian-American clients included (24.9%) children and (75.1%) adults. According to 1990 census data, the TCMHC catchment area consisted of 7% Asian Americans. These Asian clients, when compared to the total TCMHC client base (3%), were served proportionately to their numbers within the general population. Clients received services from 50 coun-

selors, 64.0% were female. Counselor ethnic breakdown was as follows: 56.0% White American, 26% Asian American, 14.0% African American, and 4.0% Latino American. Counselor discipline or major field of training was psychology (22.0%), marriage and family therapy (18.0%), social work (16.0%), psychiatric technician (16.0%), medical doctor (12.0%), crisis intervention (6.0%), and other (10.0%). Counselor degree status included master's degree (50.0%), high school diploma (18.0%), doctorate (20.0%), bachelor's degree (8.0%), and other (4.0%). Counselors' average years of clinical experience was $M = 4.04$ years.

Data Set

Data were captured by means of the Human Service Information System software in use at TCMHC. This software routinely collects information and tracks clients for purposes of accounting and billing, case management, internal report profiling, and outcome research. Client information was routinely captured by counselors using standardized forms and input into the computer system by clerical workers who, in turn, used fixed-formatted computer screens to guide data entry. This process minimized potential data entry errors.

Variables

Match or congruence between client-counselor ethnicity and its subsequent effect on global functioning and retention were the main variables of interest. Other variables that were routinely collected served as covariates in subsequent analyses.

Ethnic Match

Following Gamst et al. (2000) and Russell, Fujino, Sue, Cheung, and Snowden (1996), an ethnic match existed when the counselor who made the admission evaluation of functioning had the same general ethnicity as the client (e.g., Asian-American counselor, Asian-American client). Due to the archival nature of this study, all clients and counselors were blind as to the treatment conditions and variables manipulated or measured as well as the design and intent of the study.

Global Assessment of Function (GAF)

The GAF Axis V rating of the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994) was used as a measure of clinical outcome success. The GAF was completed at intake (GAF-intake), at termination or latest score (GAF-termination), and a difference score (GAF-difference) was computed for each client. GAF scale values can range from 1 (severe impairment) to 100 (good general functioning). GAF-difference scores were computed for each client by means of subtraction (e.g., GAF at time 2 minus GAF at time 1). Adequate reliability and validity of GAF have been obtained (see Jones, Thornicroft, Coffey, & Dunn, 1995; Spitzer, Gibbon, Williams, & Endicott, 1994). A positive GAF-difference score indicated a more positive clinical assessment by the counselor at termination; conversely, a negative GAF-difference score indicated a more pessimistic clinical assessment by the counselor at time 2 or termination.

Visitation

Client visitation was evaluated as a second dependent variable by counting the total number of client visits to the TCMHC. Due to skewness on this measure, a base-10 logarithmic transformation was performed to adjust the distribution to a normalized function.

Client Demographics

The following client demographic variables were used: age, gender, marital status, socio-economic status, U.S. citizenship, trauma, referral source, language match, gender match, and diagnosis. Age was determined as a continuous variable. Marital status was recoded into married or not-married categories. Socio-economic status was based on Medi-Cal eligibility and adjusted per federal guidelines for number of dependents (see Russell et al., 1996). The Medi-Cal eligibility variable was dichotomized into clients eligible or ineligible for Medi-Cal benefits. Trauma was dichotomized as those clients reporting, experiencing, or witnessing a serious traumatic event and those clients who did not. Client referral source was divided into four categories: (a) self, (b) family or friend, (c) court or jail, and (d) mental health or medical facility. Language match was dichotomized as either a match was present between the client and the counselor's primary language or was not pre-

sent. Gender match was based on counselor and client gender and yielded the following trichotomy: no gender match, female gender match, and male gender match. Diagnosis consisted of dichotomized Axis I disorders from *DSM IV* (1994). Severe diagnoses consisted of schizophrenic and other psychotic disorders and mood disorders, depressive disorders, and bipolar disorders. Anxiety disorders and adjustment disorders were classified as moderate Axis I disorders.

