Lessons Learned on Treating Racial/Ethnic Minority Substance Abusers

Motivational Enhancement Therapy (MET) for African American Substance Users

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Background

Previous research suggests that Motivational Interviewing (MI) and Motivational Enhancement Therapy (MET) Improve diet ,HIV risk behaviors and substance use

Gap

No studies have examined the effectiveness of a generic version of MET specifically among African American adult substance users

Objective

To examine the effectiveness of MET for African American substance users

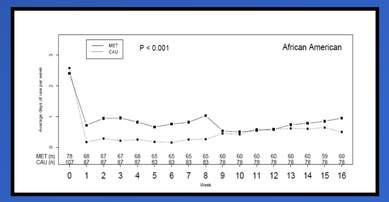
National Institute of Drug Abuse Clinical Trials Network (CTN) MET Trial (004)

- **Parent Study**: 461 substance abusing adults seeking substance abuse treatment at one of five community based treatment programs (CTPs)
- Randomized to receive either MET as an adjunct to CAU or CAU alone
- No differences between MET and CAU in substance use retention
- **Secondary Analyses of African Americans in CTN 0004**:194 Black Substance users; 75% male; Age: Mean=38; Primary drugs: cocaine and alcohol

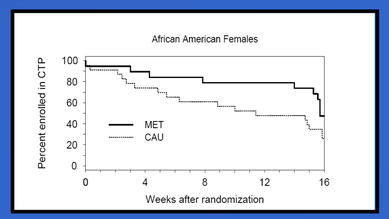
Outcomes

Self-report of drug use: self-report of weekly drug use for each of the 16 study weeks

Retention: number of days between the day of enrollment and the last day that the participant received services



African Americans in MET reported using more drugs than those in CAU (p = .001)



African American females in MET had higher retention those in CAU during the initial 12 weeks (p = .05)

Does Treatment Readiness Enhance the Response of African American Substance Users to MET?

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Gap

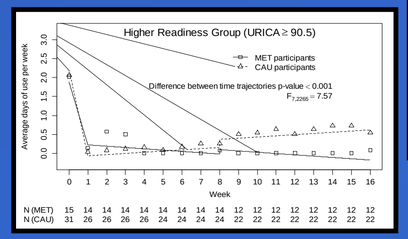
The effectiveness of MET for substance abusing Blacks at different levels of readiness has not been examined

Objective

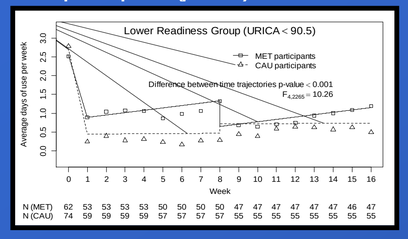
To examine the extent to which readiness-to change (high readiness vs. lower readiness) affects response to MET among Blacks

Outcomes

Self-report of drug use: self-report of weekly drug use for each of the 16 study weeks



Higher Readiness: MET participants reported less drug use over time than CAU participants (p=.001)



Lower Readiness: MET participants actually reported slightly more drug use over time than CAU participants(p=.001)

Hispanic National Group Differences in Substance Use, Cultural Factors, and Treatment Outcomes among Treatment-Seeking Adults

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Overview

Data were from the NIDA CTN trial of Motivational Enhancement Therapy (MET) versus treatment as usual in a sample of Spanish-speaking substance users (Carroll et al., 2009). Five outpatient sites were located across the country.

Subjects (N = 375) were classified by Hispanic national group based on their or parents' birthplace for U.S. born, including Cuban American (n = 34), Mexican American (n = 209), Puerto Rican (n = 78), and other Hispanic American (n = 54).

This secondary analysis examined the relationship of Hispanic national group to baseline sociodemographic, cultural, and substance use characteristics and to treatment outcomes, including retention and substance use.

