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Are There Racial Ethnic Differences in Indigent, Inner-City Clients With Dual-Diagnosis?

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Abstract

Objective—An exploratory, cross-sectional study examined personal, clinical, and treatment characteristics among non-Hispanic Caucasian, non-Hispanic African American, and Hispanic indigent, inner-city clients with co-occurring disorders.

Methods—Men and women, 20-50 years old who met DSM-IV criteria for concurrent mood and substance use disorders were eligible. Inpatients, persons in detoxification programs, or incarcerated inmates were excluded. Assessments covered sociodemographic characteristics, clinical diagnoses, substance use, psychosocial variables, health care utilization and treatment history.

Results—Two hundred volunteers were screened, and 145 were eligible to enroll. Racial ethnic group differences in the distribution of mood and substance use disorders and medical diseases were evident. Receiving psychiatric treatment and psychiatric medications significantly differed among racial ethnic groups with Caucasians more likely to receive these services than African Americans or Hispanics. African Americans and Hispanics were also more likely than Caucasians to test positive for their drug of choice and for other drugs as well. Serious medical illnesses were evident in about half of the sample, and the distributions of these illnesses significantly differed among racial ethnic groups. There were no significant differences in hospitalization or emergency room visits among racial ethnic groups.

Conclusions—Indigent, inner-city clients have multiple psychiatric and medical problems that warrant continuity of care. However, few doctor's visits for medical illnesses, lack of psychotropic medications, staggering unemployment, and homelessness were common in our sample. These results present healthcare and social service professionals with potentially serious treatment challenges. Better recognition and understanding of racial ethnic needs in those with co-occurring disorders are needed.

National surveys estimate that over 5 million Americans have a dual-diagnosis, also known as co-occurring mood and substance use disorders (Center for Substance Abuse Treatment, 2007; Kessler et al., 2005; Regier et al., 1993; U.S. Department of Health and Human Services, 2001). Healthcare utilization in relation to racial ethnicity has been thoroughly

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examined in the general population. In co-occurring disorders, racial ethnic disparities of health access and treatment utilization have also been widely investigated using national survey databases. Although the same databases are used, different conclusions about psychiatric and addiction treatment between African Americans and Caucasians have been reported in different studies. Some data concerning Hispanics is omitted entirely. Thus, it is difficult to understand the influence that racial ethnicity may have on psychiatric and addiction treatment needs in a dual-diagnosis population.

For example, Hatzenbuehler et al. (2008) analyzed 2001-2002 National Epidemiological Survey (NES) data for co-occurring disorders (n=4250) and found African Americans (n=653) received less psychiatric services but more addiction treatment than Caucasians (n=3597). Keyes et al. (2008) examined the NES data and found that psychiatric treatment was utilized more often by Caucasians than African Americans, but found no racial ethnic differences in addiction treatment. Using NES data, Perron et al. (2009) restricted analyses to examining racial ethnic differences of addiction treatment in those with drug use disorders and reported that African Americans were more likely to participate in addiction treatment more than Caucasians or Hispanics. Perron et al (2009) also found that Caucasians more often received services from private professionals, Hispanics more often used inpatient services than African Americans, and that there were no differences between Hispanic and Caucasian clients. These mixed results suggest that racial ethnicity differences in treatment outcomes remain unclear.

Recently, Elwy et al. (2008) prospectively examined treatment utilization in African Americans (n=238), Caucasians (n=1495), and Hispanics (n=166) with Axis I mood or substance use disorders (n=1899). The sample consisted of outpatients seeking treatment in mental health or substance treatment clinics (8). Out of 1899 subjects, only 296 subjects had both a mood and substance use disorder (Elwy et al., 2008). No differences in psychiatric or addiction treatment utilization among racial ethnic groups were found (Elwy et al., 2008). In a retrospective, nine state investigation from 1994-1998, Horvitz-Lennon et al., (2009) examined racial ethnic differences in an inner-city homeless population and found Caucasians had more psychiatric outpatient visits than African Americans, and Hispanics had more case management visits than Caucasians.

