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From “*Kickeando las malias*” (Kicking the Withdrawals) to “Staying clean”: The Impact of Cultural Values on Cessation of Injection Drug Use in Aging Mexican-American Men

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Abstract

Drug use among older adults is a growing concern, particularly for the burgeoning Hispanic population. Older adults seeking drug treatment will double over the next decade to almost 6 million. Cultural factors influence drug use, and more specifically, Hispanic cultural values influence heroin use. This study explored Mexican-American injection drug users' adherence to traditional Hispanic cultural values and their impact on cessation. Ethnographic interviews endorsed contextualized influences of values on heroin use. Cultural values functioned dichotomously, influencing both initiation and cessation. Understanding the impact of cultural values on substance abuse is critical given the changing demographics in American society.

Keywords

Heroin use; cultural values; Hispanics; Mexican Americans; cessation; aging; injection drug use; risk factor; protective factor; qualitative research

LITERATURE REVIEW

Culture and Drug Use

Culture impacts the initiation, duration, and cessation of substance use (Castro & Hernandez-Alarcon, 2002; Higgs, Owada, Hellard, Power, & Maher, 2008; Prado, Szapocznik, Maldonado-Molina, Schwartz, & Pantin, 2008). More specifically, culture can influence heroin use among aging Mexican-American men (Casavantes, 1976; Torres, Kaplan, & Valdez, 2011; Valdez, Neaigus, & Kaplan, 2008). Traditional cultural values,

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Declaration of Interest

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such as *familismo* (emphasis and obligation to the family over individualism) and *personalismo* (emphasis on warm personal interactions with others), are present in many Hispanic communities and have been shown to influence substance use and cessation in Hispanics (Casavantes, 1976; Delgado, 2007; Gil, Vega, & Dimas, 1994; Zambrana, 1995).

Drug Use in Older Adults

Drug use among older adults, including injection drug use (IDU), is a growing public health concern (Han, Gfroerer, Colliver, & Penne, 2009; Institute of Medicine, 2012). Illicit drug use among individuals aged 50–54 rose from 3.4% to 7.2% from 2002 to 2010 (Institute of Medicine, 2012; Substance Abuse and Mental Health Services Administration, 2011). These increases are tied to the growth of the aging baby boomer demographic (individuals born between the mid-1940s and 1960s), whose rates of drug use far exceed those of previous generations (Colliver, Compton, Gfroerer, & Condon, 2006; Gfroerer, 2003; Han et al., 2009). Moreover, baby boomers have the highest prevalence of IDU (Armstrong, 2007), significantly increasing the risk of IDU-associated health conditions. Mexican-American baby boomer IDUs are at greater IDU health risks because intravenous injection is the primary route of heroin administration for this population (Valdez et al., 2008).

Increases in Heroin Use and Need for Treatment

Heroin use in the United States has been increasing due to restrictions on illegal use of prescription opiates and inexpensive heroin from Mexico (Riordan & Rappleye, 2012; U.S. Department of Justice National Drug Intelligence Center, 2011). Substance abuse treatment for older adults has also increased significantly over the last decade, and projections of individuals aged 50 years and older in need of treatment will double to almost 6 million by 2020 (Han et al., 2009). Compounding this expansion of substance abuse in older adults is the predicted increase in substance use among the growing population of older Hispanics (Andrews, 2008). Hispanics have an increased need for drug treatment services and poorer health outcomes, but more research is needed in this area (Alegria et al., 2006; Amaro, Arevalo, Gonzalez, Szapocznik, & Iguchi, 2006; Smedley, Stith, & Nelson, 2003). Treatment, access, and utilization are impacted by treatment design considerations (i.e., the characteristics of treatment), which have often been insensitive to the cultural characteristics of the Hispanic family and, in some cases, altogether incongruent with Hispanic values (Cortes, 1979). This disconnect between culture and treatment can potentially contribute to treatment underutilization (Glick & Moore, 1990). This is especially significant for poor, urban, Mexican-American families.