Table 1. Baseline Characteristics

	Cuban (n = 34) M (SD) or %	Mexican (n = 209) M (SD) or %	Puerto Rican (n = 78) M (SD) or %	Other (n = 54) M (SD) or %	p
Male	79.41	87.13	80.77	79.63	***
Age	36.50 (8.44)	29.36 (7.72)	39.13 (8.56)	33.13 (9.51)	***
Years of education	11.24 (2.73)	8.50 (3.20)	10.96 (2.18)	9.67 (3.85)	***
Employed					
Yes, full- or part-time	55.88	88.04	10.26	50.00	***
No, unemployed	32.35	10.05	74.36	38.89	***
No, other	11.76	1.91	15.38	11.11	
Marital status					
Married/cohabitating	35.29	53.11	11.54	48.30	***
Widow/sep/div	26.47	13.40	47.44	20.37	
Never married	38.24	33.49	41.03	33.33	
Born in U.S. (Yes)	14.71	4.31	28.92	0.00	***
Years living in U.S.	20.86 (13.66)	8.91 (6.83)	22.26 (14.23)	13.89 (8.69)	***
Primary language					***
English	0.00	0.96	19.23	1.85	
Spanish	100.00	97.13	80.77	98.15	
Other	0.00	1.91	0.00	0.00	
Language spoken at home					***
English	0.00	0.96	7.69	1.85	
Spanish	88.24	88.52	65.38	79.63	
Both Equally	11.76	10.05	26.92	14.81	
Other	0.00	0.48	0.00	3.70	
Americanism subscale	2.95 (1.60)	2.72 (1.16)	3.36 (1.31)	2.77 (1.32)	**
Hispanicism subscale	4.49 (0.72)	4.28 (0.74)	4.58 (0.56)	4.40 (0.66)	

Notes: Estimates are mean (standard deviation) or percentage; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2. Substance Use at Baseline

	Cuban (n = 34) M (SD) or %	Mexican (n = 209) M (SD) or %	Puerto Rican (n = 78) M (SD) or %	Other (n = 54) M (SD) or %	p
Primary substance used					
Alcohol	32.35	83.25	17.95	64.81	***
Cocaine	47.06	9.57	42.31	22.22	
Marijuana	14.71	3.83	12.82	9.26	
Opioids	2.94	0.48	26.92	3.70	
Benzodiazepines	2.94	0.00	0.00	0.00	
Methamphetamine	0.00	2.87	0.00	0.00	
Years of regular substance abuse, primary drug	12.74 (9.47)	9.93 (7.85)	11.81 (10.44)	13.26 (9.36)	
Past-28 day primary drug use	9.41 (7.87)	5.41 (7.48)	10.76 (9.95)	7.41 (7.50)	***
Addiction severity					
Alcohol	0.25 (0.21)	0.15 (0.17)	0.18 (0.22)	0.25 (0.24)	*
Drugs	0.16 (0.12)	0.04 (0.08)	0.14 (0.11)	0.08 (0.11)	***
Employment	0.66 (0.29)	0.66 (0.23)	0.89 (0.19)	0.74 (0.24)	***
Family	0.29 (0.25)	0.10 (0.15)	0.16 (0.20)	0.19 (0.20)	***
Legal	0.21 (0.20)	0.16 (0.17)	0.09 (0.17)	0.16 (0.18)	**
Medical	0.25 (0.36)	0.07 (0.18)	0.23 (0.32)	0.09 (0.23)	***
Psychiatric	0.35 (0.25)	0.06 (0.14)	0.33 (0.25)	0.24 (0.26)	***

Notes: Estimates are mean (standard deviation) or percentage; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 3. Treatment Outcomes

	Unadjusted M or % (95% C.I.)	p	Adjusted[a] M or % (95% C.I.)	p
Retention in Treatment				
Enrolled at follow-up (day 84)	n = 358		n = 357	
Cuban American	27.59% (14.44, 46.24)	***	26.72% (13.08, 46.78)	*
Mexican American	63.68% (56.81, 70.04)		64.40% (56.35, 72.54)	
Puerto Rican	43.59% (33.06, 54.73)		41.30% (28.86, 57.42)	
Other Hispanic American	58.00% (44.06, 70.77)		57.63% (43.03, 71.01)	
% Days enrolled through week 16	n = 358		n = 357	
Cuban American	68.31 (65.02, 81.60)	*	69.19 (55.22, 83.15)	
Mexican American	86.66 (81.61, 91.71)		85.95 (79.54, 92.36)	
Puerto Rican	76.91 (68.70, 84.91)		77.40 (66.28, 88.51)	
Other Hispanic American	83.28 (73.16, 93.40)		82.50 (72.36, 92.63)	
Primary Substance Use				
% Days abstinent (=weeks 1-4)	n = 327		n = 326	
Cuban American	94.90 (89.12, 100.68)		96.73 (90.68, 102.77)	
Mexican American	93.80 (91.56, 96.04)		92.02 (89.18, 94.87)	
Puerto Rican	91.02 (87.25, 94.79)		89.29 (80.32, 100.27)	
Other Hispanic American	94.68 (90.22, 99.14)		93.65 (89.15, 98.14)	
% Days abstinent (=weeks 5-16)	n = 269		n = 268	
Cuban American	86.90 (79.55, 94.31)		87.71 (79.93, 95.48)	
Mexican American	94.77 (92.24, 97.30)		95.24 (91.93, 98.56)	
Puerto Rican	92.00 (87.28, 96.71)		91.76 (85.70, 97.81)	
Other Hispanic American	94.64 (89.54, 99.75)		93.93 (88.77, 99.09)	