The literature is mixed, Hispanic representation in co-occurring disorder studies is scarce, and most of the recent data is derived from national or state survey data acquired a decade or more ago (Hatzenbuehler et al., 2008; Keyes et al., 2008; Perron et al., 2009; Horvitz-Lennon et al., 2009). These studies and one prospective investigation using private service provider outpatients (Elwy et al., 2008) represent the bulk of our knowledge about racial ethnic differences in a dual-diagnosis population. Our primary goal was to broaden and help clarify our understanding about racial ethnic differences in a dual-diagnosis population. Here, we designed an exploratory study to examine sociodemographic characteristics, clinical diagnoses, substance use, psychosocial variables, health care utilization and treatment history among non-Hispanic Caucasian, non-Hispanic African American, and Hispanic indigent, inner-city clients with co-occurring disorders.

Methods

Study Design

A preliminary, cross-sectional study was conducted to explore differences in racial ethnic groups in indigent, inner-city clients with co-occurring mood and substance use disorders. In accordance with the Declaration of Helsinki, the study was approved by the Institutional Review Board at the University of North Texas Health Science Center. A Certificate of Confidentiality protecting vulnerable participants was also issued by the National Institutes

of Health. All subjects were given a copy of the consent form and certificate of confidentiality.

Recruitment

Volunteers were recruited using social service case manager referrals and study advertisement flyers placed in inner-city, community-based social service agencies. Racial ethnicity of social service case managers proportionately represented the study participant sample.

Participants

Eligible study participants were English speaking men and women between 20 – 50 years old who had concurrent DSM-IV diagnoses of mood and substance use disorders. The age range criterion was used to help control variances in length of psychiatric illness and years of chronic substance use. Participants self-identified racial ethnicity. Ineligible study participants were hospital inpatients, persons confined in detoxification programs, those experiencing acute substance-induced withdrawal symptoms, or incarcerated inmates.

Procedures

Volunteers were given time to review, discuss, and ask questions about the study protocol with researchers prior to providing written informed consent. After written consent was obtained, participants were interviewed face-to-face with the Structured Clinical Interview for DSM-IV (SCID; First et al., 1997) to confirm Axis I diagnoses of current and lifetime mood and substance use disorders, drug of choice, age of onset for mood symptoms and chronic substance use, and treatment. Sociodemographic information was recorded and urine specimens, breathalyzer tests, health and psychosocial profiles were obtained. Participants received a bus pass and a \$50 gift card to a discount retailer once all study assessments were completed.

Health and Psychosocial Functioning

The Multi-dimensional Health Profile – Health Functioning (MHP-H) and Psychosocial Functioning (MHP-P) are self-report assessments that were used to quantify physical and mental healthcare utilization, health beliefs and attitudes, health habits, life stress, coping skills, social resources, and mental health functioning over the past 12-months (Ruehlman et al., 1999; Karoly et al, 2005). The MHP-H consists of 69 items grouped in five areas that measure Response to Illness, Health Habits, Health History, Health Care Utilization, Health Beliefs and Attitudes with an average test-retest reliability of .74 (Ruehlman et al., 1999; Karoly et al, 2005).

The MHP-P is made up of 58 items grouped into four main areas that measure Mental Health (Psychological Distress, Life Satisfaction, Depressed Affect subscales); Social Resources (Social Support, Negative Social Exchange subscales); Coping Skills; and Life Stress (Number of Stressful Events, Perceived Stress and one Global Stress item). The test-retest reliability average range for all items was .50 to .74, and the comparative fit index between response items and long-term health outcomes range from .91 to .99 (for more detail see Karoly et al, 2005).

Raw scores from the Health and Psychosocial profile item responses were converted to standardized T-scores using the standardized, normative data manual (Ruehlman et al., 1999; Karoly et al, 2005). The standardized, normative data were derived from a national sample of participants (n = 2,411) stratified by age groups (18–32, 33–50, and 51–90 years) and gender (Ruehlman et al., 1999; Karoly et al, 2005). The standardized score is 50 with 10 points representing one standard deviation. A T-score of 60 is 1 standard deviation above the

normal average and is considered moderate in severity, while a T-score of 70 represents high severity. Conversely, a T-score of 40 is one standard deviation below the norm. The higher the T-score, the more severe problems the respondent endorses.