Analysis Strategy

Three sets of statistical analyses were employed with both dependent measures (i.e., GAF-difference and visitation). The first set of analyses included four one-way, between-subjects analyses of variance (ANOVAS), with either ethnic match (match, no match) or age group (children, adults) as the independent variables. Second, analysis of covariance (ANCOVA) was performed with the same independent and dependent variables and eight covariates: Gender, marital status, citizenship, trauma, referral, language match, gender match, and diagnosis. Most of the covariates used in the present study come from previous work by Russell et al. (1996). Third, an additional set of ANCOVAs explored the effects of the same independent variables on the dependent variables after adjustment for covariates, within the two largest primary diagnostic categories of the sample (e.g., mood disorders $N = 88$, 74.6%), and anxiety disorders $N = 30$, 25.4%). ANCOVAs were conducted for both diagnostic groups. Diagnosis was eliminated as a covariate in these analyses.

RESULTS

Sample Characteristics

Characteristics of the sample dichotomized by the two age groups (children vs. adults) can be seen in Table 1. The 253 total clients were distributed into the child (24.9%) and adult (75.1%) classifications. The average client was 31 years old (children $M = 12.40$, adult $M = 37.80$). Roughly half of each age group was female. Nearly all clients were Medical eligible. Nearly two of ten clients were not U.S. citizens. About one third of adult clients reported trauma present as compared to two of ten child clients. About half of each age group were self-referred. Nearly six of ten clients did not have a primary language match with their counselor.

Table 1. Sample Characteristics by Age Group¹

Ethnicity	Age Group		
	Total	Children	Adults
Sample Size	253	63	190
Age (M)	31.47	12.40 ^a	37.80 ^a
% Female	49.4	55.6 ^a	47.4 ^a
% Medi-Cal Eligible	99.5	100.0 ^a	99.5 ^a
% No U.S. Citizenship	17.6	14.5 ^a	18.6 ^a
% Client Trauma Present	33.6	23.8 ^a	36.8 ^a
% No Primary Language Match ²	58.1	55.7 ^a	58.9 ^a
Referral Source			
Self	49.4	54.0 ^a	47.9 ^a
Family/Friend	6.7	6.3 ^a	6.8 ^a
Court/Jail	31.6	27.0 ^a	12.1 ^a
Health Facility ³	12.3	12.7 ^a	33.2 ^a
Gender Match %			
No Gender Match	52.4	40.3 ^a	56.4 ^a
Match for Female Clients	39.2	48.4 ^a	36.2 ^a
% Ethnic Match	60.0	59.7 ^a	60.1 ^a
% Severe Diagnosis ⁴	72.0	56.1 ^a	77.6 ^b

Note. Superscripts indicate significant levels for age group comparisons ($p < .05$). The same letter indicates a nonsignificant difference; a different letter indicates a significant difference. Tests for significance of difference between proportions is used for variable summarized by percentages. Variables represented by means are evaluated by means of one-way analyses of variance.

1. Age group was dichotomized into children ages 6–18 years, and adults ages 19 years or older.
2. Most of the clients who had no primary language match with the counselor were bilingual. Hence, relatively few required mental health services in a language other than English.
3. Health facility refers to private/public medical or mental health facility.
4. Severe diagnosis refers to DSM-IV (1994) categories schizophrenic and other psychotic disorders and mood disorders.

No gender match occurred for half of all clients. Ethnic match between client and counselor occurred for about six of ten clients. Three fourths of adult clients were classified with a severe diagnosis as compared to about half of the child clients.

Unadjusted GAF-difference and Visitation Analyses

Four one-way, between-subjects ANOVAs were performed to analyze the effects of ethnic match (2 levels) or age group (2 levels) on GAF-difference and visitation and can be seen in Table 2. Ethnically matched clients demonstrated more positive outcomes than nonmatched clients, $F(1,172) = 3.93, p < .04, \eta^2 = .02$. Additionally, ethnically matched clients had significantly more visits (a base-10 logarithmic transformation was deemed necessary for the visitation variable due to the skewness of the distribution) than did nonmatched clients, $F(1,248) = 32.68, p < .0001, \eta^2 = .12$.

Table 2. Mean GAF-Difference Scores and Visitation For Ethnic Match and Age Group

GAF-Difference		
Ethnic Match	Mean	SD
Match	2.56	17.03
No Match	-3.00	18.61
<hr/>		
Age Group		
Children	-2.11	19.05
Adults	1.44	17.31
<hr/>		
Visitation (Log)		
Ethnic Match	Mean	SD
Match	1.50	.41
No Match	1.10	.69
<hr/>		
Age Group		
Children	1.22	.55
Adults	1.38	.58
<hr/>		

Significant age group effects were not observed for the GAF-difference dependent measure, $F(1,173) = 1.36, p > .05$. However, adult clients necessitated more visits than did the children, $F(1,250) = 3.52, p < .05$, $\eta^2 = .02$.

