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Latino/as in Substance Abuse Treatment: Substance Use Patterns, Family History of Addiction and Depression

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Abstract

This study describes a sample of Latino/as in substance abuse treatment. We were interested in substance use patterns, gender differences, family history of addiction and depression. Questionnaires completed by Latino/as ($N=209$) were identified from 12,000 sets completed by participants in treatment from 1993-2003. Significant gender differences emerged with Latinas reporting higher rates of stimulant use and depression. A family history of substance use disorders in primary and/or secondary family members was reported by 91% of participants. These data suggest that understanding gender differences related to substance use and depression among Latino/as in treatment warrants attention.

Keywords

Substance use; Latino(a)s; Alcohol; Drugs; Depression

1. Introduction

The 2000 U.S. Census found that 12.5 percent ($N=35\,305\,818$) of respondents indicated Latino/a descendency. Given the number of undocumented Latino/as¹ living in the U.S., national and state population measures are likely to underestimate the size of this group (Perkins, 2002). Although the exact proportion of the U.S. population represented by Latino/as is unknown, it is clear that this is the largest and fastest growing demographic group in the United States (Bowie, Juon, Cho, & Rodriguez, 2007).

Latino/as continue to be underrepresented in the substance abuse literature (Caetano, Clark, & Tam, 1998). The scant studies available document the unmet needs for substance abuse and mental health treatment for Latino/as and other minorities (Niv & Hser, 2006; Szapocznik, Lopez, Prado, Schwartz & Pantin, 2006; Wells, Klap, Koike, & Sherbourne,

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¹For this article the term Latino/as is used when referring to both sexes. Men are referred to as *Latinos* and the term *Latinas* is used when referring to women.

2001). Other work documents that Latino/as are more adversely affected by substance abuse compared to their Caucasian peers. For example, in community-based surveys, it was found that Latinos engage in prolonged periods of alcohol consumption over their life span, have high rates and frequencies of consumption, and are more likely to experience greater physical and social consequences compared to their male Caucasian peers (Caetano & Kaskutas, 1995; Caetano, 2003).

Substance abuse specific to Latinas is not well studied. While it appears to be less intense than among their male counterparts, research on acculturation issues suggests that Latinas are at increased risk for substance abuse (Vega, Alderete, Kolody, & Aguilar-Gaxiola, 1998). For example, while several studies have reported reduced drinking and illicit drug use among Latinas compared to Latinos (Nielsen, 2000; Vega et al., 1998) some have found Latinas reporting a fourfold increase in the number of drinking-related social consequences they experienced over an eight-year period (Caetano, 1997). In addition, abusive drinking patterns have been noted within some Latinas. Caetano and Kaskutas (1995) found that among Latinas 26 to 33 years of age the mean number of drinks per month increased threefold over an eight-year study period.

To date, most of what is known about substance abuse patterns among Latino/as has been derived from non-clinical, community samples. Far less is known about the patterns of substance use within treatment or clinical populations. Caetano & Schafer (1996) found that one-third of Latinos in treatment (primarily a Mexican American sample) reported both alcohol and drug dependence and a preference for cocaine, followed by marijuana, as their drug of choice. Arciniega, Arroyo and Miller (1996) found that Latinas seeking treatment had lower consumption patterns, fewer adverse consequences, and fewer dependence problems compared to Latinos. To our knowledge, no specific studies have been conducted on family history of substance abuse and its role within Latino communities.

The purpose of this study was to examine patterns of substance use for Latino men and women in treatment. Because depression frequently co-occurs in substance abuse treatment settings, we also examined its prevalence. Based on empirical findings described in the available literature, we hypothesized that Latinos would endorse more severe patterns of substance abuse relative to Latinas, but that Latinas would report higher rates of depression compared to their male counterparts. We also posed an empirical question: How does having a family history of substance abuse differentially impact Latinos and Latinas seeking treatment?