Toxicology

All participants provided a urine specimen to test recent drug use and pregnancy in women of childbearing potential. A 6-panel urine drug screen was used to measure cocaine benzoylecgonine levels (>300 ng/mL), methamphetamine (d-methamphetamine 1000 ng/mL), phencyclidine (PCP, 25 ng/mL), cannabis (11-nor Δ^9 THC-9 COOH, 50 ng/mL), opiate (morphine, 300ng/mL), and benzodiazepine (oxazepam, 300 ng/mL). A breathalyzer test was also obtained to verify current alcohol use.

Participant Education and Referrals

Investigators provided all participants with patient educational brochure packets to inform them about birth control, HIV/AIDS, hepatitis, sexually-transmitted diseases, cardiovascular disease, diabetes, breast, lung, and prostate cancer. All participants received referrals to free government-funded medical and mental health clinics to encourage them to receive the standard level of care available for their medical, mental and substance use disorders. In addition, social service case management and addiction treatment support groups were available for all study participants through referring social service agencies and community housing managers.

Statistical Analyses

Sociodemographic variables, clinical diagnoses, prevalence of medical illness, psychiatric and substance use disorders, and percent of positive urine drug screens were determined using descriptive statistics. Racial ethnic group differences were analyzed using analysis of variance and chi-square as appropriate. Treatment outcomes were defined as the number of persons receiving psychiatric treatment, receiving psychotropic medications, attending addiction treatment, number of physician office visits during the past year, number of hospitalizations, and number of emergency room visits. Urine drug screen results (positive, negative) were also analyzed as a dependent variable due to their treatment-related potential. Psychosocial and health profile scores from the MHP were also treated as dependent variables.

We were primarily interested in testing racial ethnic differences among variables that were clinically relevant to treating dual-diagnosis clients. To examine the predictive value of racial ethnicity on psychiatric treatment, psychotropic medication use, and current drug use (positive urine drug screens, logistic regression analyses were conducted. Age, sex, education, legal status, and living arrangements were included in regression models as appropriate.

We defined statistical significance using a conservative probability of 0.01, which we believed would be more appropriate for the treatment variables in this proof-of-concept study with multiple tests of significance. Post hoc analyses were performed on age of onset of psychiatric symptoms and diagnosis as well as age of onset of chronic substance use. Due to the multiple comparisons of MHP T-scores among racial ethnic groups, post hoc tests were performed only on those comparisons that were significantly different ($p \leq .01$) among racial ethnic groups. Additional in-depth regression or post hoc analyses of other variables were beyond the limited scope of this exploratory research due to the small sample size and unequal sized racial ethnic groups.

Results

Participants

Two-hundred volunteers were screened for study eligibility. Participants self-identified racial ethnicity as non-Hispanic African American, non-Hispanic Caucasian, or Hispanic of Mexican descent. One-hundred, forty-seven participants met all study criteria and provided written informed consent to participate in the study. Two participants declined to undergo the SCID interview and were discontinued from the study. This resulted in 145 participants providing evaluable data. Age, education, sex, employment, living arrangements, and legal status grouped according to racial ethnicity are shown in Table 1. Years of education and legal status were the only variables that did not significantly differ among groups.

Clinical Characteristics and Treatment

Racial ethnic group differences in distribution of mood and substance use disorders and medical diseases were evident (Table 2). Several treatment variables for psychiatric, substance use, and medical disease significantly differed among groups. Thirty-two percent of the total population tested positive for illicit drug use. No subject was positive for alcohol. Most subjects were participating in no-cost addiction treatment programs offered by the referring social service agency. Still, 37% did not take advantage of attending addiction treatment classes. To better understand the illness history among racial ethnic groups, Table 3 shows onset ages for mood symptoms, psychiatric diagnosis, and chronic substance use and Bonferroni post hoc test results. A trend was noted between African Americans and Caucasians in the age of chronic psychiatric symptom onset ($p = 0.049$). The age of onset for a psychiatric diagnosis significantly differed between African Americans and Hispanics ($p = 0.001$) and Caucasians ($p = 0.003$). Age of chronic substance use also was significantly different between African Americans and Caucasians ($p = 0.014$). We note that the smaller size of the Hispanic group precluded statistical significance in cases where mean differences were similar to those between the other two groups.

