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## Psychiatric, Family, and Ethnicity-Related Factors That Can Impact Treatment Utilization Among Hispanic Substance Abusing Adolescents

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### SUMMARY

There is great significance to improving our understanding of predictors of treatment utilization among Hispanic substance abusing youth. One hundred and ten Hispanic substance abusing adolescents and their parents participated in a study of treatment utilization. Analyses showed that adolescents with lower numbers of externalizing disorders ( $\chi^2 = 4.18$ ,  $df = 1$ ,  $p < .05$ ) and parents with better parenting strategies ( $\chi^2 = 8.73$ ,  $df = 2$ ,  $p < .05$ ), predicted overall treatment utilization (residential + outpatient). Better parenting practices and higher parental years in the U.S. predicted more utilization of outpatient services and lower parenting stress predicted more utilization of residential services. Without specialized engagement strategies, adolescents and families most in need may be the least likely to engage in recommended treatment.

### Keywords

Hispanic adolescents; treatment utilization; substance abuse; parenting strategies

### INTRODUCTION

It is widely accepted that a small minority of youth requiring treatment for a diagnosable disorder actually ever receive treatment (The National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention Development and Deployment, 2001) and this is particularly true among substance abusing youth (Szapocznik et al., 1988). In 2002, approximately 1.4 million youths between the age of 12 to 17 required treatment for a drug abuse problem. Of these, only ten percent (approximately 140,000) received treatment, with the remaining 90% of youths who needed substance use treatment failing to receive it (Substance Abuse and Mental Health Service Administration (SAMHSA), 2002). This low level of treatment utilization among adolescents has important implications not only for the alleviation of their current symptomatology but also for the

progression of these problems into more serious forms of psychopathology in adulthood (Logan & King, 2001).

The underutilization of treatment appears to be even more severe among Hispanics. In a review of mental health services for Hispanics (not specific to adolescents), Rogler (1998) notes that despite high rates of affective disorders and co-morbidity, there is still significant under-utilization of mental health services by Hispanics. Recent studies examining service utilization among minority adolescents have found that Hispanic adolescents use mental health services at rates lower than their non-Hispanic white counterparts (Goodman et al., 1997; Hough et al., 2002; Wu, Hoven, & Fuller, 2003). Results from the Methodology for the Epidemiology of Child and Adolescent Mental Disorders (MECA) study found that the percentage of non-Hispanic white adolescents using outpatient mental health services was approximately twice the rate of minorities in the sample (Goodman et al., 1997). In addition to finding lower outpatient utilization for Latino youth, Hough and colleagues (2002) found that Latinos were older when they began attending services. Interestingly, the finding by Wu, Hoven, and Fuller (2003) that minority youth had lower rates of utilization of drug treatment was diminished after controlling for drug use severity and other related problems. These authors suggest that lower minority utilization of services may have been partly explained by their lower drug use rates.

There is great clinical significance to the field of social work and other related fields, to better understanding the types of psychiatric, family, and ethnicity-related factors that can impact service utilization and specifically, follow-up on recommended substance abuse treatment services. The impact of programs that conduct assessments and referral of youth with psychiatric problems is greatly diminished when youth and families do not engage into the recommended treatment. An improved understanding of the predictors of failure to engage in treatment can lead to more specialized and targeted interventions that will increase the probability of engagement. Consequently, the purpose of this article is to report on the findings of a study that (1) focused on Hispanic drug abusing adolescents and their families, (2) systematically assessed a number of important psychiatric, family, and ethnicity-related characteristics, and (3) investigated the relationship of these important variables to later engagement into recommended substance abuse services.

## PREDICTORS OF UTILIZATION OF RECOMMENDED SERVICES

### Adolescent Psychopathology

Two of the factors consistently related to service utilization are problem severity and co-morbidity (Goodman et al., 1997; Pumariega, Glover, Holzer, & Nguyen, 1998; Wu et al., 2003; Wu, Hoven, Tiet, Kovalenko, & Wicks, 2002). Goodman and colleagues (1997) examined data from the MECA study and found that those adolescents with any disorder who attended outpatient mental health services had significantly lower mean scores on a global assessment measure and were more likely to have co-morbid disorders than those with any disorder who did not attend mental health services. Overall, this study indicates that those attending services had *more impairment in functioning*. Similarly, in a study using a sample of junior and high school students, Pumariega and colleagues (1998) found that the total Youth Self-Report (YSR) score was predictive of service utilization with an increase in

use of mental health services as symptomatology increased. Interestingly, this result emerged using the total sample (488 non-white Hispanics, 194 Hispanics, and 102 African-Americans), but did not emerge within the Hispanic subsample. Wu et al. (2003) also examined severity and co-morbidity as predictors of drug treatment among adolescents reporting drug use in the past year, finding that more severe drug-related problems and multiple drug use predicted utilization of drug treatment. Overall, the findings from these studies suggest that among adolescents greater service utilization is related to more severe symptomatology and co-occurring disorders.

### **Socio-Demographic Variables**

Family composition and economic variables have been found to be associated with service utilization. Economic obstacles can take many forms in their impact on whether or not substance-specific services are utilized by Hispanic youth. Some youth may not have the availability of needed services (Johnson, Stiffman, Hadley-Ives, & Elze, 2001). Even when these services are available, additional economic obstacles can hinder service utilization by Hispanic adolescents (Pumariega et al., 1998). The direct effects of poverty, such as not being able to afford transportation, parents not being able to take time off from work to accompany adolescents through the process, and other limited resources are powerful enough to undermine service use, even in the presence of government funded agencies designed to provide services for low income groups. Family composition has also been suggested as a factor associated with Hispanic adolescent's receipt of mental health services. Families with a large number of siblings are often less likely to use mental health services and females appeared more likely than males to receive services (Pumariega et al., 1998).

### **Family and Parental Predictors**

Another set of important predictors of adolescent service utilization are family factors and parent functioning, although the precise nature of the relationship remains very unclear (Cornelius, Pringle, Jernigan, Kirisci, & Clark, 2001; Farmer, Burns, Angold, & Costello, 1997). Parental well-being and parental feelings of competence in dealing with their children's problem have been negatively associated with service use as the parents of high utilization youth reported lower levels of both well-being and feelings of competence (Farmer et al., 1997). The presence of family stress (in this study due to changes in family composition) has been associated with increased service utilization (Zwaanswijk, Van der Ende, Verhaak, Bensing, & Verhulst, 2003).

