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The relationships among client-therapist ethnic match, client age group, client acculturation, ethnic identity, and generation level and their effect on client global assessment of function (GAF), total mental health visits, and costs were examined with a sample of 204 Latino adult and child community mental health clients. Acculturation was measured using the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II), and the Multigroup Ethnic Identity Measure (MEIM) served as the measure of ethnic identity. The adjusted findings indicated that GAF outcomes declined for Anglo-oriented Latino clients who reported low ethnic identity. These results are discussed in light of a Multicultural Assessment Intervention Process Model (MAIP) that helps guide service delivery to community mental health consumers.

The study of ethnicity in the United States was fostered by an early examination of concepts including ethnicity, culture, and race (Betancourt &

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Lopez, 1993) as well as by books describing relevant theoretical and research agendas for Latino populations (e.g., Malgady & Rodriguez, 1994; Marin & Marin, 1991; Padilla, 1980, 1995). Acculturation and ethnic identity conceptualizations led to construction of instruments measuring these concepts among college students. At present, both acculturation and ethnicity instruments have been used in research programs to provide evidence of their validity, utility, and applicability to research with multicultural mental health clients. However, the relationship of acculturation status to Latino mental health status remains controversial, although the necessity to use acculturation in culturally competent systems of care is recognized. This article provides an examination of acculturation and ethnicity instruments with Latino mental health clients as part of an application of the Multicultural Assessment-Intervention Process Model (MAIP) (Dana, 1997, 2000b) to a research program in a community mental health center.

Acculturation and Ethnicity

Psychological acculturation is adaptation by a group to a host culture and can be viewed as a group or individual process (Dana, 1998a). Acculturation outcomes depicting an individual's relationship with their original and host cultures have been reliably identified using a framework describing acculturation phases leading to distinct acculturation outcomes (i.e., Berry, 1980, 1990; Berry & Kim, 1988). These individual adaptations were described as assimilation, integration, or biculturality, separation or maintenance of traditionality, and marginalization or peripheral status in both cultures.

An early description of instruments providing these acculturation outcomes for each cultural/racial group (Dana, 1993) led to increasingly comprehensive general reviews (Cuellar, 2000a; Kim & Abreu, 2001) as well as reviews of instruments designed exclusively for Latinos (Dana, 1996). The most prominent and widely researched of these instruments is the Acculturation Rating Scale for Mexican-Americans (ARSMA-II) (Cuellar, Arnold, & Maldonado, 1995). The ARSMA-II employs two separate subscales to measure Mexican Orientation (MOS) and Anglo Orientation (AOS), thus providing a multidimensional orthogonal framework for measuring Latino acculturation. This research emerged from empirical documentation that a traditional cultural orientation among Latinos is accompanied by significant Minnesota Multiphasic Personality Inventory (MMPI)/MMPI-2 clinical scale elevations (Cuellar, 2000b; Cuellar, Harris, & Jasso, 1980; Dana, 1995). This culture-psychopathology confound has also been supported empirically for other major cultural/racial groups (Sue, Keefe, Enomoto, Durvasula, & Chao, 1996; Whatley, Allen, & Dana, 2002).

Although acculturation measurement originally focused on specific groups, a related body of research explored the ethnic identities of a number of diverse ethnic and racial groups (see Phinney, 1990, 1992, 1996). Ethnic identity—one's sense of belonging to a particular group—was guided primarily by social identity theory (Tajfel, 1981) and Erickson's (1968) neopsychoanalytic developmental notions. The concept we have of ourselves as a member of a particular ethnic or racial group appears to be formed in early adolescence and continues to develop throughout adulthood. Ethnic identity is one component of our sense of self: a schematic representation of our hopes, aspirations, values, and goals. It is also our perception of how we think others view us as ethnic beings.

Ethnic attitudes, behaviors, practices, and belongingness have been measured using the Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992), a popular 14-item measure of ethnic identity. The MEIM has recently been revised into a 12-item measure (Roberts et al., 1999). Phinney and Devich-Navarro (1997) studied bicultural identification (qualitatively and quantitatively) among Mexican American and African American adolescents. Two unique types of bicultural adolescents (i.e., blended and alternating) as well as a third group of predominantly African American adolescents who were not bicultural (i.e., separated) and had a strong sense of African American identity, were differentiated.

Only one study (Cuellar, Nyberg, Maldonado, & Roberts, 1997) examined the relationship between ethnic identity and acculturation status using the MEIM and ARSMA-II. An inverse relationship between Latino ethnic identity and acculturation was found; acculturated Latinos were more likely to have a lower sense of ethnic identity.

Acculturation and Mental Health

The importance of the relationship between client acculturation status (variously defined) and Latino mental health has been recognized (Betancourt & Lopez, 1993; Rogler, Cortes, & Malgady, 1991). In fact, a meta-analysis of 30 empirical studies examining Latino acculturation hypothesized three possible relationships between acculturation and mental health (Rogler et al., 1991): (a) a negative relationship with poorer mental health due to stress from inadequate social networks and unfamiliar cultural dynamics for unacculturated clients; (b) a positive relationship with acculturated clients yielding higher levels of mental health problems from internalization of racist cultural norms and stereotypes within the host society; (c) a curvilinear relationship with the two ends of the acculturation continuum correlating with poor mental health outcomes, and good mental health linked

to an acculturation midpoint. Approximately equal support for the positive and negative relationships was acknowledged, with only scant evidence for the curvilinear position.