Multidimensional Health Profile T-scores

The MHP-Psychosocial and general Health mean T-scores and standard deviations grouped according to racial ethnicity are shown in Table 4. Mean T-scores for health vigilance were higher in Caucasians, and spiritual help mean T-scores were higher in African Americans. Bonferroni post hoc tests showed spiritual help significantly differed between African Americans and Hispanics ($p = 0.001$), and a trend was noted in health vigilance scores between African Americans and Caucasians ($p = 0.017$).

Regression Models

Logistic regression results showing the strength of racial ethnicity in predicting no current psychotropic medication use and no current psychiatric treatment are shown in Table 5. For clarity, coding of independent variables is shown in Table 5. Univariate differences among racial ethnic groups were maintained after controlling for other variables in the model. With regard to psychotropic medications, Hispanics ($p = 0.003$) and African Americans ($p = 0.001$) were more unlikely to receive these medications than Caucasians. Similarly, Hispanics ($p = 0.002$) and African Americans ($p = 0.006$) were more unlikely to receive psychiatric treatment.

In general, sex, living arrangements, legal status, and age were not significant predictors of negative urine drug screens. After controlling for these variables in the model, racial ethnic group differences in negative urine drug screens for any drug were significantly different for Hispanics ($p = 0.002$) and African Americans ($p = 0.0001$) compared to Caucasians. Negative urine drug screens for primary drug of choice were also significantly different for

African Americans ($p = 0.001$) vs. Caucasians, A trend for Hispanics ($p = 0.04$) being less likely to produce a negative urine drug screen was also noted. Taken together, these results suggest that Hispanic and African American clients receive less medications and treatment and have more positive urine drug screens than Caucasians.

Discussion

To our knowledge, we are one of the few prospective cross-sectional studies to explore sociodemographic characteristics, clinical diagnoses, substance use, psychosocial variables, health care utilization and treatment history among Caucasian, African American, and Hispanic inner-city clients with co-occurring disorders. We found significant differences among African Americans, Caucasians, and Hispanics in mood and substance use disorders, currently receiving psychotropic medications, medical disease, and the number of office visits clients had within the past year. Like others before us, our results suggest that African Americans and Hispanics were five times more unlikely to receive psychotropic medications than Caucasians. In addition, African Americans were almost four times and Hispanics were six times more unlikely to receive psychiatric treatment than Caucasians. Similar to Elwy et al (2008) and Keyes et al (2008), we found no addiction treatment differences among racial ethnic groups.

Besides racial ethnicity, women were more likely to receive psychotropic medications than men (Table 5). One reason for these results may be the higher number of Caucasian women in the sample. Here, it seems that Caucasian women may be more vigilant in taking care of their mental health than those in other racial ethnic groups. Supporting this rationale are the substantial mean differences in Caucasians with higher T-scores in health vigilance than African Americans (Table 4). In contrast, African Americans relied on spiritual help significantly more often than any other group. Knowing about these racial ethnic differences in psychiatric treatments, medication use, health vigilance and spiritual help highlight the importance for clinicians to understand culturally sensitive needs. Healthcare professionals that educate their patients about mood symptoms, understanding the benefits of psychotropic use, and those clinicians who can be open-minded about patients' spiritual needs may go a long way in improving minority health.