Hispanic Cultural Values as Risk and Protective Factors

The Hispanic cultural values of *familismo*, *machismo*, and *personalismo* have been found to greatly influence interpersonal and intrapersonal behaviors (Delgado, 2007; Zambrana, 1995). *Familismo* (familism) is a passionate obligation to the family that de-emphasizes focus on the individual (Smith, Sudore, & Perez-Stable, 2009). *Familismo* provides an unending support network of emotional and tangible systems for members of the family (Delgado, 2007; Zambrana, 1995). *Machismo* has been described in both negative and positive terms and has been found to influence health-risk behaviors and willingness to

access treatment (Cuéllar, Arnold, & Maldonado, 1995; Meyer, 2008; Torres, Solberg, & Carlstrom, 2002). Negative attributes of *machismo* connote male domination, abusive masculinity, and repression over women, whereas positive attributes include courage, independence, and the role of the protector of the family (Arciniega, Anderson, Tovar-Blank, & Terence, 2008; Smith et al., 2009). *Personalismo* (derived from the term “personal”) denotes a “formal friendliness” that emphasizes warm and sincere personal interactions with others (Cuéllar et al., 1995; Smith et al., 2009).

These traditional cultural values are not unique to Hispanic communities and can be seen in many traditional cultures. They may not be present to the same degree in all Hispanic communities, but when present to a high degree, they play a critical role in daily life. These cultural beliefs impact health behaviors, reactions to health status (e.g., being given a diagnosis), and the subsequent health-related consequences of those behaviors (Gil, Vega, & Biafora, 1994; Gil, Wagner, & Vega, 2000). Moreover, these traditional cultural values may serve both risk and protective functions for a variety of health behaviors. Research on the influence of cultural traditions and beliefs on health behavior has yielded significant associations with health-risk behaviors such as smoking, alcohol use, drug use, and sexual activity (Canino, Vega, Sribney, Warner, & Alegria, 2008; Chen & Unger, 1999; Cuadrado & Lieberman, 2002; Higgs et al., 2008; Prado et al., 2008; Siqueria & Crandall, 2008; Unger et al., 2002; Valdez, 2005; Valdez et al., 2008). Recently, Prado and colleagues found that the effects of “differential acculturation” among Hispanic families migrating into the United States contribute to a degenerative loss of traditional Hispanic cultural values, which in turn increases the risk of substance use behaviors for those with diminished cultural or familial ties. Unger et al. (2002) and colleagues also found that the Asian familial cultural value of *filial piety* (similar to *familismo*) attenuated risky behaviors, such as substance abuse, and *machismo* served dichotomously as a risk factor for males and a protective factor for females. In another example of the dichotomous relationship between cultural values and substance use, Siqueria and Crandall (2008) found that poor and disjointed familial relations (*familismo*) increased the likelihood of alcohol and tobacco use among ethnic subgroups of Hispanics in Florida.

More specifically, the Hispanic cultural values of *familismo* and *personalismo* have been found to influence substance abuse, age of first sexual encounter, dropout rates, and current health status (Delgado, 2007; Gil, Vega, & Dimas 1994; Gil, Wagner, & Tubman, 2004; Kimbro, 2009; Zambrana, 1995). *Familismo* and *personalismo* were found to influence the positive or negative directionality of the health-risk behavior. Canino and colleagues found that family functioned dichotomously for substance use disorders among Hispanic women. In their study, strong family relationships (*familismo*) and bonds (*personalismo*) served as protective factors against substance use disorders in Hispanic women, but disharmonious family relationships in this same cohort served as a risk factor for increased substance use disorder (Canino et al., 2008). *Familismo*, *machismo*, and *personalismo* have also been found to influence determinants of heroin use in Mexican Americans (Bullington, 1977; Casavantes, 1976; Cloud & Granfield, 2008; Prado et al., 2008). Those same attributes of *familismo* and *personalismo* (i.e., loyalty, familiarity, family centeredness, selflessness) may increase pressure to participate in illicit behaviors due to feelings of obligation or a yearning

to be included in the activities (Bullington, 1977; Casavantes, 1974). Thus, when the socio-ecological environment sees heroin use as normative, cultural values can become negatively directional. Valdez and colleagues found that, specific to heroin use, family-based networks (*familismo* and *personalismo*) provided for “a paradoxical position of having the highest and lowest propensity for engaging in risk behaviors” and that *machismo* plays a role in the initiation, cessation, and attempts toward cessation of heroin among Mexican Americans (Valdez, Kaplan, & Cepeda, 2006; Valdez, Kaplan, & Curtis, 2007; Valdez, Neaigus, & Cepeda, 2007; Valdez et al., 2008). More importantly, Casavantes (1976) and Bullington (1977) identified and described examples of these dichotomous associations between cultural values and heroin use going back at least three decades and these trends continue today.