Logan and King (2001) present a converging literature on service utilization by both adults and child/adolescents suggesting that family history of psychological problems may increase the likelihood of service use. However, research examining mental health service use among male adolescents suggests that parental psychopathology and parental substance abuse can act as deterrents to adequate mental health treatment by adolescents (Cornelius et al., 2001). These apparently inconsistent findings on the effects of parental psychopathology may depend on the overall level of psychopathology of the parent. It is worth considering whether some history of problems may lead to a heightened awareness of the need for services when compared to parents with no history of problems, but severe problems may lead to obstacles to utilization.

## Ethnicity-Related Factors

The evaluation of ethnicity-related factors associated with service use among Hispanics is important given that the lack of culturally specific services is often cited as a major factor in service underutilization by Hispanics (Rogler, 1998). A study by Takeuchi, Sue, and Yeh (1998) found that Mexican-American adult clients attending ethnicity specific programs had higher return rates and longer lengths of treatment. Little is known, however, about cultural factors, including acculturation, as predictors of service utilization in adolescents (Hough et al., 2002; Pumariega et al., 1998). Pumariega and colleagues (1998) collected data on items typically associated with acculturation (e.g., place of birth, self-rating of English fluency, and self-rated reading and writing in English) and found that immigrant youth and youth who rated themselves as speaking English poorly had more mental health visits than those born in the U.S. and those rating themselves as speaking English well. Interestingly, the same relationship was not found for ability to read and write English. In addition, it is also important to disentangle the role of ethnicity from the role that socioeconomic status plays in service utilization (Pumariega et al., 1998). Although Logan and King found an overall pattern of higher service utilization by Caucasian and urban families with strong economic circumstances, Pumariega and colleagues (1998) found that when socioeconomic factors are controlled for, there were no differences in service utilization by Hispanics and African Americans when compared to whites.

## METHOD

### Participants

Participants in this study were 110 Hispanic adolescents and their parents. Adolescents had been admitted to an assessment and referral facility, Juvenile Addiction Receiving Facility at Jackson Hospital, due to substance use problems. The mean age of the adolescents was 15.6 years ( $SD = 1.96$ ) and the median age was 16-years-old. Sixty percent of the sample was male. Mother reports were much more common than father reports and are therefore the focus of analyses. Mother's reported ethnicities were: 40% Cuban, 12% Honduran, 9% Puerto Rican, 8% Dominican, 8% Nicaraguan, 7% Columbian, and 16% other Hispanic. Sixty-six percent of the youth were U.S. born while 34% were born in Hispanic countries. Eighty-one percent of mothers reported an educational level of high school or less. Sixty-one percent of the families reported an annual household income of \$25,000 or less, 12% between \$25,000 and \$29,999, and 27% above \$30,000. The median family income range for the sample was between \$20,000 and \$24,999.

To be included in the study, the adolescent/families had to meet the following criteria: (a) Hispanic adolescent 14 to 17-years-old; (b) adolescent living with at least one family member of an older generation such as a parent or grandparent, also Hispanic and having immigrated to the U.S.; and (c) adolescent fully meeting Diagnostic and Statistical Manual IV (DSM IV) criteria for a Substance Abuse or Dependency Disorder. Adolescents with signs of the following DSM-IV diagnoses were not included in the study: Developmental Disorders, Elective Mutism, Organic Mental Disorders (except Psychoactive Substance-Induced), Schizophrenia, Delusional (Paranoid) Disorder, Psychotic Disorder, and Bipolar Affective Disorder.

## Procedure

All participant adolescents were recruited from the Juvenile Addictions Receiving Facility (JARF) of a local southeastern hospital where adolescents had been admitted for assessment of their substance abuse problem and were referred to treatment in the community. The records of new admissions to the JARF were screened at least twice per week by a trained bachelor's level, Spanish-speaking research assistant to determine eligibility. Once an adolescent was determined to be eligible for the research program, a social worker on the unit obtained permission from the primary caregiver and the adolescent for the research assistant to contact them in order to explain the research program. The research assistant, then, contacted those potential participants who had given permission and explained to them the research program, that participation would require both parents and the adolescent to complete a onetime assessment which would take approximately 3 hours and that they would receive \$40 for their participation. Additionally, all participants were told that they would be contacted via telephone six weeks after the adolescent had been discharged to complete a 10-minute questionnaire about follow-up services received by the adolescent since being discharged. Both adolescents and parents were informed that their information would be kept confidential. Seventy-four percent of the families approached agreed to participate in the research. Upon signing the consent and assent forms, parents and adolescents were administered the assessment battery consisting of both self-report measures and semi-structured interviews.

## Measures

For this study, measures were selected that addressed substance use, parenting practices, stress, attachment, psychiatric comorbidity, acculturation, demographic information, and the utilization of treatment services following discharge. Adolescents were administered the battery while they were on the JARF unit and parents were administered the battery at the research office or in their home. Spanish language measures were available to those adolescents and parents who were more comfortable speaking and reading in Spanish. Parents and children were asked if they would like the questionnaire read to them, in the event that they had difficulty reading. The interview to assess service utilization was done over the phone using a semi-structured interview.

**Substance use**—The Personal Experiences Inventory (PEI) is a standardized inventory used to provide descriptive information concerning adolescent drug use and problems associated with drug use (Winters & Henly, 1989). It is organized into a Chemical Involvement Problem Severity Section and a Psychosocial Section that comprise a total of 22 subscales. Additionally, there is a drug use frequency, duration, and age of onset section. Questions in the section inquire about frequency of drug use for twelve drug categories over the past 12 months and 3 months and lifetime use. Additional questions ask the school grade in which the respondent began using each of the drugs. Its overall psychometric properties have been found to be satisfactory with internal consistency coefficient alphas ranging from .74 to .97 for all 22 scales. The PEI has also been shown to have satisfactory test-retest reliability with coefficients ranging from .63 to .90 on all scales using a one-month interval with a wait list clinical sample. The drug use frequency, duration, and age of onset section was the only section used in the analyses reported in this manuscript.