Based on urine drug screens, African Americans and Hispanics were more likely to use their drug of choice and other drugs currently. In light of the fact that most clients were on probation or parole, continued drug use will surely lead to recidivism in the justice system. As most of our subjects were living in shelter or community housing, we found that living arrangements was no guarantee of drug abstinence, although there was the suggestion that these settings were more protective than independent living. Any drug use in the shelter or community housing environment is not only a detriment to those who use, but it may jeopardize the sobriety of other residents. Thus, housing managers may find random urine drug screens beneficial in promoting drug abstinence and improving mental health and addiction treatment compliance.

Study Limitations and Strengths

Data interpretations should be viewed with caution due to the small sample size, unequal sample of racial ethnic groups, and the homogeneous sample of indigent, inner-city clients recruited from community-based social service agencies. However, this research was a preliminary exploration of racial ethnic differences in co-occurring mood and substance use disorders to generate hypotheses for larger investigations. The available data from large national studies are decades old, and indigent, homeless, and Hispanic clients with dual-diagnoses are not well-represented. Our strength is that we examined racial ethnic differences in a dual-diagnosis population within a real-world environment that included

Hispanic clients. To our knowledge, we are one of a handful of recent studies whose data may shed light on how clinicians and case managers may improve mental health outcomes in minority clients. More research in this population is needed.

Conclusions

We found that indigent, inner-city clients have multiple psychiatric, substance use, and medical problems that seem to be under-treated. Few doctor's visits, few receiving psychotropic medications, staggering unemployment and homelessness were common in our sample, especially in minority groups. The overall picture of this indigent, inner-city sample shows an early middle-aged population of mostly minority men who are unemployed, homeless, and still using their drug of choice regardless of their legal status and opportunity to receive no-cost addiction treatment. These results suggest that healthcare and social service professionals have potentially serious challenges to improve mental health and addiction outcomes in African American and Hispanic clients with co-occurring disorders.

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As the Principal Investigator, Dr. Nejtek designed and managed all aspects of the study and performed diagnostic evaluations on patients. Kathryn Kaiser assisted Dr. Nejtek recruiting, consenting, assessing participants, managing patient data, scoring, and data entry as well as providing editorial comments to this manuscript. Dr. Vo served as the primary study biostatistician, conducted literature reviews pertinent to the study results, and assisted with writing and editing the manuscript. Dr. Hilburn provided manuscript editorial comments and data interpretations concerning ethnic and race perceptions about physical and mental health treatment from inner-city outpatients. Ms. Jemila Lea, B.G.S. assisted Drs. Nejtek and Kaiser with patient data entry, assessment scoring, and provided administrative help. Dr. Vishwanatha assisted Dr. Nejtek with the design of this study in his role as Center Investigator for the NIH National Center on Minority Health and Health Disparities center grant (P20MD001633) and contributed editorial comments. All authors contributed to and have approved the final manuscript.

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Table 1

Sociodemographic Characteristics

<u>Descriptive Statistics</u>	African American (n = 65)		Caucasian (n = 55)		Hispanic (n = 25)		<i>F</i> (<i>p</i>)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Age	44.0	6.0	38.1	8.1	36.3	8.0	16.32 (<.001)
Years of Education	12.2	1.7	12.2	1.9	11.5	2.0	1.58 (.209)
<u>Percentage Distributions</u>							
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>X</i> ² (<i>p</i>)
Sex (% Men)	46	70.8%	27	49.1%	20	80.0%	9.39 (.009)
Current Employment (%)							12.87 (.012)
Full Time Employment	0	0.0%	0	0.0%	1	4.0%	
Part-Time Temporary Employment	5	7.7%	13	23.6%	7	28.0%	
Unemployed	60	92.3%	42	76.4%	17	68.0%	
Current Living Arrangements (%)							25.51 (<.001)
Independent Living	0	0.0%	5	9.1%	2	8.0%	
Friend/Family - Temporary	2	3.1%	15	27.3%	3	12.0%	
Shelter/Community Housing	63	96.9%	35	63.6%	20	80.0%	
Legal Status Within Past 12-months							.849 (.654)
No Reported Legal Problems	22	34.0%	18	33.0%	6	24.0%	
Current Legal Problems (probation, parole)	43	66.0%	37	67.3%	19	76.0%	

