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Characteristics of Mexican and Mexican American Adolescents in Treatment for “Cheese” Heroin Use

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Abstract

Clinical and cultural characteristics of Hispanic adolescent heroin users are not well described. The current exploratory study was conducted to describe a sample of in-treatment Hispanic adolescents with opioid dependence, specifically, cheese heroin. Mexican and Mexican American adolescents with heroin dependence ($N = 72$) in three treatment programs were interviewed and completed self-report measures. Participants reported, on average, first using cheese heroin at 13.5 years old and daily use at age 14.2. The majority (74%) reported a previous overdose. Adolescents being raised by caregivers other than both biological parents, who used drugs with relatives, and whose immediate family members have documentation to be in the U.S. fared worse on several indicators of drug use severity and other risky behaviors. The self-reported brief time period from first use to daily use strongly suggests the need for early prevention efforts. Additional research is needed to add to these preliminary results and inform prevention efforts.

Keywords

Hispanic; adolescents; heroin; family characteristics

1. Introduction

Heroin abuse in the adolescent population is a persistent problem affecting diverse communities. Recent Monitoring the Future surveys indicate annual use rates have doubled

since the early 1990s (Johnston, O'Malley, Bachman, & Schulenberg, 2012). From 2009 to 2010, the use of heroin via non-intravenous route more than doubled from 0.3% to 0.7% (Johnston et al., 2012). Beginning in 2004, the Dallas County region of north Texas experienced a sharp rise of intranasal heroin use almost exclusively among Mexican and Mexican American adolescents and young adults (Maxwell, Coleman, Feng, Goto, & Tirado, 2012). Dallas received national media attention due to heroin-related deaths, a sharp rise in emergency room admissions in those under 20 years old, and the high concentration of heroin use in specific low income Hispanic communities (Burnett, 2008). Maxwell and colleagues (2012) describes “cheese” heroin used in this community and describes this outbreak in more detail. Cheese heroin has a granular texture somewhat like grated cheese in appearance and is composed of black tar heroin that is typically mixed with crushed over the counter sleep aids.

The increased heroin use rates in Dallas were also evident in treatment admissions. From 2002 to 2009, yearly admissions in Dallas County for people less than 20 years of age with a primary heroin problem increased from 19 to 194, a 1020% increase. Of those admitted, 81% were Hispanic (Maxwell et al., 2012). Nationally, Hispanic adolescents tend to use heroin more than their Caucasian and African American counterparts (Johnston, O'Malley, Bachman, & Schulenberg, 2011); however, detailed information about Hispanic adolescents' use of heroin and related behaviors is lacking (Subramaniam, Fishman, & Woody, 2009).

Given the rise in heroin use by Hispanic adolescents and the lack of information about the population, the primary aim of the current exploratory study was to characterize the emerging group of Hispanic adolescents in treatment for opioid dependence. The secondary aim was to explore how sociodemographic and cultural factors, such as gender, family characteristics, and acculturation, may be related to heroin use. Thus, a survey was conducted with a sample of Mexican and Mexican American clients receiving treatment for cheese heroin in the Dallas area.

2. Methods

2.1 Recruitment

A cross sectional ethnographic survey was administered to adolescents ($N = 72$) who were currently participating in a drug treatment program. Three programs were approached and granted access to their patients, of which two were community-based residential drug treatment programs (one treated females only) and one was a juvenile detention based day treatment program. The majority of Hispanic adolescents at the sites were of Mexican descent and spoke English. Thus, only adolescents of Mexican (born in Mexico) or Mexican American (born in the United States with at least one parent born in Mexico) descent who could read, write, and speak English were eligible. Participants had to meet additional study inclusion criteria of 13 to 18 years old; current primary cheese heroin dependence per clinic intake assessment; little to no opioid withdrawal as determined by a score of less than 12 on the Clinical Opiate Withdrawal Scale (Wesson & Ling, 2003); and psychiatrically stable (i.e., no active psychosis or suicidal or homicidal ideation).