**Parenting practices**—The Parenting Practices Questionnaire (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Loeber, Stouthamer-Loeber; Van Kammen & Farrington, 1991) assesses five dimensions of parenting behavior: positive parenting, discipline effectiveness, discipline avoidance, rules on having a set time to be home, and extent of involvement. Parents are asked to report on all five dimensions while adolescent reports are obtained for positive parenting and extent of involvement only. The reliability of the scales has been supported by confirmatory factor analysis and internal consistency has been measured as ranging from .68 to .81 in past studies. Alphas ranged from .73 to .89 in the current study.

**Stress**—The Hispanic Stress Inventory (HSI) (Cervantes, Padilla, Salgado de Snyder, 1991) is a culturally sensitive self-report questionnaire designed to measure psychosocial stress levels among Hispanic respondents (Cervantes et al., 1991). The HSI has two versions, one for Hispanic immigrant respondents and one for U.S. born Hispanic respondents. Each version has a subscale for occupational/economic stress, parenting stress, marital stress, and family/culture stress. The immigrant version has an additional subscale for immigration stress and was the version used in our study. Respondents are first asked whether they have experienced a stressor, encompassed within one of the sub-scales, in the last three months. If the respondent answers “yes,” they received a score of one for each item. If they respond “no” to the occurrence of the stressor, they received a score of zero. Subscale scores were obtained by summing respective items. Following the recommendation of the measure’s author, the adolescents completed only the family/culture subscale thus they received a shortened 13-item version of the HIS while the parents received the full version. Indicators of internal consistency were high for the Immigrant version, ranging from .91 for Occupational/Economic Stress to .77 for Family/Cultural Stress. Test-retest reliability for the Immigrant version ranged from .86 for Family/Cultural Stress to .61 for Marital Stress. Alphas for the current sample range from .73 to .85.

**Attachment**—The Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987) was developed to assess adolescent perception of the positive and negative aspects of their attachment to their parents. In this study we focused only on adolescent reports of adolescent-mother attachment. The IPPA is a self-report measure of three dimensions: degree of mutual trust, quality of communication, and the extent of anger and alienation. Internal consistency, measured by Cronbach’s alpha, was .87 for the mother version and .89 for the father version. Alphas for the current sample ranged from .75 to .88. The IPPA was shown to have a correlation coefficient of .78 with family self-concept as assessed by the Tennessee Self-Concept Scale and .52 with family expressiveness on the Family Environment Scale (Armsden & Greenberg, 1987). The IPPA was administered as a self-report to the adolescents.

**Psychiatric comorbidity**—The Diagnostic Interview Schedule for Children-Predictive Scales (DPS version 4.21) was administered separately to parents and adolescents in interview format. This measure is an efficient screening instrument made up of a series of diagnostic scales matched to the Diagnostic Interview Schedule for Children (DISC). It evaluates the likelihood that a child does not meet diagnostic criteria for a psychiatric diagnosis and those that should be further evaluated with the DISC (Lucas et al., 2001).

Scores are obtained for each psychiatric disorder and the presence of symptoms of a diagnosis is based on cut-offs for psychiatric disorders established in previous research with clinical samples. Internal consistency for the DPS as measured by coefficient alphas was Attention Deficit Hyperactivity Disorder–0.82; Depression–0.77; Oppositional Defiant Disorder–0.75; Conduct Disorder–0.69 (Lucas et al., 2001). Using the DPS as a self-report questionnaire followed by the full DISC, Lucas et al. (2001) found that from a total of 75 diagnoses only 3 diagnoses were missed by gate items from the DPS ( $n = 89$ ). Sensitivity with respect to the DISC for specific DPS scales was Attention Deficit Hyperactivity Disorder–1.00; Depression–0.98; Oppositional Defiant Disorder–0.96; Conduct Disorder–1.00 and for specificity, Attention Deficit Hyperactivity Disorder–0.85; Depression–0.90; Oppositional Defiant Disorder–0.94; Conduct Disorder–0.94 (Lucas et al., 2001).

**Acculturation**—The Bicultural Involvement Questionnaire (Szapocznik, Kurtines, & Fernandez, 1980) is a 33-item questionnaire designed to assess the degree to which an individual participates and feels comfortable in Hispanic culture and activities (Hispanicism score) and in American culture and activities (Americanism score) independently. The measure differs from those that are unidimensional (e.g., Szapocznik, Scopetta, Kurtines, & Arnalde, 1978) which assume that participation and comfort in one culture negates the possibility of participation and comfort in another. The Bicultural Involvement Questionnaire is rated on a 5-point Likert scale. Aggregate scores for two dimensions of bicultural involvement can be obtained. The first dimension ranges from monoculturalism to biculturalism. The second dimension is cultural involvement, and ranges from culturally marginal (lacks involvement in either the Hispanic or the American culture) to cultural involvement. Previous research has found alpha internal consistency coefficients of .93 and .89 for Hispanicism and Americanism scales, respectively. The Biculturalism and Cultural Involvement scales were found to have reliability coefficients of .94 and .79, respectively (Szapocznik et al., 1980).

**Demographics**—An intake form was created specifically for this study to collect demographic information, including the family’s ethnicity, religious preference, family composition, biological parents’ marital living status, household income, age of onset for drug (non-alcohol) use, and language preference. Also included in this form were questions about prior adolescent residential/inpatient treatment for drug use and/ or outpatient treatment for drug use, and adolescent/parent separations lasting longer than one month and not due to vacationing.

**Follow-up questionnaire**—The follow-up questionnaire consisted of a semi-structured interview designed specifically for the current study. The primary caregiver of the participant adolescent was contacted via telephone 6 weeks after the adolescent was discharged and was administered the follow-up questionnaire to document utilization of services by the adolescent post-discharge. Questions ask whether or not the adolescent was referred for treatment upon discharge from the JARF, which type of treatment they were referred to (inpatient, residential, outpatient, etc.) and what services had been received. In addition, parents were asked about their preferences for services. They were asked whether there was a strong preference for Hispanic-specific services, and to rank, in order of

preference, issues that they felt should be key components of effective treatment (i.e., parenting, immigration/acclimation, drug counseling, and HIV-risk counseling).