These unadjusted results showed that Asian-American clients (both children and adults) who were ethnically matched were evaluated more positively and required more visits than nonmatched clients. Additionally, adults required more visits than did children.

Adjusted GAF-difference and Visitation Analyses

Four one-way, between-subjects analyses of covariance (ANCOVAs) were also conducted on GAF-difference and visitation and can be seen in Table 3. Based in part on previous research (e.g., Gamst et al., 2000; Russell et al., 1996), adjustment was made for eight covariates. The covariates included gender, marital status, citizenship, trauma, referral source, language match between client-counselor, gender match between client-counselor, and diagnosis. Adjusted GAF-difference scores did not differ significantly for ethnically matched and nonmatched clients, $F(1,80) < 1.00$, however, ethnically matched clients had significantly more adjusted visits than did nonmatched clients, $F(1,100) = 5.88, p < .01$, $\eta^2 = .06$. Conversely, after adjustment, both age group analyses failed to reach significance, $F_s < 1.00$.

After adjusting for differences on the eight covariates (only referral source and language match significantly adjusted the dependent measures), higher levels of visitation continued to be observed, with ethnically matched clients requiring more mental health visits than their nonmatched counterparts.

Adjusted GAF-difference and Visitation: Separate Diagnoses

Two additional sets of ANCOVAs were run to determine if either ethnic match or age group effects were maintained within the two largest diagnostic classifications (i.e., mood and anxiety disorders). These analyses were conducted because a greater proportion of adult Asian-American clients were assessed with a severe diagnosis than children

Asian Americans, which may have affected the GAF evaluations. Four one-way, between-subjects ANCOVAs with the same independent and dependent variables and the same covariates as before (with the elimination of diagnosis) were used for mood and anxiety disorder clients.

Table 3. Adjusted Mean GAF-Difference Scores and Visitation For Ethnic Match and Age Group

GAF-Difference		
Ethnic Match	Mean	SD
Match	1.68	19.37
No Match	-0.53	18.78
<hr/>		
Age Group		
Children	0.56	18.13
Adults	1.11	19.64
<hr/>		
Visitation (Log)		
Ethnic Match	Mean	SD
Match	1.51	.42
No Match	1.07	.69
<hr/>		
Age Group		
Children	1.35	.56
Adults	1.36	.58
<hr/>		

For the mood disorder classification, the ethnic match manipulation did not significantly affect GAF-difference, $F(1,43) < 1.00$. However, ethnically matched mood disorder clients had higher levels of visitation than non-ethnically matched clients, $F(1,54) = 5.36, p < .02, \eta^2 = .09$. The age group manipulation had no significant effect on GAF-difference, $F(1,43) < 1.00$, or visitation, $F(1,54) = 1.78, p > .05$.

Among anxiety disorder clients, a significant effect of ethnic match emerged with non-ethnically matched clients being evaluated with GAF-difference more positively than ethnically matched anxiety disorder clients, $F(1,9) = 5.50, p < .04, \eta^2 = .38$. Ethnic match was not significantly associated with visitation for the anxiety disorder clients, $F(1,13) = 2.59, p > .05$. Additionally, age group was not significantly associated with GAF-difference or visitation for the anxiety disorder clients ($F_s < 1.00$).

Table 4. Adjusted Mean GAF-Difference Scores and Visitation For Ethnic Match and Age Group Among Mood Disorder Clients

GAF-Difference		
Ethnic Match	Mean	SD
Match	2.66	21.67
No Match	-3.25	18.39
<hr/>		
Age Group		
Children	-3.09	17.42
Adults	1.32	21.33
<hr/>		
Visitation (Log)		
Ethnic Match	Mean	SD
Match	1.48	.40
No Match	.95	.63
<hr/>		
Age Group		
Children	1.17	.58
Adults	1.27	.58
<hr/>		

These results suggest that when considering specific diagnostic classifications, ethnically matched mood disorder clients had higher levels of visitation than nonmatched counterparts, but no significant differences in their GAF-difference scores. Likewise, mood disorder clients had comparable GAF-difference scores and visitation levels when examined by age groups. The Asian-American anxiety disorder clients yielded a surprising outcome, in that ethnically nonmatched clients showed more positive GAF-difference evaluations than their ethnically matched counterparts. Age group proved to not be a reliable predictor of clinical outcomes or visitation for the Asian-American anxiety disorder clients.