Recruitment occurred during two 16-week periods to sample adolescents during the school year (August – December 2008) and summer (May – September 2009). Program staff identified eligible candidates; assessed their interest in the survey; and facilitated introduction to the research staff. Data on survey refusals were not collected by the program staff. Due to the minimal risk of the survey, a waiver of parental consent was granted by the Institutional Review Board of the University of Texas Southwestern Medical Center. A Certificate of Confidentiality was obtained. All participants voluntarily consented to participate and were not reimbursed for their time.

2.2. Measures

Each participant completed a two and a half hour session in which a semi-structured interview (1.5 hours) was administered and self-report assessments were completed in private rooms at each treatment facility. Approximately 20% of participants needed moderate assistance completing assessments due to either vocabulary or comprehension difficulties.

Demographics—A brief demographic measure was administered that assessed age, gender, education level, birth country of participants and participants' biological parents, and preferred spoken language.

Heroin Use and Risky Behaviors—The Heroin Use and Risk Questionnaire—Adolescent (HURQ-A) is a standardized interview assessing substance use related behaviors. It also assesses school-related behaviors and attitudes, involvement in criminal activities, family history, trauma history, medical and mental health problems, and high risk sexual and drug use behaviors. The HURQ-A is based on an instrument previously used in surveys of adult prisoners (Kerber, 2000; Kerber & Harris, 2001) and juveniles in detention facilities (Wallisch & Kerber, 2001) in the Texas criminal justice system and adult heroin users in treatment (Maxwell & Spence, 2006).

Acculturation—Three self-report acculturation measures were administered based on the recommendations of Unger and colleagues (J. Unger, Ritt-Olson, Wagner, Soto, & Baezconde-Garbanati, 2007). The Short Acculturation Scale for Hispanics (SASH; (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) required participants to respond on a 5-point Likert scale ranging from 1 (*only Spanish*) to 5 (*only English*) as the preferred language in 12 scenarios. Total average scores of 2.9 and less indicate less acculturation (i.e., weaker identification with the dominant culture and more with the culture of origin) while scores greater than 2.9 indicate more acculturation (i.e., stronger identification with the dominant culture and less with the culture of origin). The Orthogonal Cultural Identification Scale (OCIS; (Oetting & Beauvais, 1991)) has 24 items assessing the extent to which people endorse different cultural identities concurrently, rating each culture *a lot to not at all*, in response to 6 questions that ask the degree to which respondents follow, and are a success in, the “ways of life” of each culture. The OCIS assesses White American/Anglo, Mexican/Mexican American, general Hispanic, and Black American cultures. Scores of 3 or greater indicate high cultural identification, 2 indicate medium identification, and 1 or less indicate low identification. The Acculturation, Habits, and Interests Multicultural Scale for

Adolescents (AHIMSA; (J. B. Unger et al., 2002) categorizes cultural preferences in 8 domains indicated by choosing one response (*United States, the country my family is from, both, or other/neither*) for each domain. AHIMA Scores range from 0 to 8, with 8 indicating greater orientation for the domain. Following Unger's (J. B. Unger et al., 2002) recommendations, only the U.S. Orientation and Other Country Orientation subscales are reported. The more *United States* responses indicate Assimilation/U.S. Orientation and *other/neither* responses indicate Marginalization/Other Country Orientation. All three measures have good to excellent reliability and validity (Marin et al., 1987; J. Unger et al., 2007).

2.3. Data Analysis

Data for the entire sample were examined descriptively as well as for males vs. females. The entire sample was then divided into groups and compared on the various demographic and clinical characteristics listed in Tables 1 and 2 to determine potential areas of future clinical focus. The groups were as follows: family's U.S. residency status (legal vs. not), primary caregiver (parents vs. other), drug use with relatives (yes vs. no), and acculturation measured by the SASH (more vs. less). Group comparisons were conducted using analysis of variance for continuous data and chi-square tests for categorical data. Cohen's d was calculated for the effect sizes for continuous outcomes. Given the exploratory, descriptive aims of the study, significant differences at $p < .05$ as well as differences of $p < .10$ are reported.