Table 2

Clinical Diagnoses and Treatment by Racial Ethnic Groups

Percentage Distributions	African American (n = 65)			Caucasian (n = 55)			Hispanic (n = 25)		
	N	%		N	%		N	%	X ² (p)
<u>Primary Mood Disorder</u>									29.20 (<.001)
Bipolar Spectrum Disorders	26	40.0	34	61.8	18	72.0			
Major Depressive Disorders	10	15.4	17	30.9	3	12.0			
Schizoaffective Disorder	8	12.3	0	0.0	0	0.0			
Substance-Induced Mood Disorder	19	29.3	4	7.3	4	16.0			
Anxiety Disorders	2	3.1	0	0.0	0	0.0			
<u>Current Psychiatric Treatment</u>									
Receiving Mental Healthcare	33	50.7	44	80.0	8	32.0			19.32 (<.001)
Receiving Psychotropic Medications									28.01 (<.001)
No Medications	36	55.4	11	20.0	17	68.0			
≥ 1 Medications	29	44.6	44	80.0	8	32.0			
<u>Primary Substance Use Disorder</u>									39.62 (<.001)
Cocaine	45	69.2	19	34.5	10	4.0			
Methamphetamine	1	1.5	14	25.5	9	36.0			
Heroin/Opiates	1	1.5	9	16.4	0	0.0			
Alcohol	10	15.4	11	2.0	4	16.0			
Cannabis	8	12.3	2	3.6	2	8.0			
<u>Current Addiction Treatment</u>									
Attending Treatment Classes	43	66.2	37	67.3	11	44.0			4.56 (.102)
<u>Positive Urine Drug Screen</u>									
Primary Drug Of Choice	29	44.6	6	10.9	9	36.0			16.47 (.002)
Other Drugs	25	38.5	6	10.9	12	48.0			15.72 (.005)
<u>Primary Medical Disease</u>									33.67 (.014)
None	23	35.4	17	30.9	14	56.0			
HIV/AIDS	15	23.0	6	10.9	1	4.0			

Percentage Distributions	African American (n = 65)		Caucasian (n = 55)		Hispanic (n = 25)		χ^2 (p)
	N	%	N	%	N	%	
Hepatitis C	0	0.0	7	12.7	3	12.0	
Diabetes	3	4.6	3	5.5	2	8.0	
Cardiovascular	20	31.0	10	18.2	3	12.0	
Asthma	1	1.5	5	9.0	1	4.0	
Musculoskeletal	1	1.5	1	1.8	1	4.0	
STD	0	0.0	3	5.5	0	0.0	
Liver Disease	2	3.1	1	1.8	0	0.0	
<i>Medical Disease Treatment During Past 12-Months</i>							
	M	SD	M	SD	M	SD	F (p)
Number of Office Visits	3.0	2.1	2.9	1.9	1.7	1.4	4.49 (.002)
Number of Overnight Hospital Stays	1.3	1.7	0.9	1	0.8	1.1	1.52 (.197)
Number of Emergency Room Visits	2.0	2.1	2.2	1.9	1.5	1.6	2.04 (.110)

Table 3
Psychiatric History by Racial Ethnic Groups

<u>Dependent Variable</u>	African American (n = 65)		Caucasian (n = 55)		Hispanic (n = 25)	
	M	SD	M	SD	M	SD
<u>Mood</u>						
Age of Chronic Symptom Onset	19.7	10.1	15.8	8.0	15.6	6.5
Age at First Psychiatric Diagnosis	33.9	10.7	26.4	11.5	20.0	9.9
<u>Primary Substance Use</u>						
Age of Chronic Substance Use	24.2	8.0	20.5	6.2	19.7	5.2