Strong empirical support for the positive relationship (Vega et al., 1998) was provided by lower lifetime prevalence rates of key psychiatric disorders for unacculturated Mexican immigrants as compared to acculturated Mexican Americans. Commenting on these findings, Escobar (1998) argued that Mexican immigrants have mental health advantages over Mexican Americans due to a "protective buffering" affording better family life, lower divorce rates, more two-parent families, and greater retention of their traditional culture.

Conversely, Cuellar (2000b) supported the negative relationship viewpoint when chronicling the major acculturation scales in use between 1955 and 1995. In relating these scales to the measurement of personality traits, Cuellar noted,

> A general conclusion that can be drawn about the relationship between acculturation and personality tests scores seems to be that less acculturated persons, particularly when accompanied by lower socioeconomic status (SES) and education, have elevated scores in the direction of greater psychopathology. (p. 121)

Demonstrations that these acculturation instruments developed using college students are applicable to clients in mental health agencies are now necessary for continued development of culturally competent systems of care to increase utilization of mental health services by multicultural populations as a result of increased sociocultural information (Casas, Pavelski, Furlong & Zanglis, 2001). For compelling ethical reasons and to minimize discrimination in mental health settings, culturally competent systems of care need to understand how acculturation status information, available prior to the onset of services, can be used to match therapists with clients, prepare cultural formulations for clinical diagnosis, and select potentially effective interventions with optimal outcomes (Dana, 1994, 1998b, 2000a, 2000b).

At the present time, more than half of the mental health research processes for this population deal with clinical assessment and treatment in which acculturation issues continue to occupy a major role (Mezzich, Ruiz, & Munoz, 1999). Acculturation stress, an accompaniment of adaptation for Latinos from at least 19 countries with differing demographics, preimmigration histories, and immigration routes, remains a complex contribution to their mental health problems in the United States (Dana, 1993, 1998a; Hovey, 2000; Smart & Smart, 1995).

Ethnic identity, acculturative stress research findings, relevant interventions, and associated mental health outcomes remain not only controversial but mixed with positive or negative linear relationships, as well as indications of curvilinear relationships between client acculturation status and mental health outcomes. The conclusion that "relations among ethnic identity and acculturation are not well understood" (Cuellar et al., 1997, p. 536) undergirds our primary research question, What is the relationship between clinical outcomes and client acculturation status and ethnic identity for both Latino American children and adults? and leads to this exploration of relationships between Latino acculturation and ethnic identity for a child and adult mentally ill client population.

Present Study

This study is part of a research program describing parameters of agency cultural competence using the MAIP (Dana, 1997, 2000c) with multicultural child and adult client populations in one community mental health center. To date, this program has focused on the development of a format for systematically investigating hypotheses derived from the mental health literature describing services to multicultural populations. These studies have examined the effects of client-therapist ethnic match and client ethnicity on therapist-evaluated Global Assessment of Function (GAF) and visitation for adults, children, and Asian Americans (Gamst, Dana, Der-Karabetian, & Kramer, 2000; Gamst, Dana, Der-Karabetian, & Kramer, 2001; Gamst, Dana, Kramer, & Der-Karabetian, submitted). This study extends this line of research by including acculturation and ethnic identity into the mix of variables we are exploring. The principal goals of this investigation were (a) to replicate and extend the previous work of Cuellar et al. (1997) to child and adult community mental health populations and (b) to examine the effects of client-therapist ethnic match, client age, acculturation status, ethnic identity, and generation on clinical outcome measures of client GAF scores, visitation, and total costs after statistically controlling for several important variables, assumed to impact clinical outcomes. Stemming from these research goals, the following research hypotheses are tested using specific statistical hypotheses (e.g., Wampold & Poulin, 1992). First, it seems reasonable to expect a negative correlation between client acculturation and ethnic identity and also clinical outcomes. Second, a positive correlation is expected between client acculturation and generation. Third, higher GAF scores, lower levels of visitation, and associated total costs are expected when client-therapist ethnicity is matched, or when client acculturation levels are low, or

when client generation status is low (i.e., indicating immigrant status), or when ethnic identity is high.

Method

Participants were 204 Latino American outpatient clients or parents/caregivers of clients who utilized Tri-City Mental Health Center (TCMHC)[1] outpatient services between March and May 2000. Client and therapist ethnicity was based on self-report. Precise ethnic matches for the Latino American classification were not obtained because this category contained clients of Mexican American, Mexican, South American, Central American, and Cuban descent. The 204 participants included 52.8% regular adult clients and 47.2% surrogate child clients, who were the parents/caregivers of Latino American children clients (6 to 18 years of age) receiving mental health services at TCMHC. These surrogates were included in the sample to determine the children's home-acculturative environment that they were living in during the course of treatment.

Latino Americans, according to 2000 Census data, represent 50.6% of the TCMHC catchment area and represent roughly 42% of the TCMHC consumer base. Thus, this relatively large minority group is served proportionately to their numbers in the population. Because community mental health clients are served increasingly by teams of mental health service providers, (e.g., psychologists, psychiatrists, marriage and family therapists, social workers, and case managers), and not individual therapists, the concept of a modal therapist was developed for this report. A modal therapist is operationalized as that mental health service provider who has the most frequent contact with a particular client during a specific time frame. All future references to *therapists* in this report will be based on the modal therapist. Clients received services from 57 therapists; 63.2% were female. Therapist ethnic breakdown was as follows: 38.2% White American, 43.1% Latino American, 9.3% African American, and 9.4% Asian American. Therapist degree status included master's degree (49.1%), medical degree (21.1%), doctorate (7.0%), bachelor's degree (19.3%), and less than bachelor's degree (3.5%). Therapist primary language included 49.5% English, 42.2% Spanish, and 8.3% other languages. Therapists' average years of clinical experience was $M = 9.58$ years.