In these studies, cultural values and traditional beliefs functioned as positive protective factors for participants who reported strong familial relationships. Those who reported disjointed, disorganized, or absent familial relationships, on the other hand, were at significantly higher risk for participation in risky health behaviors. Thus, it is clear from the literature that these traditional values cut both ways. While described in the literature (Amaro et al., 2006; Brisson, Roll, & East, 2009; Cloud & Granfield, 2008; Cuadrado & Lieberman, 2002; Cunningham, Foster, & Warner, 2010; DeLaCancela & Martinez, 1983; Delgado, 2007; Gil et al., 2004; Higgs et al., 2008; Smith et al., 2009; Torres et al., 2002; Unger et al., 2002; Valdez et al., 2008), this dynamic has not received a name, and it has rarely been studied in an IDU population. The authors of this article use the term “Dichotomization of cultural values paradigm” to refer to this phenomenon, described extensively in the discussion section.

The Current Study

This study examined the relationship between Hispanic cultural values and cessation of heroin use in a cohort of long-term injection drug-using (IDU) Mexican-American men. Using qualitative methods (ethnographic interviews), the study examined how these aging *tecatos*¹ defined traditional Hispanic cultural values, their level of adherence to these values, and the impact of these values on their efforts to cease heroin use. Our central thesis, based on a thorough review of the literature, first-hand knowledge of the communities where our data were collected, and our qualitative data, was that these cultural values would function dichotomously as both risk and protective factors for heroin use in this sample of aging Mexican-American men. The authors also expected that there would be a high level of adherence to these values and that these values would play a role in both initiation and cessation of heroin use in these men.

METHODS

Design

This article is based on the qualitative portion of a larger, cross-sectional, mixed-methods, field-intensive study extensively described elsewhere (Torres et al., 2011). Two hundred and

¹Mexican American injection drug user.

twenty-seven Mexican-American men aged 45–80, with a history of IDU for at least 3 years, and who were current injectors, former injectors not in treatment, or former injectors enrolled in methadone maintenance treatment programs were recruited in several inner-city, urban neighborhoods of Houston, Texas. These neighborhoods are predominantly Mexican-American areas with high rates of crime, poverty, and psychosocial challenges. Sixty of these participants (20 per group) were purposely selected based on their health, drug use, or psychosocial profiles for in-depth ethnographic interviews. These 60 participants completed extensive ethnographic interviews for which they were compensated \$40. Because cessation of heroin use was the focus of this article, only ethnographies of former users not in treatment and of former users in methadone maintenance treatment programs were included in the analyses reported here. After an extensive content analysis of the original 60 ethnographic interviews, 11 participants were re-interviewed with a particular focus on cultural values. The final sample for this article consisted of 26 ethnographic interviews from former users not in treatment or in methadone treatment.

Measures

CHIVA Questionnaire—The CHIVA² survey instrument was created to collect both qualitative and quantitative data on demographic variables, living circumstances, family trajectory, family conflicts, and comprehensive medical and sexual histories. Additionally, the instrument focused extensively on substance abuse history, including drug career trajectory, history of IDU, drug markets (e.g., access, availability, methods of purchase, etc.), drug treatment history, history of illegal/criminal activities, and incarceration. The CHIVA quantitative data are described extensively elsewhere (Flores, Torres, Bordnick, Ren, & Haider, in press; Torres et al., 2011).

The CHIVA Cultural Values Ethnographic Questionnaire—An ethnographic interview guide was developed to examine the relationship between cultural values and cessation of heroin use. Through an iterative development process and pilot testing, researchers created an ethnographic questionnaire that elicited thick and rich descriptions of participants' drug use and the influence of cultural values. Questions were designed to probe for specific beliefs about cultural values as they pertained to the individual, his family members, and community. These questions elicited perceptions on the role/importance of the family (*familismo*), ways in which we interact with others even outside the family (*personalismo*), gender roles that dictate what men do and what women do (*machismo*), and a sense that things are predetermined and there is no use in fighting them (*fatalismo*). Below are some examples of the open-ended questions used to assess positive and negative aspects of cultural values, and the full ethnographic guide is included in Appendix A.