## Data Analyses

Analyses were conducted in two steps. First, we investigated whether the hypothesized predictor variables predicted utilization in full sample, residential recommended sample only, and/or outpatient therapy recommended sample only (in that order) by entering each predictor into univariate logistical regression models for each sample. Next, those predictor variables that were significant ( $p < .05$ ) were entered into a hierarchical logistic regression model for each sample type (full, residential, or outpatient). Checks for multicollinearity (i.e., when several predictors are highly correlated) among predictors indicated a high correlation ( $r = -.70$ ) between two variables that were derived from a common measure (Parenting Practice-Discipline Avoidance and Parenting Practice-Discipline Effectiveness). As suggested by Pedhazur (1997), problems associated with multicollinearity were eliminated from the hierarchical regression analyses by creating a composite variable from the two highly correlated variables. The two variables were combined to a single variable, Parenting Effectiveness-Discipline Style that reflects parental discipline in terms of perceived efficacy and level of avoidance. The composite was created by reverse scoring Parenting Practice-Discipline Avoidance and summing it with Parenting Practice-Discipline Effectiveness. A high score on this composite reflects adaptive parenting (i.e., effective and low avoidance). Parenting Practice-Discipline Avoidance and Parenting Practice-Discipline Effectiveness were analyzed separately within the single predictor logistic regression analyses. The composite variable, Parenting Practices-Discipline Style, was used in the hierarchical regression analyses.

## RESULTS

### Single Predictor Logistic Regression Models

The single logistic regression analyses suggested a number of factors predicting general utilization of recommended therapeutic services (see Table 1).

Parenting Practice-Discipline Avoidance ( $p < .01$ ), Parenting Practice-Discipline Effectiveness ( $p < .05$ ), Total Number of Adolescent Externalizing Disorders-Parent Report ( $p < .05$ ), and HSI-Parenting Stress ( $p < .05$ ) significantly predicted utilization of any recommendation type (i.e., outpatient or residential). Parenting Practice-Discipline Avoidance ( $p < .05$ ), Parenting Practice-Discipline Effectiveness ( $p < .01$ ) significantly predicted utilization in the outpatient-recommended sample and Parental Years in U.S. was included in the equation because of its conceptual value although it was only marginally significant (.07). HSI-Parenting Stress ( $p < .05$ ) significantly predicted utilization in the residential-recommended sample. No other significant predictors were found at the univariate level. Mean differences between groups on key variables are presented in Figures 1–5.

Odds ratios were calculated to illustrate the relative magnitude of these effects. Odds ratios were calculated by comparing a standard deviation above to a standard deviation below the



mean. For the full sample, parents who reported their child had more total externalizing behavior disorders were approximately half as likely to utilize recommended general therapy services.

Parents in the full sample who also reported more perceived discipline effectiveness were almost two times more likely to utilize therapy services, while those who endorsed more discipline avoidance were about half as likely to utilize these services. Parents who reported higher levels of parenting stress were also about half as likely to make use of therapy services.

In the outpatient-recommended sample, parents who similarly reported more perceived discipline effectiveness were almost three times more likely to utilize therapy services, while those who endorsed more discipline avoidance were half as likely to utilize these services. Parents who reported more years in the United States were one and one-half times more likely to utilize recommended outpatient services.

In the residential-recommended sample, parents who reported experiencing more parenting stress were about half as likely to utilize residential services for their child than other parents.

## HIERARCHICAL LOGISTIC REGRESSION ANALYSES

### Full sample

In the hierarchical logistic regression analysis conducted with the full sample, the following predictors were entered as separate, sequential blocks: (a) total number of adolescent externalizing disorders-parent report, (b) Parenting Practices-Discipline Style, (c) HIS-Parenting Stress. The first block, total number of adolescent externalizing disorders-parent report, significantly predicted utilization ( $\chi^2 = 4.18, df = 1, p < .05$ ). The second block, Parenting Practices-Discipline Style, significantly predicted utilization ( $\chi^2 = 8.73, df = 2, p < .05$ ), even after the variance due to total number of adolescent externalizing disorders was removed ( $\chi^2 = 4.54, df = 1, p < .05$ ). The third block, Parenting Stress, failed to significantly predict utilization ( $p > .05$ ). However, the overall hypothesized model, including all 3 predictors: total number of adolescent externalizing disorders and Parenting Practices-Discipline Style and Parenting Stress did predict utilization ( $\chi^2 = 9.90, df = 3, p < .01$ ). Therefore, the variance due to parental stress and total number of adolescent externalizing disorders-parent report and Parenting Practices-Discipline Style, affected the level of univariate significance that Parental Stress contributed to the prediction of utilization of recommended treatment. That is, the effect of Parenting Stress on utilization is mediated by the total number of adolescent externalizing disorders (parent report), and Parenting Practices-Discipline Style. The full model correctly predicts 63% of the cases.

### Outpatient sample

The following two predictors were entered as separate, sequential blocks in the hierarchical logistic regression analysis conducted with the outpatient-recommended services sample: (a) Parenting Practices-Discipline Style and (b) Parental Years in the United States. Given the cultural salience of the latter variable as well as its marginal univariate significance ( $p < .$

07), it was included in the outpatient hierarchical regression analysis. The first block, Parenting Practices-Discipline Style, significantly predicted utilization ( $\chi^2 = 7.99$ ,  $df = 1$ ,  $p < .01$ ). The second block or full model, including Parenting Practices-Discipline Style and parent years in the United States, significantly predicted utilization ( $\chi^2 = 6.83$ ,  $df = 2$ ,  $p < .05$ ), even after the variance due to Parenting Practices-Discipline Style was removed ( $\chi^2 = 4.36$ ,  $df = 1$ ,  $p < .05$ ). The full model correctly predicts 81.3 % of the cases.

### Residential sample

No hierarchical regression analyses were conducted due to findings suggesting a single, significant variable from the assessments used in the current study (i.e., parenting stress-HSI) ( $\chi^2 = 4.03$ ,  $df = 1$ ,  $p < .05$ ). The model correctly predicts 63.2% of the cases.

### Correspondence Between Variables Predicting Utilization and Parent Treatment Preferences

A set of exploratory analyses were conducted to attempt to shed light on the relationship of the predictor variables to two important questions asked during the follow-up interview: one asking about their preference for treatment specifically designed for Hispanics, and a second asking them to rank the importance of certain therapy themes (parenting practices, immigration/acculturation, drug counseling, and HIV-risk). Because the original analyses yielded a marginally significant difference on Parental Years in the United States in the outpatient sample, a median split (based on outpatient sample) of parent years in the United States was performed to distinguish between two groups: parents who spent 15 or less years in the United States (low) and parents who spent 16 or more years in the United States (high). Parental differences in years in the U.S. were significantly associated with reporting a preference of therapy addressing Hispanic specific issues among the outpatient sample ( $k = -.38$ ,  $p < .01$ ). That is, the group with fewer years in the U.S. was more likely to prefer a therapy specifically designed or tailored to Hispanic issues.