Notes: Estimates are mean or percentage (95% confidence interval); * $p < .05$; ** $p < .01$; *** $p < .001$.
[a]covariates were age, gender, education, marital status, employment, treatment group, and primary drug (i.e., alcohol versus other).

Results and Conclusions

Mexicans Americans and Puerto Ricans had more socio-demographic risk factors for substance abuse, e.g., gender, age, and education for Mexicans Americans; employment and marital status for Puerto Ricans.

Puerto Ricans and Cuban Americans were more likely to be born and to have lived more years in the U.S. Puerto Ricans were more acculturated to American culture.

Hispanic national groups reported different primary substances used. Mexican Americans compared to other groups entered treatment with lower addiction severity across several domains.

All groups had similar substance use outcomes, but Puerto Ricans and particularly Cuban Americans had lower treatment retention.

Findings highlight the heterogeneity of Hispanics who seek treatment for substance abuse problems.

Study limitations include subgroup sample size differences. Hispanic national groups may be confounded by sites' geographic locations.

Racial/Ethnic Match and Treatment Outcomes for Women with PTSD and Substance Use Disorders Receiving Community-Based Treatment

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Table 1. Demographic Characteristics as a Function of Individual Racial/Ethnic Matching

Variables	Total (N=281)	Black clients Matched (N=45)	White clients Matched (N=80)	Black clients Mismatched (N=75)	White clients Mismatched (N=81)	χ^2 or F-test
	M (SD) or %					
Age (yrs)	39.06(9.27)	41.33[a] (9.08)	35.60[b] (9.72)	39.64[a] (7.47)	40.63[a] (9.65)	F(3,277)=5.60***
Marital Status						χ^2(6)=21.27**
Married	18.86%	15.56%[ab]	28.75%[a]	10.67%[b]	18.52%[ab]	
Single	37.01%	51.11%[a]	25.00%[b]	50.67%[a]	28.40%[b]	
Divorce	44.13%	33.33%[a]	46.25%[ab]	38.67%[ab]	53.09%[b]	
Education						χ^2(6)= 42.17***
< High school	26.69%	40.00%[a]	13.75%[b]	48.00%[a]	12.34%[b]	
High school	32.74%	37.78%[ab]	40.00%[a]	22.67%[b]	32.10%[ab]	
> High School	40.57%	22.22%[a]	46.25%[b]	29.33%[a]	55.56%[b]	
Maximum days used across 10 drugs	7.88(10.70)	12.60[a] (11.78)	2.45[b] (5.69)	7.87[a] (11.06)	10.64[a] (11.39)	F(3,277)= 13.07***
CAPS Severity Score	62.74(20.13)	60.56(19.82)	61.88 (22.85)	63.36 (17.04)	64.22 (20.29)	F(3,277)=0.39