Bonferroni Post Hoc Tests						
<u>Dependent Variable</u>	(I) race	(J) race	Difference (I-J)	Std. Error	Sig.	
Age of Chronic Symptom Onset	Hispanic	African American	-4.105	2.075	.150	
		White	-.175	2.127	1.000	
	African American	Hispanic	4.105	2.075	.150	
		White	3.930*	1.616	.049	
	White	Hispanic	.175	2.127	1.000	
		African American	-3.930*	1.616	.049	
Age at First Psychiatric Diagnosis	Hispanic	African American	-13.850*	3.589	.001	
		White	-6.324	3.525	.227	
	African American	Hispanic	13.850*	3.589	.001	
		White	7.526*	2.229	.003	
	White	Hispanic	6.324	3.525	.227	
		African American	-7.526*	2.229	.003	
Age of Chronic Substance Use	Hispanic	African American	-4.517*	1.646	.021	
		White	-.822	1.687	1.000	
	African American	Hispanic	4.517*	1.646	.021	

Bonferroni Post Hoc Tests					
Dependent Variable	(I) race	(J) race	Difference (I-J)	Std. Error	Sig.
	White	White	3.695*	1.281	.014
	White	Hispanic	.822	1.687	1.000
		African American	-3.695*	1.281	.014

Table 4
Multidimensional Health Profile T-Scores

	African American (n=65) ^a		Caucasian (n=55) ^b		Hispanic (n=25) ^c		<i>F</i> (<i>p</i>)
	Mean	SD	Mean	SD	Mean	SD	
<u>Psychosocial Profile</u>							
Coping	52.1	12.9	54.2	12.3	52.8	13.7	.402 (.81)
Social Support	55.9	12.7	59	15.3	57.2	15.2	1.35 (.25)
Emotional Support	57	12.3	59	14.8	57.4	14.1	.783 (.54)
Tangible Support	54.4	12.3	58	13.1	57	14.6	1.91 (.11)
Negative Social Exchange	62.6	15.5	67.3	13.4	63.1	14.1	1.07 (.37)
Psychological Distress	62.7	12.9	65	12.5	66.9	14.1	.291 (.88)
Depressed Affect	59.5	14.4	60.9	16.5	63.2	18.9	.500 (.74)
Guilt	62.3	10.8	64.5	9.6	63.6	12.8	.261 (.90)
Anxious Affect	59.8	12.3	62.9	12.2	64.2	12.6	.527 (.72)
Somatic Complaints	57.6	12.9	57.3	12.2	63.8	12.7	2.68 (.07)
Cognitive Disturbance	60.2	10.5	63.2	11.2	62.8	12.9	.902 (.46)
Life Satisfaction	60.4	10.5	64.7	11.9	62.6	13	.976 (.42)
<u>Health Profile</u>							
Positive Health Habits	56.8	10.3	61.2	10.1	59.3	9.1	2.91 (.06)
Negative Health Habits	60.4	11.4	68.1	11.6	67.3	18.6	1.27 (.28)
Health Vigilance	52.3	11.2	58.3	10.5	52.4	14.7	4.44 (.01)
Health Values	50.7	11.8	52.6	10	52	10.4	2.99 (.02)
Trust in Healthcare Personnel	48.9	10.9	50.1	10.5	48.8	12.5	.937 (.44)
Trust in Healthcare System	45.3	10.7	48.4	11.8	48.8	12.4	.730 (.57)
Self-Help	54.5	10.6	59.7	10.9	58.5	8.8	4.09 (.02)
Professional Help	57.2	11.5	56.3	9.8	52.8	10.5	1.85 (.12)
Help from Friends	55.7	11.9	55.6	10.7	57.4	10.7	1.10 (.36)
Spiritual Help	62.1	9.3	55.3	11.7	56.2	8.7	7.44 (.001)
Self-Efficacy	53.5	10.5	56.7	10.9	54	10.6	.51 (.20)

Bonferroni Post Hoc Tests						
	a-b (<i>p</i>)	SE	a-c (<i>p</i>)	SE	b-c (<i>p</i>)	SE
Health Vigilance	-6.01 (.017)	2.13	-.19 (1.00)	2.73	5.82 (.121)	2.81
Spiritual Help	5.92 (.044)	2.39	6.82 (.001)	1.87	-.90 (1.00)	2.45