2. Method

2.1 Participants and Design

The current study used archival data collected as part of a larger project on cognitive functioning among treatment seeking substance abusers from 1993-2003. Participation in the larger study was voluntary and the participants were not compensated. Two-hundred-nine (209) sets of questionnaires completed by adult Latino/a participants were identified from among approximately 12,000 sets completed by individuals in substance abuse outpatient and inpatient treatment programs. We were interested in the sections of the questionnaire that assessed demographic information, substance use patterns, family history of substance use disorders, and level of depression as determined by the Beck Depression Inventory (BDI; Beck, Steer, & Garbin, 1988; Beck Ward, Mendelson, Mock, & Erbaugh, 1961).

Participants sought treatment in one of three types of facilities: Sixty-four percent ($n = 134$) received services in a state-funded substance abuse program, 19% ($n = 40$) received services

in a private hospital-based program, and 17% ($n = 35$) received services within the Oklahoma City Veterans' Affairs Medical Center.

Seventy-seven percent ($n = 160$) of the participants were male and 23% percent ($n = 49$) were female. Of participants that endorsed a Latino subgroup affiliation, 52% ($n = 50$) reported being Mexican-American. Nearly 38% endorsed being biracial ($n = 36$) with the majority endorsing Hispanic/Latino and Caucasian, followed by Hispanic/Latino and Native American (67% and 19%, respectively).

Among those responding to marital status ($n = 194$), the sample was relatively evenly distributed between three groups: never married/single, married/cohabitating, and separated/divorced with 30%, 30%, and 38%, respectively. Among those responding to employment status ($n = 143$), 50% reported being currently employed either part-time or full-time.

The mean age for the sample was 35.9 years ($SD = 11.22$) with a range of 18 to 65. There was not a statistically significant difference between the mean age for males at 36.3 years ($SD = 11.88$) and females at 34.4 years [$SD = 8.65$; $F(1, 207) = 1.11$, $p = .29$]. Males reported a mean education level of 11.55 ($SD = 2.5$) years, while females reported a mean education of 11.47 ($SD = 2.42$) years. This difference was not statistically significant.

2.2 Measures

A questionnaire about substance use patterns was used to assess age of first use for alcohol and various categories of substances (e.g., marijuana, cocaine, amphetamines, narcotics, benzodiazepines, PCP, barbiturates, inhalants, hallucinogens, pain medications, and muscle relaxers). Regarding alcohol consumption, a Quantity-Frequency Index (QFI) was calculated for each person (Cahalan, 1969). The QFI has a long history of use in the alcohol literature. It is a well established estimate of the average number of ounces of absolute ethanol consumed per day. Participants were asked to report the frequency with which they consumed alcoholic beverages, the types of alcoholic beverage consumed, and the amounts typically consumed for each type.

A family history questionnaire was used to assess the participant's perceptions of substance use disorders (i.e., self-identified) among primary and secondary relatives (Mann, Sobell, Sobell, & Pavan, 1985). Participants were asked to code all relatives as "never" user, "social" user, having had an "alcohol-only" problem, having had a "drug-only" problem, or as having had a problem with both alcohol and other substances.

The Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the Beck Depression Inventory II (BDI-II; Beck, Steer, & Garbin, 1988) were used to assess level of depression. Both instruments have been extensively used in the literature and are considered to be psychometrically sound. Because the data for this study spanned 10 yrs, some participants completed the BDI (1993-1997) while later participants completed the BDI-II (1998-2003). Classification criteria for both the earlier and later versions were used to categorize the participants' level of depression (Beck, Steer, & Ball, 1996). Depression scores were categorized by range of severity (depending on the version administered) and were analyzed categorically as a dependent variable according to the following: Minimal (BDI <10; BDI-II 0-13), Mild to Moderate (BDI 10-18; BDI-II 14-19), Moderate to Severe (BDI 19-29; BDI-II 20-28), and Severe (BDI 30-63; BDI-II 29-63) depressive symptoms.

2.3 Data analysis

Data were analyzed using frequency distributions, Chi-square, and analysis of variance (ANOVA) techniques. Given the moderate number of comparisons, and to minimize the

probability of reporting significant results due to chance alone, only results achieving a p value of $.01$ are reported.

