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Typologies of Alcohol Dependent Cocaine-using Women Enrolled in a Community-based HIV Intervention

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PURPOSE

Alcohol dependence with comorbid cocaine use is a significant public health problem for women in the United States. However, not much is known about alcohol dependent women as a group or how alcohol dependent women may characteristically differ from each other. Research suggests that alcohol dependent women are heterogeneous: they may differ with regard to how they become dependent, how quickly they become dependent, (e.g., Ridenour et al., 2004), and when in their lifetimes they begin drinking regularly (e.g., Babor et al., 1992). Research on types or classifications of alcoholics have mainly focused on men, or have examined men and women together in inpatient alcohol treatment centers.

Alcohol dependence and cocaine use are risk factors for sexually transmitted infections including HIV (Jessup, 1997).
This is the first known study to investigate types of alcohol dependent women in a non-treatment, community-based setting. It is also the first study to examine how different types of alcohol dependent women respond to a community-based HIV intervention targeted at decreasing risky behaviors and increasing education about substance use and risky sexual practices.

AIMS

Aim 1: To evaluate differences in psychosocial factors among four typologies of alcohol dependent women.
Aims 2/3: To examine typology-differential changes in alcohol related behavioral outcome measures at post-intervention and one year later.

SAMPLE

--subsample of parent study of women from two similar community-based HIV intervention programs in a Midwestern metropolitan area
--eligible for inclusion in parent study if women had a history of drinking and/or using drugs, were currently not in treatment for alcohol or drug problems, and tested negative for HIV
--current study subsample included 324 women who met criteria for lifetime alcohol dependence and had ever used cocaine
--majority African American (79%), never married (61%), GED or less than high school education (70%)

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METHODS

Parent Studies: Women Teaching Women (WTW) and Sister to Sister (STS) HIV prevention programs for drug and alcohol using women at risk for HIV.
Standard intervention: HIV screening and counseling
Enhanced intervention: standard + 4 peer-delivered sessions on substance abuse; health and nutrition; STI and HIV; and stress management.
Risky behaviors assessed at baseline; end of intervention (4 months) and 12 months post-intervention.

Current Study: Typologies of alcohol dependent women were created based on age of onset of regular drinking (early/late) and time to dependence from age of regular drinking (short/long). Psychosocial factors were assessed for each typology. Behavior change was measured between typologies.

MEASURES

Substance Abuse Module (SAM): alcohol dependence typology classification
DIS-IV: to assess conduct disorder diagnosis and depression diagnosis/suicidal ideation
Risk Behavior Assessment: frequency of drinking and cocaine use; engagement in risky sexual behaviors
Violence Exposure Questionnaire: history of childhood abuse
Family History Screener

DATA ANALYSIS

Aim 1: Multinomial logistic regression; odds ratios calculated to determine likelihood of each typology having psychosocial characteristics.
Aims 2 and 3: General linear modeling (GENMOD) and resulting generalized estimating equations (GEE) with multinomial distribution (risk index for risky sexual behaviors); negative binomial distribution for alcohol and cocaine use behaviors: time*treatment group; treatment group*typology; time*typology; time*treatment group*typology interactions were analyzed.

RESULTS

TYPOLOGIES

TIME TO DEPENDENCE

ONSET OF REGULAR DRINKING	SHORT (under 6 years)	LONG (6 years or more)	
EARLY (under age 18)	Persisters **(A)** (n=68)	Resisters **(B)** (n=63)	*EARLY REGULAR DRINKING (A+B)*
LATE (18 years and older)	Erupters **(C)** (n=110)	Latents **(D)** (n=83)	*LATE REGULAR DRINKING (C+D)*
	SHORT TIME TO DEPENDENCE (A+C)	*LONG TIME TO DEPENDENCE (B+D)*	

AIM 1

	X^2	p	Beta (+/- SE)	Odds Ratio	95% CI
Resisters					
h/o Suicidal ideation	11.59	0.00*	1.41 (0.413)	4.08	1.8-9.2
h/o Conduct disorder	8.00	0.00*	1.25(0.441)	3.48	1.5-8.3
cocaine abuse/dependence	5.81	0.02*	- 1.61(0.669)	0.20	0.1-0.7
Race (African American)	0.01	0.9	0.04(0.620)	1.05	0.3-3.5
Age (older)	5.28	0.02**	-0.07(0.029)	0.94	0.8-0.9
Erupters					
h/o Suicidal ideation	10.05	0.00**	1.18(0.374)	3.27	1.6-6.8
h/o Conduct disorder	0.05	0.8	-0.10(0.447)	0.91	0.4-2.2
cocaine abuse/dependence	6.18	0.01**	-1.51(0.603)	0.22	0.1-0.7
Race(African American)	0.99	0.32	-0.52(0.524)	0.59	0.2-1.7
Age (older)	11.78	0.00**	-0.09(0.026)	0.92	0.8-0.9
Persisters					
h/o Suicidal ideation	2.83	0.09	0.72(0.431)	2.06	0.9-4.8
h/o Conduct disorder	3.58	0.06	0.86(0.454)	2.36	1.0-5.6
cocaine abuse/dependence	0.34	0.56	-0.45(0.77)	0.64	0.1-2.9
Race (African American)	7.11	0.01**	-1.41(0.531)	0.24	0.1-0.7
Age(older)	12.23	0.00**	-0.10(0.029)	0.91	0.8-0.9

Likelihood ratio: X^2=87.66, df=15, p<0.001.
* significant p<0.05
**significant p<0.01
h/o=history of

AIMS 2 and 3

Aim 2: Baseline to Wave 2

Variable		Typology: Persisters (n=63)	Erupters (n=95)	Resisters (n=54)	Latents (n=77)
	Risk	-	-	-	-
	# drinks	-	-	-	-
	#days public alcohol use	n/s	n/s	+	-
	# days cocaine use	n/s	n/s	n/s	n/s

Aim 3: Wave 2 to Wave 3

Variable		Typology: Persisters (n=63)	Erupters (n=95)	Resisters (n=54)	Latents (n=77)
	Risk	n/s	n/s	n/s	-
	# drinks	n/s	n/s	n/s	n/s
	#days public alcohol use	n/s	+	n/s	-
	# days cocaine use	n/s	n/s	n/s	n/s

CONCLUSIONS AND IMPLICATIONS

- NOT ALL ALCOHOL DEPENDENT WOMEN ARE ALIKE: Women who begin drinking regularly later in life show different factors associated with their alcohol dependence and react differently to an HIV intervention (Latents had a significantly greater behavior change in alcohol use and risk than did other typologies)
- Reliability and validity of typologies need to be assessed particularly with a more diverse sample of women
- Stressful life events, social supports and coping skills should be included in predictors of typology membership
- Examine typology response to drinking cessation interventions
- Heterogeneity of alcohol dependence means women have experienced differential events which need to be a focus of treatment