The format of the questionnaire began with a query regarding ethnic identity followed by a list of prompts trying to further elicit cultural information regarding the construct. For example, “When you think about race, or ethnicity, how do you typically refer to yourself? For example, if people ask you ‘Hey what are you?’ do you say I’m, ‘Mexican American’ or ‘Hispanic’ or some other term?” Once the participant responded, a series of follow-up

²CHIVA is slang for heroin in Mexican-American Spanish.

questions were used to explore the concept and its cultural context, for example, “What does that mean for you, to be [respondent's term]?” These open-ended questions allowed for researchers to develop a baseline frame of reference from which to direct further questions. Participants were asked to elaborate on key concepts related to the cultural values *familismo*, *personalismo*, *machismo*, and *fatalismo* (without the interviewer using these terms, e.g., “tell me about family”) and other cultural values they may be familiar with. Interviewers then followed additional prompts to elicit deeper interpretations and associations between constructs. The same line of probing was repeated for each construct.

Data Analysis

An ecological ethnographic approach was applied to glean “thick and rich” (Glaser & Strauss, 1967; Morse & Field, 1995) descriptions of interactions between culture, individuals, institutions, and environmental influences on cessation of heroin use (LeCompte & Schensul, 1999). Ethnography is holistic, contextual, reflective, and is informed by the concept of culture (Morse & Field, 1995). This method has been successfully used in researching the effects of culture on health (Davis, 1992). Data consisted of memos, extensive field notes, and ethnographic interviews. Sixty transcripts of open-ended questions were uploaded into NVivo 9© Qualitative Research Software to aid with data storage, coding, and management of themes, and 26 were ultimately selected for analyses at random. Research team members included the first author and three additional coders. Team members conducted independent analyses of transcripts and directly coded content. Team members convened several times to collectively review axial codes and identify thematic content. The analysis moved through three stages, summarizing and packaging of the data, repackaging and aggregating the data, and developing and testing propositions to construct an explanatory framework (Miles & Huberman, 1994). Team members collectively developed and decided thematic categories, references between categories, positive and negative instances, and example text segments for each code. Incongruities of interpretations were resolved through constant comparison, extensive discussion, triangulation, and continued review of additional exemplars until consensus in interpretation and saturation was achieved (Glaser & Strauss, 1967). Reliability (Warren & Karner, 2010) was established through *checking for representativeness* (Tversky & Kahneman, 1971), *triangulation* (Webb, Campbell, Schwartz, & Sechrest, 1965), and *researcher effects* (Miles & Huberman, 1994) *using extreme cases* (Sieber, 1976) and *negative case analysis* (Judd, Smith, & Kiddler, 1991).

RESULTS

Twenty-six ($N = 26$) ethnographic interviews were analyzed for this article, including former users not in treatment ($n=13$) and former users in methadone treatment ($n = 13$). Similar to the parent study, half of the sample was separated, or divorced ($n = 12$, 46.2%), and the remaining were single ($n = 7$, 26.9%) or married ($n = 6$, 23.1%) with one cohabitating ($n = 1$, 3.8%). One-fourth of participants reported being employed full time or part time ($n = 6$, 23.1%) with the remaining unemployed ($n = 5$, 19.2%) or disabled ($n = 10$, 38.5%). On average, participants first used heroin at age 19 ($\bar{x}$, $SD = 5.98$) and were injecting weekly by age 21 ($\bar{x} = 20.65$, $SD = 6.39$). Over half of the participants ($n = 14$, 53.8%) reported “never

having problems with their families” over the last 6 months and the remainder reported “sometimes having problems” ($n = 10$, 38.5%) or “often having problems” ($n = 2$, 7.7%). Fewer participants reported dissatisfaction with family interactions ($n = 6$, 23.1%) compared with those who reported high levels of satisfaction ($n = 20$, 76.9%). Family *encouragement of cessation of drug use* was reported to be “not at all” for half of respondents ($n = 12$, 46.2%), least for “sometimes” ($n = 4$, 15.4%), and roughly a third for “often” ($n = 10$, 38.5%; see Table 1 for a detailed summary of participant characteristics).

Qualitative analyses revealed five primary domains specific to cultural values and their influence on cessation. The major domains to emerge from the data were the following: (1) *Dichotomization of cultural values*, (2) *Male kinship's influence on initiation of IDU*, (3) *Female kinship's influence on cessation of heroin use*, (4) “*Fed-up with the shit*,” and (5) *Community “negotiated coexistence.”* We discuss these domains next.