3. Results

3.1 Substance Use

About half of the males and females in this study had no prior substance abuse treatment. Sixteen percent reported having attended one treatment program prior to the current one. The average number of prior substance abuse treatment attempts for males ($n = 127$) was 1.0 ($SD = 1.79$) versus 0.8 ($SD = 1.30$) for females ($n = 40$). This difference was not statistically significantly [$F(1, 166) = .79, p = .38$].

Examining age of first use for various substances revealed that the overall sample reported onset of inhalants, alcohol and marijuana as between the ages of 12 and 16. Onset of use for other drug categories (e.g., cocaine, narcotics, and amphetamines) occurred after age 20. Age of onset for most categories of drugs did not reveal statistically significant differences for gender at the $p .01$ level of significance. However, a one-way ANOVA revealed a statistically significant difference was found for onset of benzodiazepine use; men reported an earlier onset compared to women [men $M=20.6$ years ($SD=7.0$); women $M=27$ years ($SD=9.7$); $F(1, 47) = 6.75, p = .01$; see Table 1].

Frequency distributions indicated that men were approximately two times more likely than women to report alcohol abuse (36% versus 19%), while women were two times more likely than men to report drug abuse (25% versus 12%). Regarding self-report of substance use disorders to both alcohol and drugs, men and women endorsed polysubstance abuse 48% and 54%, respectively. None of these differences reached the more conservative $p .01$ level of significance.

Participants were asked to indicate whether or not they considered themselves to have a problem with each of eleven substances listed on a questionnaire: marijuana, cocaine, amphetamines, narcotics, benzodiazepines, PCP, barbiturates, inhalants, hallucinogens, pain medications, and muscle relaxers. Examining for gender differences in rates of individual drug endorsement, statistical significances were not detected at $p .01$. However, when amphetamines and cocaine were combined to form a stimulant category, Latinas were more likely to report problem use compared to their Latino counterparts (84% vs. 62%, respectively) [see Table 2; $\chi^2(1, N = 163) = 6.73, p = .01$].

Examination of the data for non-alcohol drug preferences revealed that participants overall reported marijuana, cocaine, and amphetamine to be the preferred substances of choice (36%, 33% and 13%, respectively). Frequency distributions revealed that 56% of the sample reported use of their drug of choice on a daily basis, 10% reported 5-6 days per week, and 12% reported using 3-4 days per week. When examined by gender, males reported marijuana, cocaine, and amphetamine as their preferred drugs of choice (41%, 34%, and 9%, respectively), while female participants reported cocaine, amphetamine, and marijuana (24%, 31%, and 24%, respectively). The differences were not statistically significant [$\chi^2(4, N = 105) = 5.47, p = .24$].

Regarding alcohol consumption, the mean QFI for all participants was 7.83 ($SD = 9.51$). Males had a mean QFI of 8.21 ($SD = 9.62$) while females had a slightly lower mean of 6.32 ($SD = 9.04$). The difference between males and females was not statistically significant.

3.2 Depression

Regarding depressive symptoms, twenty-seven percent (27%) of the participants' scores were classified as Minimal, 22% reported Mild to Moderate-level symptoms, 26% reported Moderate to Severe-level symptoms, and 24% reported Severe-level BDI/BDI-II depressive symptoms. Overall, one-half of participants reported having symptoms in the Moderate or Severe ranges. As predicted, significant sex differences emerged. Seventy-three percent (73%) of women reported Moderate to Severe symptoms compared to 44% of men [$\chi^2(3, N = 205) = 13.93, p < .01$]. Significant differences were also noted for rates of past or current antidepressant use; 44% of women reported using antidepressants, compared to 20% of men [$\chi^2(1, N = 143) = 7.74, p < .01$].

3.3 Family History

Frequency distributions revealed that for those completing the family history questionnaire ($n = 196$), 16 % reported substance use disorders within one or more primary relatives (mother, father or siblings), 12 % reported substance use disorders within one or more secondary relatives (grandparents, uncles and aunts), and 63% reported substance use disorders in both primary and secondary family members. Only nine percent of participants reported having no family history of substance use disorders. The distribution of family history subtype (none, primary relatives, secondary relatives or both primary and secondary relatives) was similar for men and women [$\chi^2(3, N = 196) = 4.77, p = .19$].