3. Results

Table 1 provides descriptive statistics for the entire sample and by gender. Participants ($N = 72$) were on average 15.7 years old and 65% were female. Most participants were in the United States legally (69%) and were born in U.S. (64%). Participants reported some form of physical (17%), sexual (11%), or mental/emotional (11%) abuse, with significantly more females than males reporting having been sexually abused, 17% vs. 0%, $F(1, 8) = 4.8$, $p = .029$, $d = .26$.

The majority (88%) of participants had been arrested for non-traffic violations, with an average of 2.6 ($SD = 2.2$) arrests. The majority of participants (56%) reported most to all of their neighborhood's older kids belong to gangs, a third (29%) belonged to a gang at treatment entry, and many (60%) had dated a gang member. The main reasons for gang involvement were for respect and to have protection. A slight majority of participants (58%) were still attending school prior to treatment entry. However, less than half (39%) were attending regularly in the past year and participants were on average 1.4 grade levels behind their expected grade. Participants reported missing classes in the past year most often due to skipping school (71%) and being ill from heroin (47%). In general, an assessment on attitudes about school revealed most participants wanted to graduate, planned to go to college, and their parents cared about their education. In addition, the majority (85%) reported there was too much drug use at school.

3.1. Substance use

Participants from this in-treatment sample reported first using cheese heroin at 13.5 years old on average, began regularly using at 14.2 years old, and the majority (74%) reported having had at least one heroin-related overdose. Most participants (88%) were using heroin by snorting before the current treatment episode. However, significantly more females used heroin by a combination of snorting and injecting (17%) than males (1%), $\chi^2(1, 63) = 6.4, p = .04$. Participants reported the first time they ever used cheese heroin it was most often at a private residence (39%) such as a friend's home, and they used heroin because they were bored (38%) or because they were dared to or to prove they were not scared (33%). The majority of participants had broad exposure to other drugs, especially cannabis (99%), powder cocaine (93%), and alprazolam (89%), as shown in Table 2.

3.2. Family Characteristics

Half of the participants (51%) reported their immediate family members were U.S. citizens or had documentation to be in the U.S. despite the majority of participants' mothers (76%) and fathers (86%) having been born in Mexico. Most participants (50%) were being raised by both of their biological parents while the remaining were being raised by their biological mother (40%), father (4%), or maternal grandparents (6%). Regarding their extended families' substance use, participants reported their parents' generation (uncles, fathers) have significant drinking problems and relatives from their generation (cousins, brothers) have significant drug problems. See Table 3 for other characteristics of participants' families. A slight majority of participants strongly agreed there were clear rules against alcohol and drug use in the family (61%), that someone was usually at home when they got home from school (59%), and that their parents could tell when they were high (56%).

3.2.1. Participants raised by biological parents vs. other primary caregiver—

For the participants living with both biological parents (50%), as opposed to living with other caregiver(s), significantly fewer reported using heroin by injection, 3% vs. 22%, $\chi^2(1, 9) = 6.2, p = .013, d = .29$, significantly fewer received insults for their drug use, 28% vs. 53%, $\chi^2(1, 29) = 4.7, p = .031, d = .25$, and significantly fewer perceived their caregivers were aware of occasions they were high, 65% vs. 86%, $\chi^2(1, 53) = 4.4, p = .037, d = .25$. Finally, participants living with both parents reported significantly fewer stressors (e.g., moved, changed schools) in the past two years, 2.9 vs. 3.6, $F(1, 72) = 4.7, p = .033, d = .52$. The remaining results were not significant but were in the same direction, indicating participants living with both biological parents fared better on the assessed variables.