Dichotomization of Cultural Values

Familismo—Domains for all cultural values revealed a dichotomous relationship regarding their effect on initiation, duration, and cessation of heroin use. *Familismo* was the most discussed and emphasized. All participants described the importance of the Mexican-American or Chicano family in terms of tolerance, respect, culture, love, solidarity, and forgiveness. The bond between family and individual family members was described as very strong and emerged as a central theme. An example of this bond is described below.

David: As a Mexican-American, to me the family is the most important thing. Family is first; you always have your family, no matter what they do, no matter what happens, you have to have that family. There is nothing that they can do wrong, it is that tight. It is that structure, you have to have or you are not a Mexican man. You got to have that strong family base. You have to, to forgive everything. You cannot let anything disrupt the family. Because once you do, you stop being part of the family. And if you don't have that then you don't have nothing.³

This bond extends to friends, neighbors, and others in the community as well. The cultural value of *familismo* emphasizes family, loyalty, and interdependence, and cooperation over competition. For this cohort, the embodiment of *familismo* was interwoven throughout their life experiences in the family and in their community—even for those who committed acts against *familismo's* principles. A common theme was *forgiveness* for family members who fall out of favor with the family due to a direct offense against the family (stealing money to buy heroin) or an ancillary incident (heroin addiction).

A significant finding was that *familismo* served as both a protective and a risk factor for heroin use. In terms of protective factors, *familismo* provided protection from poorer health and homelessness. This cohort was comparable to the general Mexican-American population regarding chronic disease except for increased rates of HCV (hepatitis C virus), but even then much healthier compared to other IDU populations (Torres et al., 2011). Participants also had a regular place of residence: none of the 26 participants were homeless at the time

³Participants have been assigned fictitious names in order to protect their anonymity.

of interview (and the rate of current homeless in the overall sample [$N = 227$] was low [14%]). Family was the prime motivator for cessation of heroin use and for maintaining abstinence. However, *Familismo* also served to support continued substance use. In the following exemplar quote, one participant describes how “enabling” (the participant's term) behaviors of his mother prolonged his heroin use (risk factor) but also facilitated his ability to stop using heroin due to the love of his mother and family (protective):

Participant: Well, when I would get sick, I didn't want nobody to be around me but my mom was always there. She's always making sure that I was okay. She called paramedics a few times.

Interviewer: She was taking care of you?

Participant: Yeah, she'd knock on my door—she knew I could do it [kick the withdrawals]. She knew I could kick. But I was going through some shit. Sometimes I'd cut [go back to use]. But the last time, she was there for me. She'd knock on the door every 30 minutes, “Jose, you okay?!”

Interviewer: Is there any part of how your mother used to help you that maybe kept you using?

Participant: Yeah, in the beginning she would—it's called an enabler. And back in the day, she would give me money just because she didn't know how sick I was. But she knew I needed it. But she didn't know what it was for. But she had an idea that, “he's not right.” Because when she did find out, it broke her heart. She said, “I knew something was wrong with you.” But she used to give me money, not to go use, but because I was so sick ... I don't know, I think if she would've kicked me out of the house and just cut me off, I wouldn't have made it. I'd probably be dead by now. And hearing the things and the prayers being answered is what helped me. (Jose)

Machismo—*Machismo* was the second most referred to cultural value. Participants described scenarios in which *Machismo* encompasses desirable qualities such as masculinity, honor, sexual prowess, male dominance, and protection of loved ones. Negative aspects of *machismo* were also described by participants, including the subjugation of women, womanizing, and false bravado. References to *machismo* were often described as specific mechanisms for living in challenging and often dangerous environments. *Machismo* among this group of *tecatos* presented itself as a cultural model of “street masculinity” where specific ideologies, behaviors, values, drug use, aggression, and survival strategies contributed to heroin use and to the ability to stop using. The following example encompasses many commonly associated negative attributes of *machismo*:

Luis: Oh yeah ... men are suppose to be real macho, real tough, no feelings, especially no emotion. You can't cry, can't be sad, can't show your love to others. You have to be strong, because you are the rock, you are the foundation of that family so you have to be strong. If you show emotions that means that you are weak that means that you have feelings, and how can you be a rock if you showing emotions? How can you be strong? Now the women, they're supposed to be

nurturing, loving, and flexible, real flexible, especially for Mexicans. It's ok to go mess around and have extra marital affairs or ... for the men it's ok. But you have a woman who does that and she is a "hoe" she is all kind of stuff. Now the dude does it, it's alright. It's expected, it's suppose to be like that, and she is suppose to accept it and deal with it, and that is all there is to it. She is supposed to be a rock too, secondary to the man, always secondary to the man.