Questionnaire

A convenience sample of clients or parents/caregivers was given a fairly lengthy questionnaire to assess their cultural background at the time of their

regularly scheduled visit to TCMHC. Participants signed a consent form and also indicated if they were willing to participate at this time. About 6 respondents (2.9%) chose not to participate, and 12 respondents were eliminated for not following instructions in completing the questionnaire. Some participants (40.7%) required follow-up by telephone to complete all questionnaire items. Clients required between 20 and 60 minutes to complete the questionnaire. All questionnaire items were provided in both English and Spanish. The questionnaire included basic demographic and descriptive items about the client, the 30-item (scale 1) ARSMA-II, the 18-item (scale 2), both developed by Cuellar et al. (1995), and the 12-item MEIM developed by Phinney (1992). Additional demographic and diagnostic information was retrieved from the TCMHC database on each adult or child client.

Variables

The main variables of interest were match or congruence between client-therapist ethnicity, client age group, various client acculturation and ethnic identity measures, and client generation status and their subsequent effect on global assessment, visitation, and total client costs. Other variables that were routinely collected served as covariates in subsequent analyses.

Independent Variables

Ethnic match. Previous research (e.g., Gamst et al., 2000, 2001; Russell, Fujino, Sue, Cheung, & Snowdon, 1996) operationalized an ethnic match by matching the therapist who made the admission evaluation of functioning with the client's ethnicity. This operationalization may be inadequate because clients of large urban community mental health operations are provided with mental health services from a number of staff members. Hence, in this study, an ethnic match existed when the modal therapist (i.e., the mental health worker who had the most sessions with the client as indicated by computer activity logs) had the same ethnicity as the client. Clients and therapists were blind as to the treatment conditions and variables manipulated or measured, as well as the design and intent of the study.

Generation. Following Cuellar et al. (1995), clients were asked to indicate which generation category best described them. First generation was operationalized as being born outside the United States. Second generation denoted being born in the United States with either parent being born outside

the United States. Third generation was defined as both client and parents being born in the United States and all grandparents were born outside the United States. Fourth generation, clients and parents and one grandparent were born in the United States. Last, fifth generation clients had both grandparents born in the United States. From this, client generation was trichotomized into the following groupings: first generation, second generation, and third or later client/respondent generations.

Acculturation level (or score). This is a computed variable based on two subscales of the ARSMA-II (see Cuellar et al., 1995) and is a linear measure of acculturation with level one representing clients with a more Mexican orientation and level five anchoring the more Anglo orientation of the scale. Due to sample size limitations, the present study dichotomized acculturation level by means of a median split. Hence, all respondents were classified as being more Mexican oriented or more Anglo oriented.

Ethnic identity. This composite variable is an average of the 12-item MEIM scale (see Phinney, 1992; Roberts et al., 1999). This variable was further decomposed into two subscales: Ethnic Identity Search (EIS) is a composite average of five items from the MEIM scale, and Affirmation, Belonging, and Commitment (ABC) is a seven-item composite measure. A dichotomous MEIM variable (high, low) was created by computing a median split on the complete MEIM scale. This variable was used for purposes of analysis of covariance.

Dependent Variables

Global Assessment of Function (GAF). One set of three dependent variables was the GAF Axis V rating of the Diagnostic and Statistical Manual IV (DSM-IV) (American Psychiatric Association, 1994). The GAF was completed at intake (GAF-intake), at termination or latest score (GAF-termination), and a difference score (GAF-difference) examined all phases of the treatment process. 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, 1995). A positive GAF-difference score indicated a more positive clinical assessment by the therapist at termination; conversely, a negative GAF-

difference score indicated a more pessimistic clinical assessment by the therapist at time 2 or termination.

Visitation. Client visitation was evaluated as a fourth dependent variable by counting the total number of visits (visitation) each client had at the TCMHC. Due to skewness on this measure, a base-10 logarithmic transformation was performed on this variable to adjust the distribution to a more normalized function.

Total costs. A measure of total monetary costs or charges was developed for each client that totaled the cost of all mental health services received at TCMHC. This variable was also adjusted with a base-10 logarithmic transformation because of skewness.

Client/Sample Demographics and Descriptors

The following variables were used to describe and segment the clients/respondents: age, gender, marital status, living arrangement, education, generation, referral source, program, language match, gender match, age group, diagnosis, ability to speak English, service preference, language preference, and gender preference. Age was determined as a continuous variable. Marital status was recoded into married or not married categories. Living arrangement was trichotomized among those who live alone, with family, or under community care. Education was bifurcated among those who were high school graduates or not. Generation consisted of three mutually exclusive categories (e.g., 1st, 2nd, and 3rd-5th). Client referral source was divided into the following four categories: self, family or friend, court or jail, and mental health or medical facility. Client program was broken into the following five groups: outpatient, psychiatry, crisis, day treatment, and specialized treatment. Language match was dichotomized as either a match was present between the client and the (modal) therapist's primary language or was not present. Gender match was analyzed with regard to both the (modal) therapist's and the client's gender and yielded the following trichotomy: no gender match, female gender match, and male gender match. Age group of respondent was dichotomized into adult Latino American clients receiving services or adult parents/caregivers of Latino American children (ages 6 to 18) who were receiving mental health services. Diagnosis consisted of dichotomized Axis I disorders from DSM-IV (American Psychiatric Association, 1994). Severe diagnoses consisted of schizophrenic and other psychotic disorders

and mood disorders, depressive disorders, and bipolar disorders. More moderate Axis I disorders were classified as anxiety disorders, adjustment disorders, and childhood disorders. English language was dichotomized as those clients who could speak English and those who could not. Service preference was trichotomized among those respondents who preferred service from someone of the same culture, different culture, or it did not matter. Language preference was trichotomized among those respondents who preferred English-only service, bilingual Spanish services, or it did not matter. Gender preference was trichotomized among those respondents who preferred the same gender, different gender, or it did not matter.