3.2.2. Participants who used drugs vs. did not use drugs with relatives—

Almost half (46%) of the participants had used drugs with relatives. These participants first used heroin at a significantly younger age, 13.2 vs. 13.8, $F(1, 72) = 4.3, p = .041, d = .50$, and significantly more used heroin by injection, 21% vs. 5%, $\chi^2(1, 9) = 4.2, p = .040, d = .24$. These participants were also significantly more likely to have tried alprazolam, 97% vs. 82%, $\chi^2(1, 64) = 4.0, p = .045, d = .24$. Furthermore, significantly more participants who had used drugs with relatives had also consumed alcohol with relatives, 64% vs. 21%, $\chi^2(1, 29) = 13.8, p = .000, d = .44$ and had more relatives with alcohol problems (cousins: 27% vs. 8%, $\chi^2(1, 12) = 4.8, p = .026, d = .26$) and drug problems (cousins: 55% vs. 13%, $\chi^2(1, 23) =$

14.3, $p = .000$, $d = .45$; brothers: 42% vs. 8%, $\chi^2(1, 17) = 12.0$, $p = .001$, $d = .41$). Finally, significantly more participants who used drugs with relatives did not enjoy family time, 30% vs. 10%, $\chi^2(1, 14) = 4.6$, $p = .032$, $d = .25$, reported their family was violent, 36% vs. 13%, $\chi^2(1, 17) = 5.5$, $p = .019$, $d = .28$, fought a lot, 55% vs. 18%, $\chi^2(1, 25) = 10.6$, $p = .001$, $d = .38$, and that they (the participant) had been hit as punishment for drug use, 33% vs. 10%, $\chi^2(1, 15) = 5.8$, $p = .016$, $d = .28$.

3.2.3. Participants' immediate family members do vs. do not have

documentation to be in U.S.—Participants who reported their families were in the U.S. legally (51%), as compared to those who reported their families did not have appropriate documentation to be in the U.S., first used heroin at a significantly earlier age, 13.2 vs. 13.8, $F(1, 72) = 5.2$, $p = .025$, $d = .55$. These participants were significantly more likely to have first used heroin at school (46%), whereas participants whose families were not in the U.S. legally first used heroin at either an 'other' location (53%) or someone's house (49%) but not at school (9%), $\chi^2(1, 72) = 12.5$, $p = .002$. Participants whose families were in the U.S. legally also tended to begin regularly using heroin at a younger age, 13.9 vs. 14.5, $F(1, 72) = 3.7$, $p = .060$, $d = .46$, and tended to use heroin by a combination of snorting and injecting, 19% vs. 6%, $\chi^2(1, 9) = 2.9$, $p = .090$, $d = .20$, rather than just snorting. The remaining results were not significant but were in the same direction, indicating participants who reported their families were in the U.S. legally fared worse on the assessed variables.

3.3. Acculturation

When asked to identify as either Mexican or Mexican American, most participants identified as Mexican (59%). Acculturation measured by the OCIS revealed participants identified highly with a Mexican or Mexican American culture (average score of 3.1) and General Hispanic culture (2.9) and identified minimally with White American or Anglo (1.5) and Black American (1.3) cultures (see Table 1). Acculturation as measured by the AHIMSA average scores indicated participants were more oriented to the U.S. culture (2.1) than to an Other Country (0.2) culture. The third acculturation measure, the SASH, categorized 33% of participants as more acculturated and 67% as less acculturated to the dominant English culture. Overall, these acculturation measures indicate participants identified mostly with a Mexican or Mexican American culture rather than an English speaking or White American culture, but all scores were very low.

3.3.1. Participants categorized as more vs. less acculturated by the SASH—

The participants more acculturated to the English-speaking American culture (33%) were significantly more likely to self-identify as Mexican American (67%) than Mexican (33%) while the participants less acculturated to the English-speaking American culture identified as Mexican (72%) more than Mexican American (23%), $\chi^2 = 9.6$, $p = .002$, $d = .37$. The participants more acculturated to the English-speaking American culture were significantly more likely to have been on probation, 96% vs. 75%, $\chi^2(1, 59) = 4.7$, $p = .030$, $d = .26$. No other results were significant regarding acculturation.