One participant stated how the realization of his mother's aging lead him to re-evaluate his life and enter into a methadone maintenance program. The following quote illustrates how *machismo* served as a positive influence aiding this participant to cease the use of heroin due to his filial responsibilities.

Ricardo: The same things that pushed me to it, had an effect in pushing me away from it. Family is the foundation and I need to be the foundation now, because my mother is getting old. So I have to be the rock. I have to start taking responsibility for the family because she is getting old. We took her for granted and depended on her for so much. Now she just can't do it. I have to become the rock. It is my turn. And it's about time. We should have done this a long time ago. With my feelings I should have stopped this shit a long time ago. And it took me what, till I was 40 years old before I stopped? I have to take responsibility for my actions. And as a rock, they all depend on me. Where I was ashamed before I'm not any more, I'm strong.

Personalismo—*Personalismo* emphasizes the personal quality of interactions. Relationships, even with service providers, are considered personal as opposed to institutional. For our participants, *personalismo* was discussed in terms of attitudes toward family and neighbors in the community. *Personalismo* was expressed in terms of sharing personal information, attending personal family functions, eye contact, shaking of hands, physical proximity, placing a hand on the shoulder, and giving respect, among other examples. One participant expressed remorse in losing old personal relationships due to a fear of relapse:

Steve: You know some of my best homeboys were dope heads with me. And now that I stopped, I can't even talk to them, I can't see them man. It takes me back to that past that I do not want to have anything to do with. And we were so close; it goes against what I was brought up.

Fatalismo—*Fatalismo* is the belief that life's situations, concerns, and events are typically out of one's control. In this *tecató* subculture, a commonly expressed term was "*lo que Dios quiera*" (whatever God wants). Although faith and spirituality are not always concomitant with *fatalismo* (Abraido-Lanza et al., 2007; Fernandez et al., 2008), many in this cohort reported their interpretations of *fatalismo* as being associated with "Gods will." This attitude was expressed mostly in terms of lost opportunities and of resignation about their substance use. Numerous *tecatos* expressed recognition that heroin and alcohol use had adversely affected their lives, but they would simply continue to use until they themselves were ready to quite. For most of this cohort, *fatalismo* did not have a significant influence on their heroin use or cessation:

Jaime: Nah, I mean I believe in god, or a spirit, there is something out there, because I'm a product of it, I know, I should have been gone a long time ago, shot, stabbed, run over, wrecks, fights, you know I should have been gone a long time ago. So there has to be something greater than me, guiding me, but letting me make the choices. Even though my choices are wrong sometimes, they are my choices ... We have our own choices and path to make even though it might be pre-written, like some people say, you can change it by the right choice. You can change the whole outlook. If that was pre-written how could I make the choices, then I would only be going one way without no choices.

Male Kinship's Influence on Initiation of IDU

The second major theme was the influence of male family members and friends on the initiation of IDU. All participants reported being initiated into heroin IDU by an older brother, brother-in-law, friend, or uncle. For Mexican Americans, the patriarch is typically the head of the family as was the case for most of this cohort. Family context is predictive and critical in the development of youths' cultural orientation and the role of the adult male was a significant factor for these participants during their youth. In the case of these *tecatos*, intergenerational transmission of drug use and deviant behavioral patterns lead to IDU initiation and the development of negative aspects and traits of family life, contrary to the positive attributes represented by *familismo*. The following quote exemplifies this:

Emiliano: My family was involved in drugs. My uncles, my cousins, you know. And that's how I got into it. I started delivering for one of my uncles. I remember the first bicycle I had—my uncle bought it for me so I could make deliveries for him. I was about 6 or 7. I remember cause he would give me a bag, one of those paper sacks, and says, “Take this to Jose and don't open it, God damn it!” I'm gonna be upstairs looking; you better not open it!” As soon as I go around the house, I'd open it and look inside and I'd see a syringe and colored papers that were already packaged up.