Table 5

Logistic Regression Models of Clinical Disposition

No Current Psychotropic Medications	B	SE	Wald	Sig.	Odds	95% CI	
						Lower	Upper
age	-0.071	0.03	5.063	0.024	0.931	0.875	0.991
sex=1 women	-1.602	0.471	11.554	0.001	0.021	0.080	0.507
sex=2 men	0 ^a	.	.	.	.	.	.
race=1 Hispanic	1.779	0.597	8.877	0.003	5.925	1.838	19.098
race=2 African American	1.611	0.502	10.311	0.001	5.008	1.873	13.387
race=3 Caucasian	0 ^a	.	.	.	.	.	.
current legal status=0 none	0.625	0.447	1.950	0.163	1.868	0.777	4.489
current legal status=1 parole, probation	0 ^a	.	.	.	.	.	.
living = 0 shelter/community housing	1.787	1.270	1.980	0.159	5.973	0.495	72.010
living=1 family/friend temporary	1.264	1.359	0.865	0.352	3.540	0.247	50.766
living=2 Independent	0 ^a	.	.	.	.	.	.
No Current Psychiatric Treatment							
age	-0.068	0.031	4.844	0.028	0.934	0.88	0.993
sex=1 women	-1.297	0.459	7.985	0.005	0.273	0.111	0.672
sex=2 men	0 ^a	.	.	.	.	.	.
race=1 Hispanic	1.805	0.592	9.280	0.002	6.079	1.903	19.417
race=2 African American	1.374	0.497	7.634	0.006	3.950	1.491	10.469
race=3 Caucasian	0 ^a	.	.	.	.	.	.
current legal status=0 none	0.258	0.433	0.355	0.552	1.294	0.554	3.024
current legal status=1 parole, probation	0 ^a	.	.	.	.	.	.
living = 0 shelter/community housing	1.652	1.232	1.799	0.180	5.217	0.496	58.321
living=1 family/friend temporary	1.200	1.319	0.827	0.363	3.321	0.250	44.086
living=2 Independent	0 ^a	.	.	.	.	.	.
Negative Urine Drug Screen for Any Drug							

No Current Psychotropic Medications	B	SE	Wald	Sig.	Odds	95% CI	
						Lower	Upper
age	0.059	0.031	3.631	0.057	1.061	0.998	1.128
sex=1 women	0.767	0.453	2.869	0.090	2.153	0.886	5.227
sex=2 men	0 ^a						
race=1 Hispanic	-1.978	0.624	10.035	0.002	0.138	0.041	0.470
race=2 African American	-2.839	0.575	24.417	0.0001	0.058	0.019	0.180
race=3 Caucasian	0 ^a	.	.	.	.	.	.
current legal status=0 none	-0.646	0.463	1.946	0.163	0.524	0.211	1.299
current legal status=1 parole, probation	0 ^a						
living = 0 shelter/community housing	2.562	1.036	6.121	0.013	12.962	1.703	98.652
living=1 family/friend temporary	2.493	1.123	4.924	0.026	12.095	1.338	109.36
living=2 Independent	0 ^a						
Negative Urine Drug Screen for Primary Drug of Choice							
age	0.008	0.031	0.068	0.795	1.008	0.946	1.072
sex=1 women	0.952	0.483	3.882	0.049	2.592	1.005	6.686
sex=2 men	0 ^a						
race=1 Hispanic	-1.320	0.654	4.067	0.044	0.267	0.074	0.964
race=2 African American	-1.863	0.579	10.357	0.001	0.155	0.05	0.483
race=3 Caucasian	0 ^a						
current legal status=0 none	-0.411	0.453	0.825	0.364	0.663	0.273	1.61
current legal status=1 parole, probation	0 ^a						
living = 0 shelter/community housing	1.474	0.928	2.524	0.112	4.367	0.709	26.915
living=1 family/friend temporary	2.215	1.158	3.66	0.056	9.165	0.947	88.702
living=2 Independent	0 ^a						

^aThis parameter is set to zero as it is redundant