Because analyses showed (a) Parent Discipline Style significantly predicted utilization in the full sample, (b) Parent Discipline Style significantly predicted utilization of outpatient services, and (c) Parenting Stress predicted utilization of residential services, analyses were conducted to examine the correspondence between these variables and parental preferences in terms of therapy themes. A median split of Parent Discipline Style was performed to distinguish between two groups: parents scoring 8.22 or less (low parent discipline style) and parents scoring greater than 8.22 (high parent discipline style) across the full sample, and parents scoring 8.07 or less (low parent discipline style) and parents scoring greater than 8.07 (high parent discipline style) across the outpatient sample. Differences in level of Parent Discipline Style scores were not significantly associated with reporting a preference of therapy addressing parenting practice among full sample ( $k = -.07$ ,  $ns$ ). There was a significant association between Parent Discipline style differences and parent reporting preference of therapy addressing parenting practice among outpatient sample ( $k = .33$ ,  $p < .05$ ). That is, the more effective the parents reported their Discipline Style, the more likely they expressed a preference for therapy that addressed parenting issues.

A median split of Parenting Stress was conducted for the residential sample to address the significant findings. High parenting stress respondents indicated a score greater than 10, and low parenting stress parents reported a score of 10 or less. Differences between these two groups were significantly associated with reporting preference of therapy addressing parenting practice among residential sample ( $k = .46, p < .05$ ). That is, the more stress parents reported experiencing, the more likely they wanted therapy addressing parenting issues.

## DISCUSSION

The current study investigated the predictive impact of psychiatric, family, and ethnicity-related factors on the utilization of recommended substance abuse services. Analyses yielded a number of noteworthy findings with important implications for the clinical engagement of drug abusing Hispanic adolescents into treatment. Adolescents and families who utilized various types of recommended therapy services were distinguished from non-utilizing families by several key factors that were the focus of this study.

The first interesting finding was that a parenting practice style characterized by involved parents who did not avoid disciplining issues and felt effective and competent in their parenting were most likely to seek services overall (residential + outpatient), and separately among the subsample for whom outpatient treatment was recommended. This along with low externalizing behavior and low parental stress were associated with higher utilization. On the flip side, parents who feel ineffective, who avoid disciplinary actions, who have youth with multiple externalizing behaviors, and feel high levels of parenting stress are less likely to engage. Interestingly, it appears that a high level of parental stress level does not seem to impact utilization likelihood alone; but rather, is mediated by the number of externalizing problems adolescents exhibit and the parenting discipline style carried out by parents. The findings regarding parental characteristics and externalizing behaviors do not bode well for those families most in need of services. One would hope that the more (a) externalizing problems adolescents exhibit, and the more (b) parents report problems in their parenting skills and levels of stress (problems that could be addressed via parenting and mental health interventions), the more families would utilize recommended services. However, the opposite appears to be occurring among Hispanic drug abusing populations. This finding is consistent with our previous work pointing to the need for specialized engagement interventions developed to engage adolescents and families most in need, into services (Santisteban & Szapocznik, 1994; Santisteban et al., 1996; Szapocznik et al., 1988).

Worthy of additional discussion is the finding that high symptomatology is associated with diminished utilization. In some ways, this is contrary to much of the available literature. Our hypothesis is that the findings of studies investigating the relationship between level of symptomatology and service utilization may differ substantially depending on the overall level of functioning of the sample. That is, studies of non-clinical samples may find a positive relationship between adolescent and parent symptomatology and utilization because some level of problem history may increase the “readiness” for services. However, in a sample consisting fully of clinical cases with high levels of symptomatology, one may find that those with the highest levels of symptoms are actually hindered from utilizing services.

In these clinical samples one may find the opposite effect or a negative association between symptoms and utilization. If this is true, we would expect a reverse U-shaped curve for the relationship between symptoms and utilization if cases at all ranges (clinical and non-clinical) were investigated together. Interestingly, the same pattern of association between symptoms and utilization was also evident in that high parenting stress led to less utilization of residential treatment. This is also counter-intuitive because anecdotally one often thinks that highly stressed families may seek to “fix the problem” by taking the youth out of the home and placing them in residential treatment. Even this process, however, appears to be hindered by high levels of stress.

It is also important to note those variables that might have been expected to, but did not, predict service utilization in this study. For example, none of the family composition and demographic factors previously thought to impact service utilization (family size, gender, income) were found to predict utilization in this study. Parental years in the U.S. was only marginally predictive variable, with those in the U.S. longer showing greater utilization. Of the key demographic variables, one–family income–may not have received an adequate test because of the very restricted range in this sample.

## LIMITATIONS

Several limitations concerning these studies should be noted. First, the study analyzed a limited sample of adolescents referred to treatment for their drug abuse and related externalizing problems. Generalizability limitations in terms of adolescents referred for psychiatric problems outside the scope of the current study are important to note. The ability of certain factors to predict utilization may not generalize to other types of adolescents and families. Future research is required to assess whether these predictors would identify utilizing from non-utilizing adolescents recommended treatment for additional psychiatric conditions.

Second, the sample is entirely composed of Hispanic adolescents and their families. Although research on underserved populations such as the one sampled in the current sample is valuable to fill the void in the literature (Nagayama Hall, 2001), the findings could be unique to specific sample characteristics.

Third, there were additional possible predictors of utilization that were not studied (e.g., readiness for therapy factors). Past treatment service research (see Dakof, Tejada, & Liddle, 2001 for review) have described multiple reasons for non-utilization of therapy including (a) adolescents’ motivation and readiness (Melnick, De Leon, Hawke, Jainchill, & Kressel, 1997), (b) parents’ belief that the treatment will not help, (c) parent-therapist relationship, and (d) practical obstacles to treatment (Kazdin, Holland, & Crowley, 1997). It would be helpful to continue to investigate these important predictors of utilization of treatment.