Table 2. Effect of Racial/Ethnic Match on CAPS Scores at Follow-Up

Covariates	Beta	s.e.	t Value	Pr > |t|
Education				
Less than high school	2.76	3.62	0.76	0.45
High school	2.34	3.08	0.76	0.45
More than high school				
Age	0.18	0.17	1.03	0.30
Marital status				
Married	2.08	3.99	0.52	0.60
Divorced	-2.24	3.19	-0.70	0.48
Single				
Treatment	-4.18	2.74	-1.53	0.13
Session attendance	-0.37	0.39	-0.93	0.35
Follow-up timepoint (post treatment)				
1 week (reference)				
3 months	-6.18	1.61	-3.84	0.0001
6 months	-8.88	1.63	-5.46	<.0001
12 months	-13.31	1.61	-8.27	<.0001
Individual matching	-0.98	4.34	-0.23	0.82
White Females	-25.99	14.58	-1.78	0.08
Group matching	-22.85	26.20	-0.87	0.38
Whites*Group matching	57.71	29.62	1.95	0.052
Baseline CAPS scores	0.38	0.18	2.06	0.04
Whites*Baseline CAPS	0.45	0.23	1.97	0.049
Group matching*baseline CAPS	0.39	0.40	0.98	0.33
Whites*Group matching*baseline CAPS	-0.94	0.46	-2.07	0.04

- **Overview**: This study examined the relationship between racial/ethnic match and treatment outcomes for 281 dually-diagnosed women who participated in a multi-site clinical trial of group treatments for PTSD and substance use disorders (CTN-0015).
- There was a significant 3-way interaction effect of client race/ethnicity, baseline CAPS score, and group racial/ethnic match on CAPS scores at follow-up (t = - 2.07, p = .04). See Table 2. See Figure 1.
- White clients with high baseline CAPS scores who attended groups with high group racial/ethnic match, had lower predicted CAPS scores at follow-up (M = 31) than White clients with high baseline CAPS scores who attended groups with no group racial/ethnic matching (M = 40).
- In contrast, for Black clients with high baseline CAPS scores, a different interaction pattern was observed. Black clients with high baseline CAPS scores, who attended groups with high group racial/ethnic match, had higher predicted CAPS scores at follow-up (M = 36) than Black clients with high baseline CAPS scores who attended groups with no group racial/ethnic match (M = 30).

Figure 1. Predicted CAPS scores at follow-up by race/ethnicity, baseline CAPS scores, and group matching

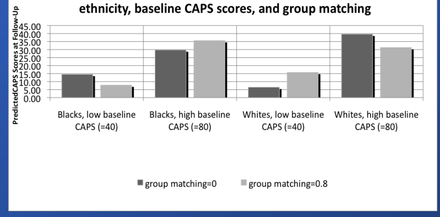

Table 3. Substance Use at Follow-Up

Covariates	Odds Ratio	95%CI	t Value	Pr > |t|
Education				
Less than high school	0.71	0.31-1.64	-0.80	0.42
High school	0.71	0.35-1.43	-0.95	0.34
More than high school (ref)				
Age	0.99	0.95-0.95	-0.68	0.49
Marital status				
Married	0.89	0.36-2.23	-0.25	0.80
Divorced	0.68	0.42-1.83	-0.54	0.75
Never married (ref)				
White	0.78	0.37-1.63	-0.66	0.51
Treatment	0.75	0.41-1.39	-0.91	0.36
Session attendance	0.96	0.79-0.95	-3.14	0.002
Follow-up timepoint (post treatment)				
1 week (reference)				
3 months follow-up	1.47	0.85-2.54	1.37	0.17
6 months follow-up	2.27	1.32-3.91	2.96	0.003
12 months follow-up	3.17	1.86-5.39	4.24	<.0001
Group matching	0.71	0.13-3.98	-0.39	0.69
Individual matching	2.73	0.70-10.64	1.45	0.15
Drug use at baseline (Zero use)				
1-12 days	7.70	2.80-21.18	3.95	<.0001
13-30 days	12.06	4.46-32.61	4.90	<.0001
Interaction between individual matching and drug use at baseline				
Matching, zero baseline (ref)				
Matching, 1-12 days baseline	0.12	0.03-0.56	2.71	0.007
Matching, 13-30 days baseline	0.24	0.04-1.04	1.91	0.056

- There were no significant associations between client-therapist racial/ethnic match or mismatch and number of sessions attended [F (3, 277) = 1.16, p >.05].
- There was a significant interaction between baseline substance use and individual racial/ethnic match (F (1, 401) = 3.86, p = 0.02). See Table 3.
- Women who were light substance users (1 to 12 days of use at baseline) and who were racial/ethnically matched with their group therapist were less likely to use substances heavily at follow-up compared to women who were light substance users who were mismatched with their group therapist, but this finding only approached significance (Odds ratio = 0.33, 95%CI = 0.09-1.25, p = .10). All other subgroup differences were not significant (p > .05)