Female Kinship's Influence on Cessation

The majority of participants in this study reported that a female relative provided the impetus for cessation or for seeking treatment. There was only one instance reported in which a girlfriend encouraged continued IDU—but she was not “family” (i.e., sister, mother, or daughter) and was also injecting heroin. Hispanic households are traditional and patriarchal. This is more evident for those less acculturated. Historically, Hispanic women have maintained the home and cared for their children and spouses, in many instances neglecting their own physical and psychological needs. The role of *familismo* is evident in this domain, but another cultural construct, *Marianismo*, is a significant contributor to these phenomena. Marianismo is defined as the veneration of feminine virtues, docility, kindness, caring, and prioritizing the needs of others. The term is based on attributes of the Virgin Mary and has been described as “bearing the cross of Christ.” It is the duty of the woman to care for members of the family regardless of psychological and physical ramifications. In this study, mothers, daughters, and sisters were reported as instrumental and essential in maintaining the health and welfare of the participants. Many of the men expressed their love

and admiration for female family members and credited them for their being alive. Many participants report that when presented with ultimatums from female kin, they were able to immediately stop:

Robert: Oh, because she's my mom. My mom is a down to earth person. God bless her soul. She wasn't stupid because she was born in the neighborhood. She's a Chicana. So, you know, you can only hide so much from your parents and my jefita [mom] would always find little match boxes from *mota* [marijuana] y *la chingada* [and shit] ... But after a while, she kept looking at it and she kept saying, "What the hell's wrong with you?" I kept seeing her eyes. *Pero, mi jefita* [mother], it played a good role in me stopping ... Also, *mi hermana* [my sister], man, cause she's like my second mother. She wasn't stupid cause she's another one born in the *barrio* [neighborhood].

Examples of female family members' influence on cessation of heroin use were numerous and profound. The next quote is one of the few times a mother actually forced her son to leave the house due to heroin use. He describes in detail how it affected his ability to quit because of the love for his mother and for fear of losing his wife:

Jose: Finally she just got tired of it and, "you know what, if you can't quit, m'ijo [son], quit coming around." So after about a month of sitting there with that on my brain and still using, I just said—fuck it. I just went through the *malias* [withdrawals], stomach pains and the monkey scratching and all that for about a month." My mom was the only one I had back at that time ... my mom is the one that had got me to stop. Even every now and then, man that hurts when I think about it. I think man, I'm gonna lose what I got [if he returns to using]. Because I'm married now, I'll end up losing her too [his wife], the house.

"Fed-Up With the Shit"

While the majority reported cessation of heroin due to female intervention, many also reported that they were simply "fed-up" with using and decided to quit for multiple reasons. This construct emphasized the ability of the men to "kick" the use of heroin by "*amarrarse los huevos*"⁴ or "manning-up." Quotes for this domain were strongly associated with *machismo* and descriptions in the data emphasized "taking the initiative" and "following through" regardless of obstacles. The following participant describes that he was just fed-up and tired of using. Incidentally, this was also the only time one of our participants reported getting off heroin for a male family member, his father.

Armando: Cause I was fed up with this shit, I was fed up that I needed it to move around, you know what I mean? To actually function, you know what I'm saying? I just got tired of it. It's something that I wanted for myself and mainly for my father, too. Cause it was wrong. It was wrong, man, and he seen that if I kept up that way I probably end up dead. I wasn't gonna amount to nothing.

⁴Literally, to *tie your eggs*. *Huevos* (eggs) is Spanish slang for testicles. In this case, the phrase is used to connote "manning up" and doing what is needed.

The following quote speaks to the desperation and realization this participant had come to in his heroin use:

Evelio: It just takes that one little push man. You know on a day where something ain't right. I have to be on guard 24 hours a day, its not you know one day I feel it one day I don't, but I know that I cannot put another needle in my arm. I just can't man ... it's pride in what I've accomplished, I've got pride in that I've stopped, stopped selling, stopped everything, stopped any interaction with that life of bad choices.