Finally, the interviews that collected service utilization data were conducted six weeks following discharge and, therefore, it is not known whether some families may have followed the treatment recommendations after the interview. Although we believe that it is unlikely that many families would initiate a continuation of services if they had not already, it would be helpful to investigate this possibility directly.

## CLINICAL IMPLICATIONS

The results of this study emphasize the need for specialized engagement interventions that can offset the power of key psychiatric and parenting factors that serve as obstacles to engagement into treatment. The expectations that highly clinical families, especially those in most need, can organize themselves to meet the challenge of negotiating their way through the treatment systems and engage into treatment, appears unrealistic.

It is important for both ends of the service delivery system (i.e., discharge and referral systems, and receiving substance abuse and mental health providers) to understand how maladaptive parenting style and high levels of symptomatology will keep youth and families from much needed services. It is also important to note that both parental and adolescent factors are predictive. Family factors and family-member role in service utilization cannot be understated, especially when speaking of child and adolescent service utilization. Future research may be able to focus on ways of screening for specific factors that lead to non-utilization and the development of specific engagement strategies tailored to those family characteristics.

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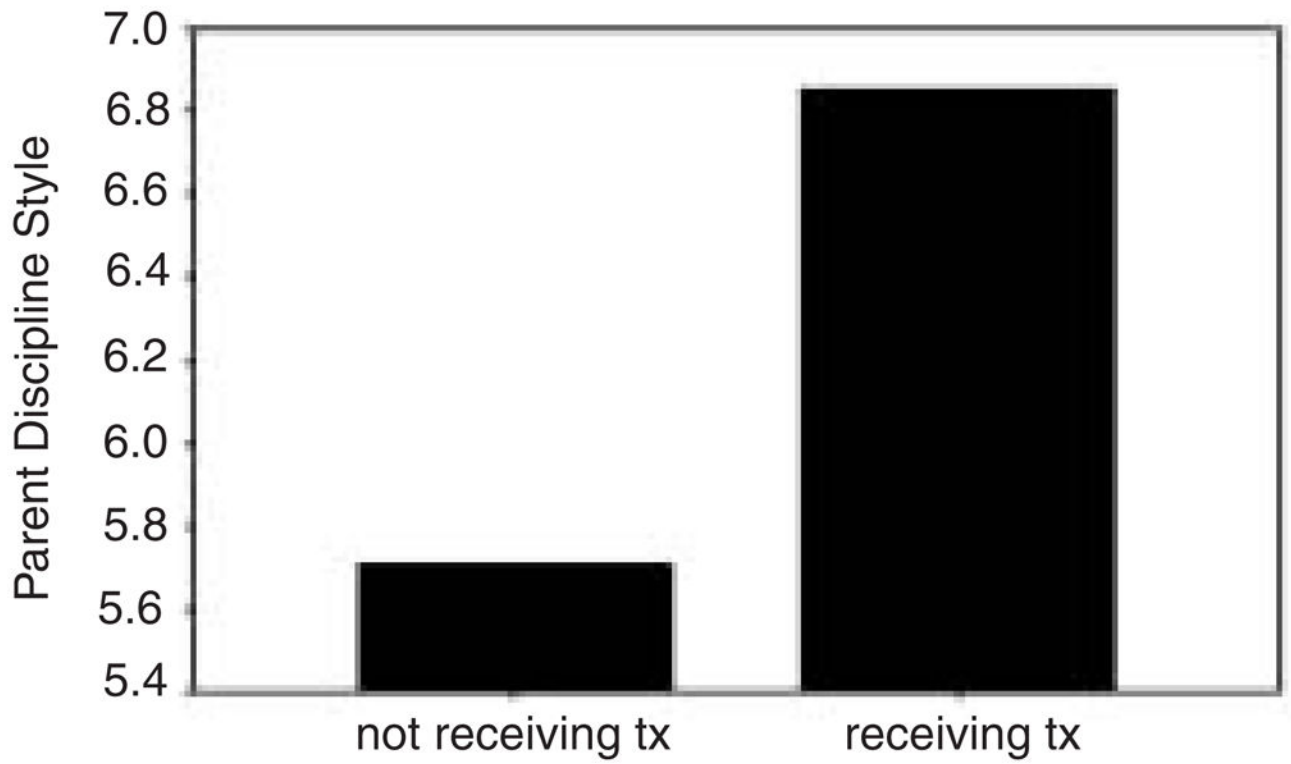
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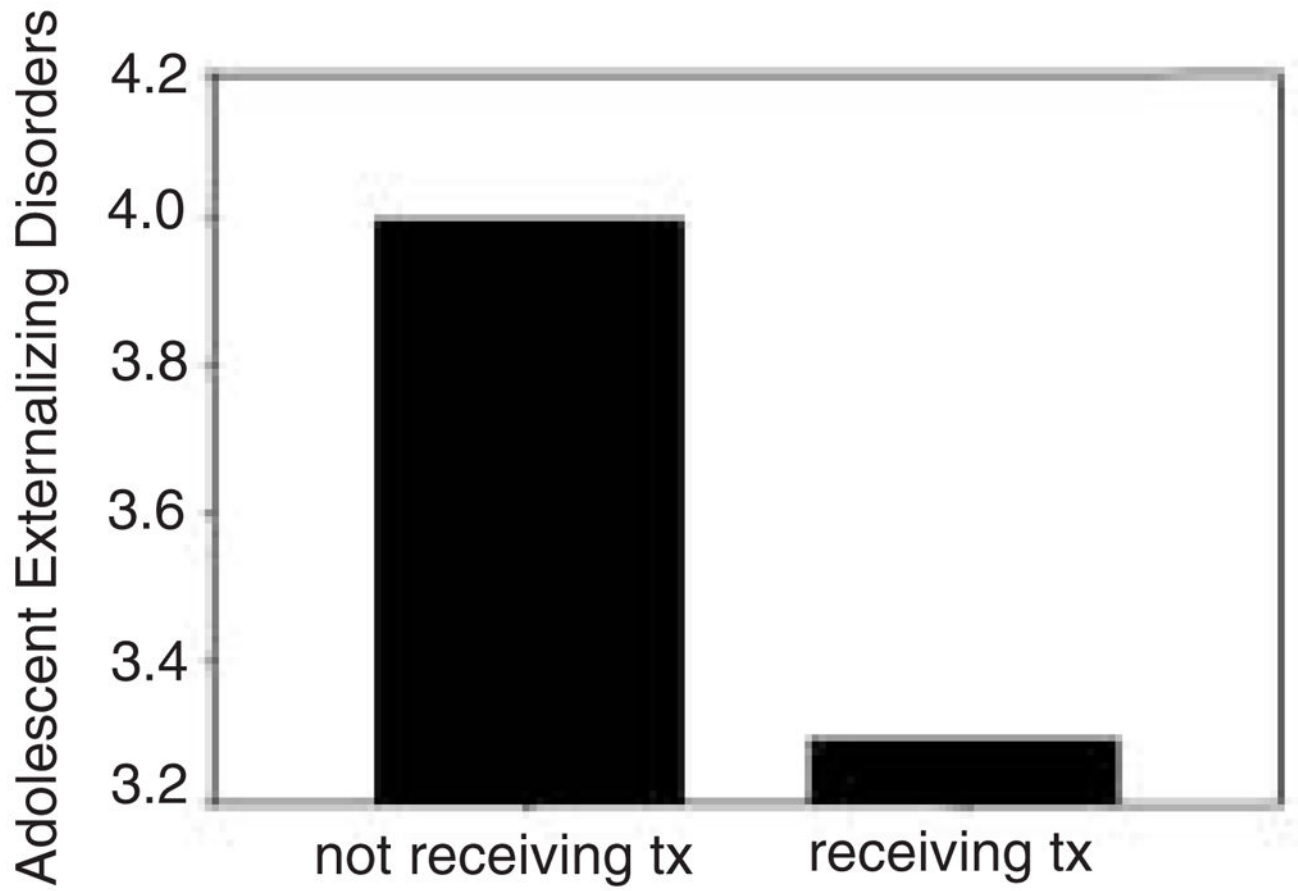
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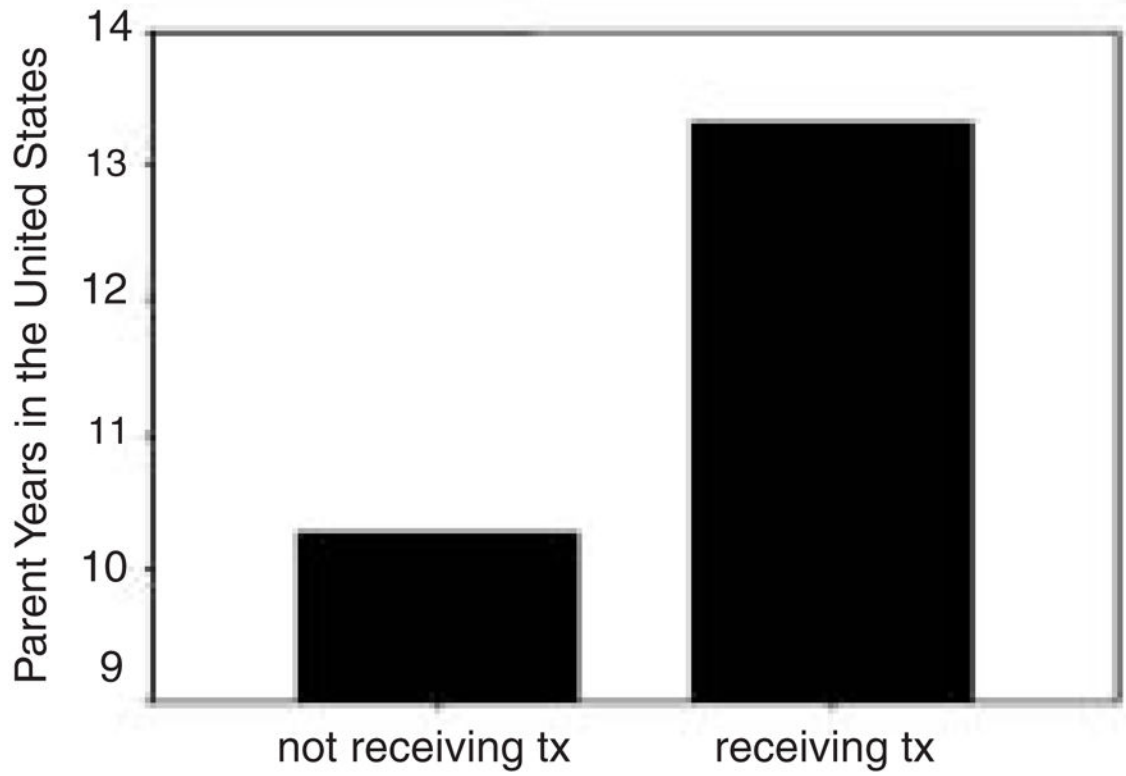