Analysis Strategy

Three sets of statistical analyses were employed with several independent and dependent variables. First, reliability analyses (Cronbach's α) were computed for the six scales or subscales used in this study. Second, interitem correlations were computed among the independent and dependent variables. Third, two sets of four-way between-subjects analyses of covariance (ANCOVAs) were computed using various combinations of independent and dependent variables. For the first set of five ANCOVAs, the independent variables were ethnic match (match, no match), age group (child, adult), acculturation level (Mexican orientation, Anglo orientation) and MEIM (high, low). The dependent variables were as follows: GAF-intake, GAF-termination, GAF-difference, total costs, and visitation. The second set of 5 four-way between-subjects ANCOVAs included ethnic match, age group, generation (first, second, or third or later) and MEIM (high, low) as independent variables. The dependent variables were the same as in the previous analyses. Seven covariates were used to adjust the dependent measures. The seven covariates used in the ANCOVA models were as follows: client gender, client-therapist gender match, referral source, diagnosis, marital status, therapist degree (licensed, nonlicensed), and therapist tenure (in years). Some of these covariates were found to make significant adjustments to dependent variables in previous studies (see Gamst et al., 2000, 2001; Russell et al., 1996).

Results

Sample Characteristics

Characteristics of the sample partitioned by client/respondent age group (child or adult) and acculturation level (Mexican or Anglo orientation) can be seen in Table 1. The 204 respondents were dichotomized into groups: adults (54%) were adult Latino American clients receiving services at TCMHC and children (46%) were adult parent/caregivers of Latino American children (ages 6 to 18 years) who were receiving services at TCMHC. Each of these age groups was further dichotomized by acculturation level and was operationalized by a median split on the Cuellar et al. (1995) acculturation score. This computation yielded for the child portion of the sample, 61% of Mexican orientation and 39% of Anglo orientation and for the adult portion of the sample, 43% were of Mexican orientation and 57% were of Anglo orientation. The average age of the client sample was 27 years old (children = 13.7 and adults = 39.3). Roughly half the sample was female; however, about three fourths of the adult Mexican orientation clients were women. About one third of the adult Mexican orientation clients were married, and roughly 2 of 10 respondents were living in a community care situation. Nearly 8 of 10 respondents had not graduated from high school. About half of the sample classified themselves as first generation. The bulk of these respondents were of Mexican orientation. Roughly half of the sample was referred by a health facility and about half of the clients received standard outpatient mental health services. Adult Anglo-oriented clients were more likely to be seen by a psychiatrist. Lack of client-therapist primary language match was evident for about 4 of 10 Mexican-oriented respondents. Gender matches occurred for about half the sample. Client-therapist ethnic match occurred for about 4 of 10 child Mexican-oriented respondents and 7 of 10 adult Mexican-oriented respondents. Only about 1 of 10 adult Anglo-oriented respondents were ethnically matched. Severe diagnoses were disproportionately skewed to adult clients with more than 9 of 10 Anglo-oriented clients and three fourths of Mexican-oriented adult clients being classified with a severe diagnosis. Four of 10 adult Mexican-oriented clients had no English language ability. Mexican-oriented respondents (44.4% child and 61.8% adult) preferred mental health services from staff of the same culture. Conversely, 85.7% of the Anglo-oriented child respondents and 78.0% of their adult counterparts indicated culture of staff did not matter. Language preference (during treatment) was similarly skewed with about half of the Anglo-oriented respondents

Table 1. Sample Characteristics by Age Group and Acculturation Level

		Age Group,[c] Acculturation Level[d]			
		Child		Adult	
Variable	Total	Mexican	Anglo	Mexican	Anglo
Sample size	204	57	37	47	63
Age (*M*)	27.38	13.54[a]	14.00[a]	40.57[a]	38.09[a]
Female (%)	53.9	38.6[a]	59.5[b]	72.3[b]	50.8[b]
Married (%)	10.3	1.8[a]	0.0[a]	31.9[b]	7.9[a]
Community care (%)	17.6	19.3[a]	21.6[a]	10.6[a]	19.0[a]
Less than high school graduate (%)	82.4	98.2[a]	97.3[a]	85.1[a]	57.1[b]
First generation* (%)	50.5	92.6[a]	20.6[b]	78.7[a]	8.2[b]
Referral source (%)					
Self	30.4	15.8[a]	13.5[a]	48.9[b]	39.7[b]
Family/friend	4.4	3.5[a]	8.1[a]	4.3[a]	3.2[a]
Court/jail	8.3	12.3[a]	13.5[a]	0.0[a]	7.9[a]
Health facility[e]	56.9	68.4[a]	64.9[a]	46.8[b]	49.2[b]
Client program (%)					
Outpatient	47.1	49.1[a]	54.1[a]	63.8[a]	28.6[b]
Psychiatry	16.2	7.0[a]	5.4[a]	17.0[a]	30.2[b]
Crisis	3.9	1.8[a]	8.1[a]	4.3[a]	3.2[a]
Day treatment	2.9	0.0[a]	0.0[a]	2.1[a]	7.9[a]
Special treatment programs	29.9	42.1[a]	32.4[a]	12.8[b]	30.2[a]
No primary language match[f] (%)	31.9	38.6[a]	27.0[a]	31.9[a]	28.6[a]
Gender match (%)					
No gender match	44.6	45.6[a]	32.4[a]	61.7[b]	38.1[a]
Match for female clients	36.3	33.3[a]	54.1[a]	17.0[b]	42.9[a]
Match for male clients	19.1	21.1[a]	13.5[a]	21.3[a]	19.0[a]
Ethnic match (%)	43.2	55.4[a]	41.7[a]	72.3[a]	10.0[b]
Severe diagnosis[g] (%)	58.4	22.8[a]	36.1[a]	74.5[b]	91.9[b]
No English (%)	17.2	22.8[a]	2.7[b]	42.6[a]	1.6[b]
Client service preference* (%)					
Same culture	32.9	44.4[a]	11.4[b]	61.8[a]	20.3[b]
Doesn't matter	65.4	55.6[a]	85.7[b]	35.3[a]	78.0[b]
Different culture	1.7	0.0[a]	2.9[a]	2.9[a]	1.7[a]
Client language preference* (%)					
English only	28.7	5.4[a]	55.6[b]	2.1[a]	54.0[b]
Bilingual Spanish	56.9	87.5[a]	19.4[b]	93.6[a]	23.8[b]
Doesn't matter	14.4	7.1[a]	25.0[b]	4.2[a]	22.2[b]
Client gender preference* (%)					
Same gender	22.8	24.1[a]	14.3[a]	38.6[b]	14.3[a]
Different gender	4.2	5.6[a]	0.0[a]	2.3[a]	7.1[a]
Doesn't matter	73.0	70.3[a]	85.7[a]	59.1[b]	78.6[a]