DISCUSSION

The present study examined the relationship of several independent variables (e.g., client-counselor ethnic match and client age group) on two dependent measures (e.g., client functioning level and client treatment visitation) with and without adjustment for important covariates.

Unadjusted results suggested that higher GAF-difference evaluation scores and more mental health visits were associated with ethnically matched clients. Adult Asian-American clients had higher levels of visitation than did children. After adjustment, only the ethnic match effect pertaining to visitation remained: ethnically matched Asian-American clients necessitated more mental health visits than their nonmatched counterparts. Additionally, ethnically matched mood disorder clients also required more mental health visits than did their nonmatched counterparts. Interestingly, higher GAF-difference scores were found for non-matched anxiety disorder Asian Americans as compared to their ethnically matched counterparts.

Table 5. Adjusted Mean GAF-Difference Scores and Visitation For Ethnic Match and Age Group Among Mood Disorder Clients

GAF-Difference		
Ethnic Match	Mean	SD
Match	-1.33	14.19
No Match	13.33	17.22
<hr/>		
Age Group		
Children	3.00	14.49
Adults	3.91	18.15
<hr/>		
Visitation (Log)		
Ethnic Match	Mean	SD
Match	1.55	.41
No Match	.92	.53
<hr/>		
Age Group		
Children	1.40	.45
Adults	1.31	.60
<hr/>		

Maki (1999) reported on Japanese American clinicians' perceptions of matching. Clinician identification with clients was positively affected by match of generation, place of origin, and acculturation status. Moreover, there were two essential identification components, perceived commonality with clients and salience or intensity of the perception. Apparently

the matching of Asian-American clinicians and their clients is even more complex than hitherto suspected. The addition of additional covariates may further dilute match effects.

The generality of these findings is limited by the relatively small samples of children and adults in this study and the failure to attain adequate samples of clients from different countries of origin. However, there is both commonality and diversity among Asian populations of various origins. Chin (1998) described commonalities in help-seeking behaviors that utilize somatization and expectations for advice and information in addition to medication. Health-illness beliefs are also similar across Asian-American clients of different national origins (Dana, 1993). These commonalities are of critical importance because a majority of mental health clients are immigrants (e.g., 63% of all Asian Americans in 1990; Tanaka, Ebero, Linn, & Morera, 1998) espousing traditional Asian values (Kim, Atkinson, & Yang, 1999). Under these circumstances, the use of small samples, undifferentiated by country of origin, may be acceptable. Nonetheless, future research must use more adequate numbers and descriptions of client samples from diverse national origins in order to examine differences in immigration history, educational level, and socioeconomic status that may prove to be related to help-seeking behaviors as well as outcomes of various forms of treatment.

Earlier research suggests that the GAF is a reliable measure of disturbance in long-term mental health clients (Jones et al., 1995). However, the reliability of GAF termination ratings in this archival study could not be assessed. The GAF ratings in this study were made by the counselors who provided the services and are vulnerable to "favorability" influence and other untoward effects.

Several additional limitations of the present study should be noted. First, non-Asian-American counselor ethnicity was only classified by broad ethnic groupings due to the unavailability of detailed data. Second, the mix of therapeutic competence varied among the clients receiving services. As is true in many community mental health centers, direct mental health services are provided by staff with terminal degrees ranging from high school diplomas to doctorates. Due to the way the present community mental health center makes available information regarding staff, we were unable to systematically assess (i.e., covary) the potential impact of this variable on client outcomes. Third, likewise, information on client treatment modality (i.e., individual psychotherapy, group, medications-only, etc.) was not available in the present data set. The extent to which ethnic match or age interact with clinical intervention remains unknown in the present study and should be a high priority for future applied community mental health research.

These research results may seem meager but their heuristic value calls attention to the necessity for management with a flexible data-driven format guided by, for example, the Multicultural Assessment-Intervention Process Model as a vehicle for systematic study of clinical outcomes for ethnic minority mental health populations (Dana, 1997, 1998b, 2000). The present study has important implications for mental health counseling practitioners. While not a consistently significant effect in the present study, client-counselor ethnic match should be treated as an important resource allocation issue for counseling practitioners at community mental health centers with Asian-American populations. The present study also alerts counselors to be vigilant concerning Asian-American anxiety and mood disorder clients and the role of ethnic matching. Only future research will be able to confirm or disconfirm our ethnic matching results among diagnostic classifications.

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