4. Discussion

This investigation described characteristics of Mexican and Mexican American adolescents receiving treatment for “cheese” heroin dependence. This study’s data provides clues to potential directions for prevention efforts that corroborate and further extend those provided by Maxwell et al.’s (2012) description of the initial spike of heroin use in Dallas. On average, these adolescents reported first using heroin when they were just 13 years old, regularly using heroin by less than a year later, and had well-established heroin dependence by the current treatment episode. They also were engaging in other risky behaviors such as abuse of other drugs and unprotected sex. Furthermore, the adolescents had other notable risk factors for adverse outcomes, such as previous abuse and poor school attendance. These data indicate the need for early prevention and rapid intervention after first use of heroin, especially in this population that has a number of additional risk factors present.

Several family level constructs were important in this study. Adolescents who were being raised by someone other than both biological parents, who had used drugs with relatives, or whose families were in the U.S. legally fared worse on substance use and other clinical indicators. Drug use with relatives, which typically occurred with cousins and brothers, may have served as early behavioral models for substance use even prior to participants actually using drugs themselves. Participants whose families were in the U.S. legally may have been less likely to consider the familial consequences of their substance use whereas participants whose families were not in the U.S. legally may have purposely delayed drug related (i.e., illegal) activities for fear of the impact on their families. Our data provide some support for this interpretation, as a very public location—school—was the least endorsed first heroin use location for participants whose families were not in the U.S. legally but was the most endorsed location for participants whose families were in the U.S. legally.

Findings from the current study regarding the association of the family system with adolescent drug use are consistent with the larger literature on the impact of biological and environmental risk factors on future substance use (e.g., (Rowe, 2012; Stone, Becker, Huber, & Catalano, 2012). Furthermore, this study’s findings support the idea of cross-generational transmission of disorders and extends it to Mexican and Mexican American adolescents, which Merikangas and colleagues (2009) also found in their study of Puerto Rican adolescent immigrants. Therefore, early identification and intervention may greatly benefit Hispanic adolescents whose families exhibit the risk factors identified in this study. Family-based interventions are effective for adolescents with substance use problems (Rowe, 2012). However, these results underscore the need to carefully evaluate the family to fully understand the extent to which the adolescent’s substance use may be influenced by the family system. Furthermore, interventions specifically aimed at how to best engage adolescents and families in treatment (Santisteban et al., 1996) may be necessary for the current study’s population, especially if there are fears of deportation preventing families or adolescents from seeking help, as was evident in Dallas when community leaders initially responded to the increase in heroin use (Maxwell et al., 2012).

Acculturation to the U.S. society is generally associated with an increased risk for substance use (De La Rosa, 2002). The results regarding acculturation in this study were unclear, as

there were few actual differences based on acculturation. The lack of findings could be related to a number of reasons. First, the measurement of acculturation in this study likely was negatively impacted by the English language inclusion criteria. This may have led to the data's restricted range, such that all participants scored low on the acculturation measures, which may explain the lack of significant findings. Alternatively, acculturation may not be a useful construct in this sample that has an identified significant problem with substance use. Finally, the lack of significant findings may indicate acculturation is not an important factor for this sample or that other constructs are more salient. The growing acculturation literature indicates other contextual factors (Vaeth, Caetano, & Rodriguez, 2012) must be considered in addition to acculturation. Given the importance of family-level constructs in this study, the differences in acculturation among adolescents and family members (Martinez, 2006; Unger, Ritt-Olson, Soto, & Baezconde-Garbanati, 2009), also termed intergenerational discrepancy (Felix-Ortiz, Fernandez, & Newcomb, 1998), would likely be more useful as it accounts for the interaction of adolescents' and their family members' acculturation. Using this discrepancy approach would more closely approximate studying acculturation as an interactive, fluid process (Alvarez, Jason, Olson, Ferrari, & Davis, 2007).