NOTE: Superscripts indicate significance levels for client acculturation level comparisons ($p < .01$) for each age group. The same letter indicates a nonsignificant difference; a different letter indicates a significant difference. Tests for significance of difference (among age group/acculturation level combinations) between proportions is used for

Table 1 Note (continued)

variables summarized by percentages. Variables represented by means are evaluated by means of one-way analyses of variance. Asterisked (*) items indicate that adult clients and/or the parents/caregivers answered these items, not the child clients themselves.
c. Respondent age group was dichotomized into "adult" (53.9%) = those adult Latino clients receiving mental health services, and "child" (46.1%) = those *adult* parents/caregivers of Latino children (6 to 18 years of age) receiving mental health services. Thus, the entire data set is based on responses from adults. Some of these adults reflect the acculturative environment that the children clients live in.
d. Acculturation level (see Cuellar, Arnold, & Maldonado, 1995) was computed from the mean of the Anglo Orientation Subscale minus the mean of the Mexican Orientation Subscale. This continuous measure was partitioned into two mutually exclusive categories using the ARSMA-II acculturation score (Accscore) median as the cutting point: Mexican = Mexican orientation and Anglo = Anglo orientation. Cuellar et al. (1995) used a five-level classification scheme. This study utilizes a dichotomous scheme due to the relatively small sample of respondents in the two age groups.
e. Health facility refers to private/public medical or mental health facility.
f. Most of the clients who had no primary language match with the therapist were bilingual. Hence, relatively few required mental health services in a language other than English.
g. Severe diagnosis refers to DSM-IV categories schizophrenic and other psychotic disorders and mood disorders.

wanting English only and more than 8 of 10 Mexican-oriented respondents preferring bilingual Spanish services. About three fourths of the child and Anglo-oriented adult respondents indicated no particular gender service preference.

Statistical Analyses

Scale reliability. Internal consistency as measured by Cronbach's α was computed on respondents who answered all items on each scale. As can be seen in Table 2, all measures are fairly reliable for both the adult clients and the parents or caregivers of the child clients. These reliability measures are in general accord with previously published norms (see Cuellar et al., 1997; Phinney, 1992).

Interscale correlations. Table 3 depicts Pearson correlation coefficients for all of the scales and subscales used in this study. The ARSMA-II acculturation score was negatively correlated with the MOS, the MEIM, and both of its subscales (ABC and EIS). The acculturation score was positively related to the AOS and generation. The negative correlation between ethnic identity

Table 2. Alpha Coefficients for the ARSMA-II and MEIM Scales and Subscales

Description	Scale					
	ARSMA-II	MOS	AOS	MEIM	EIS	ABC
Total sample	.62	.89	.94	.89	.73	.90
Parents/caregivers of child	.60	.89	.94	.78	.63	.84
Adults	.65	.89	.93	.91	.79	.92

NOTE: ARSMA-II = Acculturation Rating Scale for Mexican Americans-II. MOS = Mexican Orientation Scale. AOS = Anglo Orientation Scale. MEIM = Multigroup Ethnic Identity Measure. EIS = Ethnic Identity Scale. ABC = Affirmation, Belonging, and Commitment.

and acculturation has been established previously with college student populations (see Cuellar et al., 1997). The five clinical outcome measures used in this study (i.e., visitation, total costs, GAF-scores) had low correlation with the other scales, indicating these particular outcome measures may be tapping issues unrelated to acculturation and ethnic identity.

Adjusted factorial analyses. Five four-way between-subjects ANCOVAs were performed to analyze the effects of client-therapist ethnic match (two levels) by client age group (two levels) by client acculturation level (two levels) by MEIM (two levels) on each of five dependent outcome measures. The dependent measures were: GAF-intake, GAF-termination, GAF-difference, visitation, and total costs. Adjustment was made for seven covariates found in previous research to significantly adjust the dependent variables (see Gamst et al., 2000, 2001). The covariates included referral source, diagnosis, client gender, client-therapist gender match, marital status, therapist degree, and therapist tenure. Any main or interaction effects not reaching the 5% level of significance will not be reported to simplify the presentation. Thus, the present analyses examined the effects of ethnic match, age group, acculturation level, and MEIM on five dependent measures while controlling for the effects of other important variables.