**FIGURE 1.**  
Utilizer and Non-Utilizer Differences on Parent Discipline Style (Full Sample)

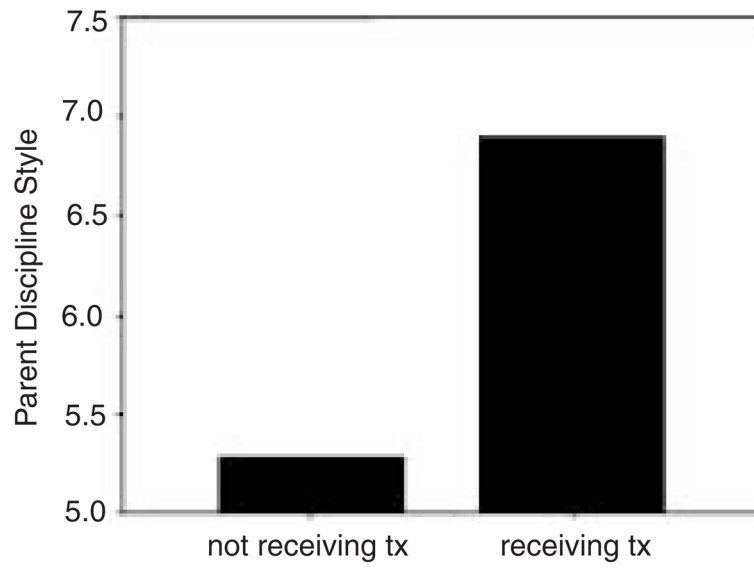




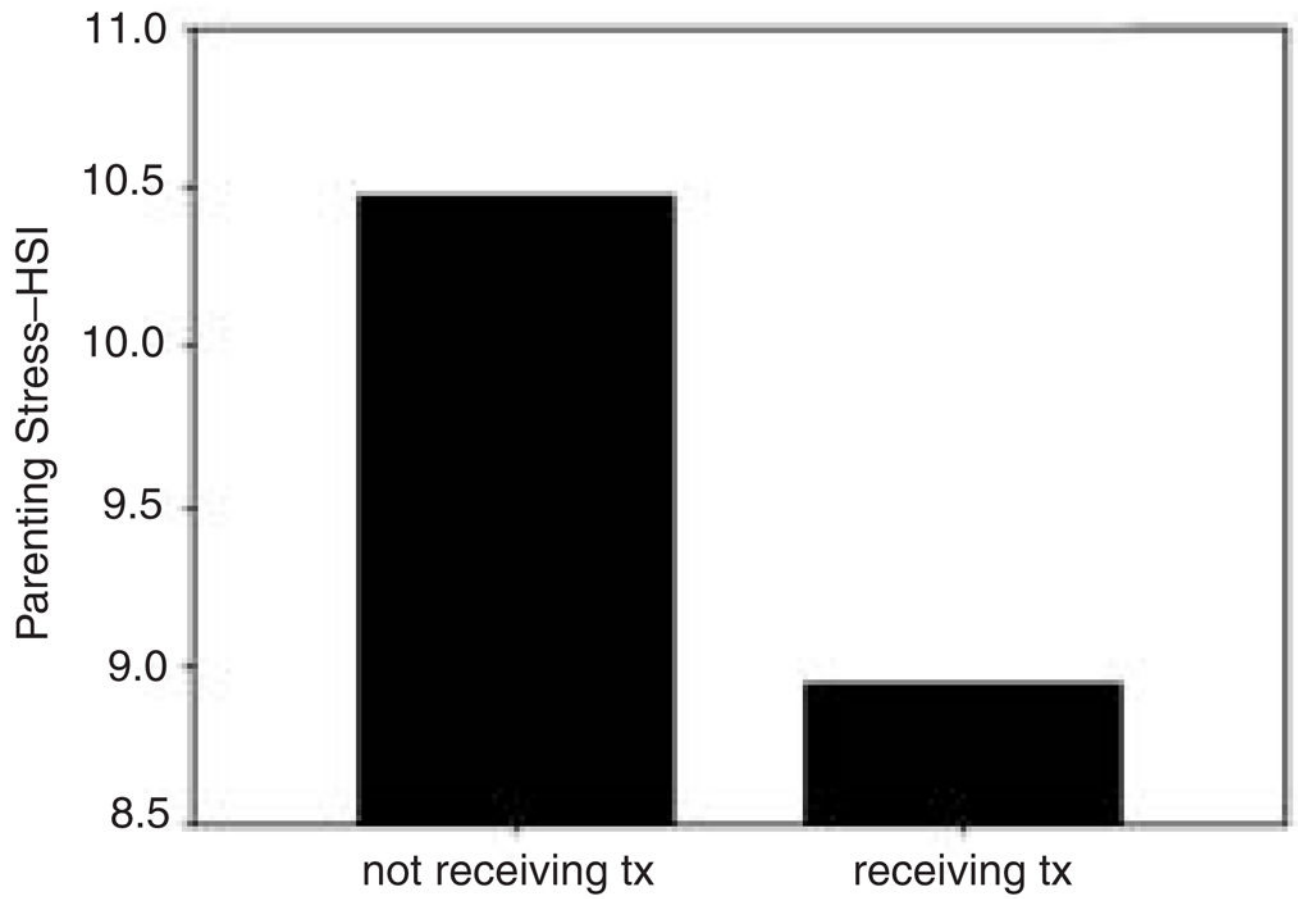
**FIGURE 2.** Utilizer and Non-Utilizer Differences on Adolescent Externalizing Disorder (Full Sample)



**FIGURE 3.** Utilizer and Non-Utilizer Differences on Parental Years in U.S. (Outpatient Sample)



**FIGURE 4.** Utilizer and Non-Utilizer Differences on Parent Discipline Style (Outpatient Sample)



**FIGURE 5.** Utilizer and Non-Utilizer Differences on Parenting Stress (Residential Sample)

**TABLE 1**

Predictors of Utilization: Results of the Univariate Logistic Regression Models

| Variable Name                            | Full Sample n = 86 |     |            |           |         | Outpatient Sample n = 48 |     |            |           |         | Residential Sample n = 38 |     |            |           |         |
|--|--------------------|-----|------------|-----------|---------|--------------------------|-----|------------|-----------|---------|---------------------------|-----|------------|-----------|---------|
|  | $\beta$            | SE  | Odds Ratio | Wald Test | p-value | $\beta$                  | SE  | Odds Ratio | Wald Test | p-value | $\beta$                   | SE  | Odds Ratio | Wald Test | p-value |
| Adolescent Psychopathology—Parent Report | -.37               | .18 | 0.58       | 4.19      | .04     | -.57                     | .32 | .49        | 3.10      | .08     | -.22                      | .24 | .76        | .82       | .37     |
| DISC-Externalizing Behaviors             | .63                | .27 | 1.77       | 5.57      | .02     | 1.34                     | .50 | 2.15       | 7.11      | .01     | .23                       | .34 | 1.23       | .49       | .49     |
| Parenting Practices—Parent Report        | -.69               | .25 | 0.51       | 7.50      | .01     | -.85                     | .37 | .55        | 5.33      | .02     | -.47                      | .36 | .71        | 1.66      | .20     |
| Discipline Effectiveness                 |                    |     |            |           |         |                          |     |            |           |         |                           |     |            |           |         |
| Discipline Avoidance                     |                    |     |            |           |         |                          |     |            |           |         |                           |     |            |           |         |
| Family Stress Indicators—Parent Report   |                    |     |            |           |         |                          |     |            |           |         |                           |     |            |           |         |
| Parenting Stress—HSI                     | -.27               | .12 | 0.54       | 4.87      | .03     | -.18                     | .17 | .71        | 1.04      | .31     | -.36                      | .18 | .50        | 4.09      | .04     |