4. Discussion

The purpose of this paper was to describe the substance use patterns, depression levels, and family history of substance use disorders among treatment seeking Latino/as in the state of Oklahoma. Not surprisingly, this sample of individuals reported drug-use onset for inhalants, alcohol and marijuana during their early teens. Interestingly, Latinos and Latinas in our sample began to use these substances at approximately the same ages. Given that polysubstance use in adolescents is a significant predictor for adult polysubstance use among many ethnic groups including Latino/as (Galaif & Newcomb, 1999), these data clearly speak to the necessity of early drug education and prevention programs geared toward the specific needs of Latino children.

Regarding sex differences, Latinos have been consistently found to have higher rates of alcohol consumption compared to Latinas in both community and treatment samples with some noting that traditional gender roles may help curtail alcohol abuse among Latinas (Arciniega, Arroyo, & Miller, 1996; Nielson, 2000). Interestingly we did not find sex differences for alcohol use. Our data suggest that this sample of Latinas consumed alcohol at rates similar to those of their Latino counterparts. This suggests that rates of alcohol abuse may be increasing among Latinas and is consistent with studies suggesting that acculturation issues may increase risk among women. The Latinas in our study reported higher rates of stimulant drug use compared to their male counterparts (84% vs. 62%). Although women did not have significantly more drug use compared to men, this finding still challenges previous reports that indicate Latinos of all ages use alcohol and/or drugs more frequently than Latinas (Arcineiga, Arroyo, & Miller, 1996; De La Rosa, Khalsa, & Rouse, 1990; Vega, et al., 1998). The current findings may have significant new diagnostic and treatment implications for Latinas presenting for treatment.

Flack et al. (1995) noted that Latino/a families, relative to non-Latino/a families, are larger, more likely to have a female as head of household, have lower rates of educational attainment, and higher rates of unemployment. The current study contributes important information about substance abuse within the extended Latino/a family. Results from the

family history analysis suggest that Latino/as in this study have extremely high rates of substance use disorders within their families (91%). These data clearly speak to the need for treatment interventions to focus on the extended family system. However, the common barriers to treatment (e.g., finding services, paying for services) will need to be addressed (Schmidt, Ye, Greenfield, & Bond, 2007).

Finally, some attention has been given to rates of co-occurring disorders among Latino subgroups (Conway, Swendsen, Dierker, Canini & Merikangas, 2007). Vega, Sribney, & Achara-Abrahams (2003) found a dominant pattern of lifetime co-occurring disorders among those with an alcohol use disorder diagnosis. We specifically examined the prevalence of self-reported depressive symptoms within our sample of Latinos in substance abuse treatment. Female participants were significantly more likely to report depressive symptoms in the moderate/severe range compared to males. Hesselbrock, Hesselbrock, Segal, Schuckit & Bucholz (2003) also found a high prevalence of depression among Latino(a)s in their study. Approximately 63% of Latinas reported major depressive disorder within the context of alcohol and drug use compared to 35% of Latinos. Our data show a similar ratio of 73% to 44%.

This study has several limitations. First, because information on participants' ethnic subgroup for approximately 50% of the sample was not available we were unable to make these comparisons. Substance use and abuse patterns vary by ethnic subgroups of Latino/as, however studies that include Latino/as tend to portray them as a homogenous group. Unfortunately, the archival nature of the current data prevented us from distinguishing among the Latino subgroups.

Second, information on level of acculturation was not available. It is commonly held that degree of acculturation may influence drinking patterns among Latino men and women, with the effect being most pronounced for Latinas (Caetano, 1987). Flack et al. (1995) also noted that higher levels of acculturation may be associated with increased substance abuse and depressive symptomatology.

Third, this study examined data gathered between 1993 and 2003. Due to limitations of the administered questionnaire, this study was unable to address changes in social and cultural factors (e.g., drinking norms, attitudes toward illicit drugs) that may have occurred during this time period. It is possible that changing norms might have influenced reported alcohol and drug use patterns and related consequences.

Finally because these were archival data and collected in a highly confidential manner, it was not possible to retrospectively determine whether any participants were represented more than once due to having multiple treatment admissions. However, this confound is minimized given that a large percentage of the sample (66%) reported having only one or no previous treatment experiences.