After adjustment, the independent variables had a significant effect on only three of the five dependent measures. For GAF-difference, three covariates (referral source, staff tenure, staff degree) significantly adjusted ($p < .05$) the dependent variable, the interaction of acculturation level and MEIM was significant, $F(1, 32) = 5.45$, $p < .02$, $MSe = 153.88$, $\eta^2 = .15$, indicating Anglo-oriented Latino American respondents with low MEIM had the least favorable pre/post (GAF-difference) evaluations by their therapists. These results can be seen in Table 4. Both visitation and total costs dependent

Table 3. Pearson Correlation Coefficients for ARSMA-II, MEIM Scales, Generation, and Outcomes

Scale	1	2	3	4	5	6	7	8	9	10	11	12
1. Accscore	—	–.88*	.92*	–.44*	–.29*	–.46*	.74*	–.03	–.04	–.05	–.18	–.16
2. MOS		—	–.61*	.42*	.29*	.43*	–.58*	.05	.07	.03	.05	.01
3. AOS			—	–.37*	–.24*	–.39*	.73*	–.01	–.01	–.06	–.25	–.24
4. MEIM				—	.83*	.93*	–.34*	.09	.10	.16*	.09	–.03
5. EIS					—	.57*	–.22	.11	.12	.08	.04	.01
6. ABC						—	.36*	.05	.06	.18*	.11	–.07
7. Generation							—	.09	.09	–.12	–.19	–.07
8. Visitation								—	.98*	–.05	–.29*	–.11
9. Total costs									—	–.07	–.33*	–.10
10. GAF-intake										—	.53*	–.30*
11. GAF-termination											—	.65*
12. GAF-difference												—

NOTE: Accscore = Acculturation Score (AOS mean – MOS mean). MOS = Mexican Orientation Scale. AOS = Anglo Orientation Scale. MEIM = Multigroup Ethnic Identity Measure. EIS = Ethnic Identity Scale. ABC = Affirmation, Belonging, and Commitment. Generation = Client generation trichotomy. Visitation = log base –10 of total client visits to the community mental health center. Total costs = log base –10 of client total costs.
*$p < .01$.

Table 4. Adjusted Means and Standard Errors For GAF-Difference By Acculturation Level and MEIM

Acculturation Level	MEIM	M	SE	N
Mexican	High	–.01	4.36	35
	Low	3.99	6.11	12
Anglo	High	4.27	5.91	9
	Low	–5.05	3.71	22

NOTE: Acculturation level was dichotomized into Mexican = Mexican orientation and Anglo = Anglo orientation, based on a median split of the Cuellar, Arnold, and Maldonado (1995) acculturation score. MEIM = a median split on the 12-item composite measure.

variables produced significant triple interaction (ethnic match × age group × MEIM) effects. For visitation, three covariates (client gender, referral source, and staff tenure) significantly adjusted ($p < .05$) the dependent measure. The triple interaction of ethnic match × age group × MEIM was significant, $F(1, 172) = 3.97$, $p < .04$, $MSe = .36$, $\eta^2 = .02$. This result can be seen in Table 5. Independent t tests ($p < .05$) indicated that ethnically matched child clients whose parents/caregivers scored high on the MEIM required more mental health visits than their child counterparts, whose parents/caregivers scored low on the MEIM. This same pattern was found for nonmatched adult clients.

For total costs, the same three covariates (client gender, referral source, and staff tenure) significantly adjusted the dependent variable. The ethnic match × age group × MEIM triple interaction was significant, $F(1, 172) = 3.56$, $p < .05$, $MSe = .34$, $\eta^2 = .02$. This interaction effect can also be seen in Table 5. Paralleling the previous results, higher total mental health costs were associated with ethnically matched, child clients/respondents who scored high on the MEIM ($p < .05$). Conversely, nonmatched adults who scored high on the MEIM also generated higher total costs.

These results clearly show that clinical outcomes (as measured by pre/post GAF-difference) decline appreciably for Anglo-oriented clients who score low on the composite MEIM scale. High levels of visitation and total cost outcomes are more problematic but appear to be related to high scores on the MEIM and ethnic matching for child clients and nonmatches for adults.

To further understand these results, a second set of 5 four-way between-subjects ANCOVAs with ethnic match (two levels), age group (two levels), MEIM (two levels), and generation (three levels) were computed using the same five dependent measures and the same seven covariates as before. Generation level has been reported to be a strong correlate of respondent acculturation

Table 5. Adjusted Means and Standard Errors For Visitation and Total Costs by Ethnic Match, Age Group, and MEIM

			Visitation[a]			
Ethnic Match	Age Group	MEIM	M	SE	N	Total Costs[b]
Match	Child	High	2.06	.19	24	
		Low	1.68	.14	21	
	Adult	High	1.90	.18	30	
		Low	2.01	.21	10	
No match	Child	High	1.63	.14	27	
		Low	1.64	.16	19	
	Adult	High	2.00	.15	7	
		Low	1.58	.15	5	
Match	Child	High		.18	24	3.95
		Low		.13	21	3.55
	Adult	High		.18	30	3.84
		Low		.20	10	3.89
No match	Child	High		.13	27	3.60
		Low		.16	19	3.56
	Adult	High		.14	19	3.88
		Low		.15	44	3.47