There are several limitations knowingly built into the design of this exploratory study in order to accomplish the exploratory aims. The study was funded to only recruit a small sample and was composed of more females than males, limiting the power of statistical comparisons. Additional limitations include the lack of a comparison group, the exclusion of non-English speaking Hispanic adolescents, and all of the participants were in treatment programs at the time of the survey; therefore, we cannot conclude these findings were due to heroin use, being Hispanic, or were influenced by participation in treatment, respectively. In addition, participants in the juvenile detention based day treatment program may have differed from those attending residential, non-mandated treatment programs. Some participants may have had confidentiality concerns that impacted willingness to provide complete answers since program staff identified and recruited participants, particularly those participants in the juvenile detention based program and those whose families were in the U.S. without appropriate documentation. How participants' confidentiality would be maintained and how their honest responses could potentially help people in similar situations was thoroughly explained to help mitigate these limitations. Finally, many adolescents were enrolled in alternative schools due to behavior problems at their original school but data was not collected on school enrollment when they first tried heroin. A substantial portion reported first trying heroin on or around school grounds and this information would be useful inasmuch as it could provide information on where resources for early identification and prevention may be best applied.

6. Conclusions

The results of this survey study describe an in-treatment sample of Mexican and Mexican adolescent "cheese" heroin users and underscore the need for early identification and rapid prevention efforts in order to prevent and positively impact their outcomes. We identified characteristics, especially related to their families, that may put them at additional risk and that can be utilized to target prevention and intervention efforts. Additional research with this population is necessary to better understand and build upon these findings as they relate

to the family system. For example, although adolescents' acculturation did not appear to be an important factor for our sample, participants' family's immigration status, caregivers, and drug use with relatives were important, and should be further investigated. Given the effectiveness of family-based interventions for adolescent substance use (Rowe, 2012), it is important to thoughtfully apply these interventions to adolescents from families with specific at-risk features—such as relatives who abuse drugs—that were related to adolescents' substance use in this study.

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Table 1

Demographic and Clinical Characteristics of the Total Adolescent Cheese Heroin Using Sample, Females, and Males

	Total Sample N = 72		Female n = 47		Male n = 25	
	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)
Age	15.7	(1.0)	15.7	(1.0)	15.8	(1.0)
Nativity						
USA	46	(64%)	27	(57%)	19	(76.00%)
Mexico	26	(36%)	20	(43%)	6	(24.00%)
Participant is in US legally	50	(69%)	33	(70%)	17	(68.00%)
Health Status and Behaviors						
Physical health self-rating						
Excellent to Good	50	(69%)	32	(68%)	18	(72.00%)
Fair to Poor	22	(31%)	15	(32%)	7	(28.00%)
Mental health self-rating						
Excellent to Good	51	(71%)	29	(62%)	22	(88.00%)
Fair to Poor	21	(29%)	18	(38%)	3	(12.00%)
Stressors, past 2 years (0–9)	3.3	(1.4)	3.4	(1.3)	3	(1.6)
Ever had psychiatric treatment	24	(33%)	18	(38%)	6	(24.00%)
<i>Trauma History</i>						
Physically abused	12	(17%)	7	(15%)	5	(20.00%)
Sexually abused**	8	(11%)	8	(17%)	0	(0.00%)
Emotionally abused	8	(11%)	6	(13%)	2	(8.00%)
<i>Risky Sexual Behaviors</i>						
Alcohol use during last intercourse	9	(16%)	4	(11%)	5	(22.70%)
Drug(s) use during last intercourse*	32	(55%)	23	(64%)	9	(40.90%)
Legal and Related Problems						
Previously arrested ^a	63	(88%)	39	(83%)	24	(96.00%)
Previously detained	63	(88%)	41	(87%)	22	(88.00%)
Ever on probation	59	(82%)	38	(81%)	21	(84.00%)
Ever wanted to join gang	39	(54%)	23	(49%)	16	(64.00%)