In summary, this study attempted to broaden and strengthen the existing literature on substance use patterns, co-occurring depression, and family history of substance abuse among Latino men and women in substance abuse treatment. Sex differences in substance use patterns and depressive symptoms suggest a need for separate examination of substance abuse issues, including co-occurring disorders, among Latinas.

5. Planning Implications

The current study identified some areas of concern among the Latinas in the study: higher rates of stimulant use and depression as compared to their male counterparts, and statistically comparable rates of use of other substances (e.g., alcohol). Collectively, these

may have important treatment implications and acculturation may play a significant role. How acculturation is assessed and the depth to which it is addressed within the context of substance abuse treatment will need to be carefully balanced against programmatic costs, length of stay, staffing requirements, and other considerations.

Substance abuse treatment has changed considerably over the past 15-20 years. Budgetary cut-backs and changes in third party payment options have drastically reduced the overall length of stay in many programs. Realistically, shorter-stay inpatient and out-patient programs have fewer options for concentrated treatment approaches and are sometimes forced to implement bare-bones treatment. Findings from the current study serve as a reminder that what might be considered programmatic accoutrements from a financial perspective (e.g., cross-cultural training programs for staff, culturally sensitive interventions, and measures designed to assess protective and risk factors of acculturation), may be essential to patient success.

The current data serve to emphasize the need not only to identify and introduce traditional values and practices to treatment teams in an effort to better understand the background and diversity of patient culture, but also to determine how current substance use, particularly among women of ethnic subgroups, may have changed over time and likely differs substantially from behaviors and practices associated with traditional gender roles. Lack of insight about changing substance use practices, lack of knowledge of traditional values, and lack of understanding about how such values may no longer be protective (at least for Latinas), can lead to treatment practices that fail to connect people with therapeutic interventions.

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Table 1

Age of First Substance Use for Overall Sample and by Sex

Substance	Total Sample			Men			Women			F
	N	M	SD	N	M	SD	N	M	SD	
Alcohol	179	12.7	4.3	140	12.7	4.3	39	12.8	4.3	.03
Marijuana	136	15.9	5.2	102	15.3	4.4	34	17.6	6.8	5.10
Cocaine	117	21.8	7.9	88	21.7	8.1	29	22.1	7.3	.05
Amphetamines	72	20.7	7.3	52	20.2	6.2	20	22.1	9.7	.89
Narcotics	33	20.1	6.3	28	21.1	6.2	5	14.2	2.6	5.94
Benzodiazepines ^a	49	22.6	8.4	34	20.6	7.0	15	27.0	9.7	6.75
PCP	17	21.1	6.6	14	21.0	5.5	3	21.3	12.3	.00
Barbiturates	11	17.0	4.4	8	17.8	4.6	3	15.0	3.6	.85
Inhalants	16	13.6	3.9	14	14.0	4.0	2	11.0	0.0	1.06
Hallucinogens	51	18.2	4.5	44	18.1	4.4	7	19.1	5.6	.34
Pain Medication	44	23.7	9.8	31	23.4	9.6	13	24.5	10.4	.11
Muscle Relaxers	23	26.7	11.2	13	25.7	11.6	10	28.0	11.3	.23

^a sex effect, *p* .01.

Table 2

Perceived Problem Use by Sex

Substance	Total Sample		Men		Women		χ^2
	N	%	N	%	N	%	
Alcohol	202	155	90	47	87	.22	
Marijuana	166	128	47	38	58	1.42	
Stimulants ^a	163	125	62	38	84	6.73	
Cocaine	157	121	54	36	69	2.80	
Amphetamines	148	114	32	34	50	3.87	
Narcotics	144	111	17	33	12	.47	
Benzodiazepines	147	111	15	36	22	.92	
PCP	140	108	.05	32	.03	.14	
Barbiturates	140	108	.05	32	.06	.14	
Inhalants	139	107	.07	32	.03	.77	
Hallucinogens	142	110	16	32	.03	3.75	
Pain Medication	147	114	13	33	30	5.33	
Muscle Relaxers	141	109	.07	32	19	3.60	

^a sex effect, p .01.