NOTE: Ethnic match represents the match or degree of congruity between client ethnicity and modal therapist ethnicity. Age group represents a dichotomous variable in which adult = those adult Latino American clients seeking mental health services at TCMHC and child = adult parents/caregivers of Latino American children (ages 6 to 18 years) receiving services at Tri-City Mental Health Center (TCMHC). Visitation and total costs are information taken from the TCMHC database and pertain directly to each child client. Both visitation and total costs were transformed with a base –10 log transformation due to skewness of the original distributions. The other variables associated with children were derived from responses from the child's parent/caregiver.

a. The median untransformed total visits was 92 for adults and 43 for children. Adult Mexican-oriented clients had a median of 107 visits and Anglo-oriented adults had a median of 83. Child Mexican-oriented clients averaged 41 visits and Anglo-oriented child clients averaged 49.

b. The median untransformed total costs for adults was $6,897.00 and for child clients it was $3,250.00. Adult median total costs for Mexican-oriented clients was $6,988.00 and for Anglo-oriented clients the median was $6,661.00. Child median total costs for Mexican-oriented clients was $2,957.00 and for Anglo-oriented clients it was $3,524.00.

ation status (see Cuellar et al., 1995; Cuellar et al., 1997) and may shed additional light on the present pattern of results found with our mental health consumers and/or respondents. Results indicated no reliable main effects or interactions across the various dependent variables ($p > .05$).

Discussion

This study examined the relationship of a variety of independent variables (e.g., client-therapist ethnic match, client age group, acculturation status, ethnic identity, and generation level) on five clinical outcome dependent variables (e.g., GAF-intake, GAF-termination, GAF-difference, total visits, and total costs), while adjusting these dependent measures with seven important covariates (e.g., referral source, diagnosis, client gender, gender match, marital status, therapist degree, and therapist tenure) with Latino adult and child community mental health clients.

A breakdown of the sample by age group and dichotomized acculturation level yielded some interesting patterns. As expected, Mexican-oriented child parents/caregivers and adult clients were more likely to be first generation immigrants. Client-therapist ethnic matching occurred for roughly half the child clients, and for nearly three fourths of the Mexican-oriented adult clients. This ethnic-match pattern coincides closely with the reported levels of non-English-speaking abilities of these clients. In the present sample, severe diagnoses were skewed to the adult clients, regardless of acculturation level.

Client service preferences were also probed in this study. Mexican-oriented parents/caregivers and adult clients showed a strong desire for a therapist of the same culture as themselves, whereas Anglo-oriented Latino clients were strongly ambivalent on this issue. Client language preferences followed similar patterns with 9 of 10 Mexican-oriented clients preferring treatment in bilingual Spanish, as compared to three fourths of the Anglo-oriented clients preferring English only or indicating it did not matter. Client-gender preferences were also linked to acculturation status: Mexican-oriented adults were more likely to indicate a preference for a therapist of the same gender, although child parents/caregivers, regardless of acculturation status, indicated that therapist gender did not matter to them as it pertained to services provided to their child.

The pattern of correlation results clearly shows that clinical outcomes (as measured by GAF, total visits, and total costs) are not related to the MEIM and ARSMA-II scales or subscales. Furthermore, these correlations reinforce the fact that the ARSMA-II and the MEIM are measuring somewhat related but relatively independent theoretical constructs among these Latino respondents. Additional analysis suggested that although generation level is identified as a strong correlate of respondent acculturation status (Cuellar et al., 1995; Cuellar et al., 1997), current findings suggested that generation level was not associated with outcome measures.

After controlling for a number of important variables, a significant ARSMA-II $\times$ MEIM interaction effect with the GAF-difference dependent

variable indicated Anglo-oriented Latino clients with low ethnic identity or Mexican-oriented Latino clients with high ethnic identity had more pessimistic pre/post outcome evaluations. Clearly, acculturation and ethnic identity combined to produce a unique joint outcome result. A slightly more complex picture was found for the total visits and costs dependent measures. Latino children who were ethnically matched and whose parents/caregivers had low ethnic identity required fewer visits and thus lower costs than their high ethnic identity counterparts. This pattern was also found for nonethnically matched adult clients.

The mental health needs of Latinos are a major concern for psychologists (Altarriba & Santiago-Rivera, 1994). Moreover, the increased arrival of Latino immigrants poses increased challenges for mental health professionals in the provision of culturally appropriate services (Altarriba & Santiago-Rivera, 1994). Therefore, acculturation status is important in matching therapists with clients, preparing cultural formulations for clinical diagnosis, and selecting effective interventions with optimal outcomes (Dana, 1994, 1998b, 2000a). Given these ethical issues, ethnic matching for Latino clients is imperative for effective interventions with optimal outcomes. The use of a community-based sample has empirically supported the efficacy of ethnic matching with Latino clients (Gamst et al. 2000; Russell et al., 1996; Sue, Fujino, Hu, Takeuchi, & Zane, 1991; Yeh, Eastman, & Cheung, 1994). Sue and his associates (1991) examined the relationship between therapist-client matches (ethnicity, language, and gender) and length of treatment among African Americans, Asian Americans, Mexican Americans, and White Americans. They observed that matches in ethnicity and language were beneficial, as evidenced by lower premature termination, increased participation, and greater improvement in treatment. More specifically, among Mexican American clients, ethnic match was important for Spanish dominant speakers, resulting in fewer premature terminations and improved clinical outcomes.