	Total Sample N = 72		Female n = 47		Male n = 25	
	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)
Currently in gang	21 (29%)	11 (23%)	10 (40.00%)			
Ever had boy-, girlfriend in gang	43 (60%)	31 (66%)	12 (48.00%)			
Education						
Attendance, past year						
Regularly	28 (39%)	17 (36%)	11 (44.00%)			
Occasionally	20 (28%)	14 (30%)	6 (24.00%)			
Hardly ever	24 (33%)	16 (34%)	8 (32.00%)			
Why frequently or sometimes missed school, past year						
Cut/skipped school	51 (71%)	36 (77%)	15 (60%)			
Ill due to heroin use	34 (47%)	25 (53%)	5 (36%)			
"Locked up"	20 (28%)	13 (28%)	7 (28%)			
Attitudes about School:						
It matters if I graduate	57 (79%)	36 (77%)	21 (84%)			
I plan to go to college	52 (74%)	37 (80%)	15 (63%)			
My parents care about school	70 (97%)	45 (96%)	25 (100%)			
My teachers care about me	38 (54%)	23 (50%)	15 (60%)			
School doesn't want people like me	41 (59%)	26 (59%)	15 (60%)			
Can't stay away from drugs there	39 (54%)	27 (57%)	12 (48%)			
Too much drug use at school	61 (85%)	40 (85%)	21 (84%)			
Kids take advantage if weak*	34 (47%)	26 (55%)	8 (32%)			
Acculturation						
Participant identifies as (forced choice)						
Mexican	41 (59%)	26 (55%)	15 (65%)			
Mexican American	29 (41%)	21 (45%)	8 (35%)			
OCIS acculturation						
Mexican or Mexican American	3.1 (0.8)	3.1 (0.8)	3.1 (0.7)			
General Hispanic	2.9 (0.9)	2.8 (0.9)	2.9 (1.0)			
White American or Anglo	1.5 (0.6)	1.6 (0.6)	1.5 (0.6)			
Black American	1.3 (0.5)	1.3 (0.5)	1.3 (0.4)			
AHIMSA						

	Total Sample N = 72		Female n = 47		Male n = 25	
	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)
US orientation	2.1 (2.1)	2 (2.2)	2.2 (2.0)			
Other country orientation	0.2 (0.5)	0.1 (0.4)	0.2 (0.6)			
SASH continuous score**	2.9 (0.6)	3 (0.6)	2.7 (0.6)			
SASH dichotomous score						
More acculturated (>2.9)	24 (33%)	16 (34%)	8 (32%)			
Less acculturated (≤ 2.9)	48 (67%)	31 (66%)	17 (68%)			
Substance use with family						
Alcohol to intoxication	29 (40%)	17 (36%)	12 (48%)			
Drugs to get high*	33 (46%)	25 (53%)	8 (32%)			

Note. All values indicate agreement with or "more" of a given construct as it is described in column 1. OCIS = Orthogonal Cultural Identification Scale; scores of 3 or greater indicate high cultural identification, 2 indicate medium identification, and 1 or less indicate low identification for the individual sub-scales. AHIMSA = Acculturation, Habits, and Interests Multicultural Scale for Adolescents; range = 0 to 8, with 8 indicating greater orientation for the individual sub-scales. SASH = Short Acculturation Scale for Hispanics; indicates acculturation to English language culture.

^a Arrests excluding traffic violations.