Although present findings suggest that ethnic matching is beneficial for Latinos, complex issues arise when considering the salience of ethnic identity. As noted by Cuellar and associates (1997) and Cuellar and Roberts (1997), the relationship between ethnic identity and acculturation among Latinos is not well understood. Their findings demonstrated the complex relationship between acculturation and ethnic identity among students of Mexican descent. Ethnic identity varied among individuals as distinctive feelings about ethnic identity were associated with distinct acculturative types and patterns of acculturation. For example, an Anglo orientation was associated with lower ethnic identity scores, particularly for feelings of affirmation and belonging to an ethnic group. This complexity is also demon-

strated in our current study. An inverse relationship between Latino ethnic identity and acculturation was also demonstrated. However, numerous questions remain, particularly when examining Latino ethnic identity and clinical outcomes among children and adults. For example, findings indicated that ethnically matched children with parents/caregivers of high ethnic identity required more mental health visits than their counterparts with low ethnic identity scores. These differences suggest that age may play an important role in determining outcomes. Perhaps interpretations of treatment length are not equivalent among children and adults, and these differences suggest that researchers and service providers need to extend their interpretations of effective treatment and outcomes. From a developmental perspective, as adult identity formation takes on significance during adolescence, perhaps Latino children and adolescents require additional sessions to address the ongoing developmental issues of identity. Furthermore, identity construction and development is further complicated by family variables, contextual variables, and the dynamics of acculturation (Pizarro & Vera, 2001). As ethnic identity is susceptible to the process of acculturation, it is also important to consider other issues that adolescents struggle with including gender roles, sexuality, socioeconomic class, education, and other variables.

Complex issues also arise for Anglo-oriented clients with low ethnic identity scores as they received less favorable GAF-difference evaluations by their therapists. Although findings indicate that they may not endorse Latino values, attitudes, or behaviors, their therapists may not make these distinctions. This finding was unexpected and poses significant challenges. Are Latinos with Anglo orientations indeed experiencing greater amounts of mental health disorders and poorer outcomes? Are the evaluations based on therapist bias or other cultural factors that impact the therapeutic process? For example, it has been demonstrated that when compared to middle-class Anglo Americans, Latinos and other ethnic minorities receive poorer quality of psychological services and fewer visits (Rosado & Elias, 1993). Moreover, findings suggest differences in diagnosis, care, and treatment (Rosado, 1980; Snowden & Cheung, 1990). When compared to middle-class Anglo Americans, financially indigent and culturally diverse Latinos (a) were often perceived as inherently more disordered and pathological, (b) were more frequently treated by physical or chemical means than through psychotherapeutic treatment modalities, (c) were given poorer prognoses, (d) had higher rates of institutionalization, and (e) were less preferred than young, attractive, Anglo, verbal, intelligent, and successful clients (Rosado & Elias, 1993).

Clearly, the interaction between acculturation and ethnic identity among Latinos warrants further scrutiny. Current findings provide additional sup-

port for the positive relationship between acculturation and mental health. For example, Vega et al. (1998) and Escobar (1998) observed that Latino immigrants have mental health advantages over Latinos born in the United States. Accordingly, these findings suggest that the maintenance of Latino culture may provide a protective or buffering effect. Perhaps the retention of cultural traditions may also contribute to healthier habits that may possibly lead to enhanced health and mental health outcomes (Escobar, 1998). The fact that clinical outcomes decline appreciably for Anglo-oriented clients with low ethnic identity challenges long-standing notions regarding the positive psychological effects of acculturation. Further inquiry is needed to examine factors that mitigate mental health outcomes for Latinos as researchers are attempting to conceptualize and identify their psychological strengths and other areas of resiliency.

Several limitations are noted when considering this study. First, we acknowledge the diversity of Latinos' extensive within-group difference due to variations in ancestry, nationality, migrational history, political and religious beliefs, linguistic abilities, education, and income. Second, as our sample contained clients of Mexican, South and Central American, and Cuban descent, precise ethnic matches between clients and therapists did not occur. Third, direct mental health services were provided with staff members with terminal degrees ranging from high school diplomas to doctoral degrees. In addition, information on client treatment modality was not available in the present data set. Therefore, the degree to which ethnic match or age interacts with clinical interventions remains unclear. Fourth, a methodological issue that may have contributed to the lack of clarity of the age factor may be the fact that parents/guardians completed the acculturation and ethnic identity scales for themselves rather than for their children, as is common practice. Both of these variables are related to the variable of generation. If the children's acculturation and ethnic identity were measured more directly, the interaction patterns may have been different. Future research needs to examine this issue. Lastly, an additional limitation to the present study is the use of the GAF as a measure of clinical outcome. Several hundred research studies have used the GAF, and clinicians generally compare their evaluations with other clinicians in the same setting on a series of clients to permit consistent use of the scale (Spitzer et al., 1994). In this study, licensed therapists who received periodic training completed the GAF ratings with a .53 pre/post correlation that suggested consistent application, although this coefficient is contaminated by client improvement.

This study introduced a methodological innovation related to the process of matching in a community mental health setting. It used the modal therapist, the therapist most frequently seen, rather than the intake professional to

establish matching. This, we believe, adds a degree of clarity and reliability to the matching process and should be used in future studies dealing with client-therapist matching. Another contribution of this study is the demonstration that the ARSMA-II and the MEIM can be used with clinical populations with a high degree of reliability. This finding provides confidence about their future use with such populations.

These research findings highlight the complexity of the relationship between acculturation and Latino ethnic identity. As noted by Pizarro and Vera (2001), Latino ethnic identity should be examined across the life span. In particular, to fully comprehend ethnic identity and its relationship to acculturation with Latino clients, research should examine these variables across early childhood, adolescence, and adulthood. Recognizing differences in counselor preference characteristics, the availability of client-counselor ethnic match will aid in the examination of these complex issues, via culturally sensitive therapies.

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