Difference between females and males: * $p < .10$,

** $p < .05$

Table 2

Substance Use Characteristics for the Total Sample, Females, and Males

	Total Sample N = 72		Female n = 47		Male n = 25	
	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)
Heroin Use						
Age at first use	13.5 (1.2)	13.4 (1.3)	13.7 (1.1)			
Age at regular use	14.2 (1.2)	14.1 (1.2)	14.2 (1.2)			
Use route at treatment entry**						
Snort	63 (88%)	39 (83%)	24 (96%)			
Snort and inject	9 (13%)	8 (17%)	1 (4%)			
Spent on heroin per day, past 30 days	\$37.40 (\$42.10)	\$37.50 (\$45.90)	\$37.30 (\$34.70)			
Participants with 1 overdose	53 (74%)	33 (70%)	20 (80%)			
Number prior treatment episodes	1.3 (1.1)	1.3 (1.2)	1.2 (0.9)			
Location of first heroin use						
Private residence	28 (39%)	15 (32%)	13 (52%)			
Other location	24 (33%)	18 (38%)	6 (24%)			
School	20 (28%)	14 (30%)	6 (24%)			
Primary reasons for first use						
Bored	27 (38%)	20 (42%)	7 (28%)			
Dared / Prove not scared	24 (33%)	14 (30%)	10 (40%)			
Didn't know what it was	12 (17%)	9 (19%)	3 (12%)			
Other Drug Use						
<i>Cannabis</i> ever used	71 (98%)	46 (98%)	25 (100%)			
Days used in past 30*	3.1 (8.2)	1.9 (6.2)	5.5 (10.6)			
<i>Powder Cocaine</i> ever used	67 (93%)	43 (92%)	24 (96%)			
Days used in past 30	1.2 (3.9)	1.2 (4.2)	1.3 (3.4)			
<i>Crack Cocaine</i> ever used	10 (14%)	6 (13%)	4 (16%)			
<i>Methamphetamine</i> ever used	15 (21%)	9 (19%)	6 (24%)			
Days used in past 30*	0.1 (0.6)	0 (0.1)	0.3 (1.0)			
<i>Alprazolam</i> ever used	64 (89%)	41 (87%)	23 (92%)			

	Total Sample N = 72		Female n = 47		Male n = 25	
	M (SD) or N (%)		M (SD) or N (%)		M (SD) or N (%)	
Days used in past 30	0.9	(3.7)	1	(4.3)	0.6	(2.6)
<i>Opioids</i>						
Codeine ever used	21	(29%)	11	(23%)	10	(40%)
Hydrocodone ever used*	19	(26%)	9	(19%)	10	(40%)
Buprenorphine ever used	17	(24%)	10	(21%)	7	(28%)
<i>Alcohol</i>						
Drank any, past month	16	(22%)	10	(21%)	6	(24%)
Days drank in past 30	1.3	(3.2)	1.3	(3.5)	1.1	(2.5)

Difference between females and males: * $p < .10$,

** $p < .05$

Table 3

Family Characteristics for the Total Sample, Females, and Males

	Total Sample N = 72		Female n = 47		Male n = 25	
	N	%	N	%	N	%
Mother's nativity						
USA	17	24%	11	23%	6	24%
Mexico	55	76%	36	77%	19	76%
Father's nativity						
USA	10	14%	6	13%	4	16%
Mexico	60	86%	39	87%	21	84%
Family is in US legally	37	51%	25	53%	12	48%
Sources of family's finances						
Parents' income	71	100%	46	100%	25	100%
Food stamps	25	35%	16	34%	9	36%
Public assistance**	11	16%	10	22%	1	4%
Unemployment	5	7%	3	7%	2	8%
Illegal	11	15%	7	15%	4	16%
Primary caregiver						
Both biological parents	36	50%	22	47%	14	56%
Biological mother only	29	40%	21	45%	8	32%
Biological father only	3	4%	2	4%	1	4%
Maternal grandparents	4	6%	2	4%	2	8%
Family members incarcerated						
Biological father	26	36%	17	36%	9	36%
Uncle(s)	26	36%	18	38%	8	32%
Brother(s)	20	28%	13	28%	7	28%
Cousin(s)	20	28%	16	34%	4	16%
Biological Mother	10	14%	8	17%	2	8%
Family with drinking problems ^a						
Uncle(s)*	25	35%	20	43%	5	20%

	Total Sample N = 72		Female n = 47		Male n = 25	
	N	%	N	%	N	%
Biological father	20	28%	16	34%	4	16%
Maternal, paternal grandfather(s)	13	18%	9	19%	4	16%
Cousin(s)	12	17%	10	21%	2	8%
Family drug problems ^a						
Cousin(s)	23	32%	18	38%	5	20%
Brother(s)	17	24%	12	26%	5	20%
Uncle(s)	13	18%	11	23%	2	8%
Biological father	6	8%	3	6%	3	12%

^aThe four most-endorsed family member categories are reported.

Difference between females and males: * $p < .10$,

**
 $p < .05$