Community “Negotiated Coexistence”

Community negotiated coexistence is the last major theme to emerge from the data. This domain is associated with the cultural values of *familismo* and *personalismo*. Extended kinship networks associated with *familismo* consider most members of the community as extended “family.” Community members involved in illicit activities would be provided with the same protections individual family members are provided with and would be tolerated. *Personalismo* typically emphasizes the informal closeness and trust among members of the community; however, in this example, the reluctance to report a fellow Mexican American for illicit activities is more likely related to the mistrust of local authorities and a desire to protect community members from corrupt law enforcement. Participants described how drug use in the community was, for the most part, tolerated if not accepted. Even if there was disapproval, conventional (i.e., nondrug using) community residents did not get involved or called the authorities when confronted with illicit activities for fear of reprisal. One individual's perception was that the community was accustomed to the illicit activities because many people in the community were or had been users at one time:

Pablo: Well, it's been here forever in [neighborhood], so they kind of accept it here. They don't care really. Everybody knows everybody. Or at one time they were users, too.

Participants described a *collective ambivalence* in the community regarding a lack of willingness or inability to confront those involved in illicit activities. When asked how the community members perceived drug use in their neighborhood, one participant gave the following quote that provides some insight into why conventional community residents were reluctant to report drug abuse and crime:

Carlos: They frown on it, man. It's just like any other community. You got people that are willing to help you but other people are willing to frown on you or call the police on you. Depending upon your neighbors. They knew about it but they didn't like it. They were like shocked by it. Like, “I didn't know they did that!” But they kept to themselves, whether it was out of fear. Well, it was out of fear, I guess, yeah. I would say out of fear.

Although care and respect for community participants was endorsed, some admitted the lengths they would go regarding their addiction:

Pablo: I wouldn't care less who knew about it. Nah, I mean, I was the type of dude that, that whatever I seen or what I saw, if I wanted, I'd get it, depending if you're an 80 year old woman, or 8 year old kid, I'll take what I want but it's not me taking it, it's the drugs taking it.

Compounding these issues, participants also expressed a collective distrust of authority figures within the community.

Patricio: I guess to them [conventional community members] they still had a lot of the old culture from Mexico, like the police was the enemy. You know if a policeman drove into the neighborhood or something and was to ask anybody, there could be a dead man lying in the street and they could ask anybody what happened but nobody knows. "I didn't see nothing, I was in the back."

DISCUSSION

These findings add to the current literature on cultural values. The *Dichotomization of cultural values* was the most prevalent domain and consistent across all values and themes. Each value, *familismo*, *machismo*, *personalismo*, and *fatalismo*, was discussed in terms of both positive and negative impetuses for initiation and cessation of heroin use. Additionally, the cultural values *familismo* and *machismo* were the two most transcendent themes across all subthemes. References to the family (*familismo*) were consistent throughout the data and all themes would refer back to this dominant domain. Elements of *machismo* were present in all themes as a "backdrop" to the responses. For example, in the domain "fed-up with the shit," men expressed having to "*amarrarse los huevos*" or "man-up" in order to quit heroin use. *Machismo* was also peppered throughout certain behaviors meant to protect ones' status. For instance, methadone users went to great lengths to protect their image and reputation in the community by traveling to methadone treatment clinics far outside their own neighborhoods. In the domain "female kinship's influence on cessation," *machismo* is expressed as an unnegotiated supposition by participants' expectations that their women kin were supposed to accommodate their illicit activities and care for them when they had "*malias*" [sick from withdrawals].

For this cohort, there were many instances of quitting by "*kickeando las malias*" (kicking the withdrawals) or "quitting cold turkey." In other instances, "maturing out" of heroin use was common. Maturing out is the process of cessation of substance use due to maturity, health-related reasons, or the consequences associated with use (Maddux & Desmond, 1980; Winick, 1962). Strong family cohesion has been shown to be a significant protective factor against substance abuse and criminality (Rivera et al., 2008). It has further been shown to be strongly associated with lower levels of psychological distress and greater health outcomes among Hispanic families (Rivera et al., 2008). Conversely, living in distressed, unstable family environments and communities with increased crime provides an increased risk for participation in substance abuse, sexual activity, and illicit activities (Valdez, Mikow, & Cepeda, 2006).

In this cohort, three specific contextual factors are significant for understanding the role of cultural values among these Mexican-American men. First, many poor, urban, Mexican-

American families who live in ethnically enclosed enclaves or “*barrios*” have been found to be susceptible to intergenerational street and gang connections (Glick & Moore, 1990). These families live in neighborhoods called *barrios* that are steeped in poverty and psychosocial strife. Second, the *tecato* is a heroin-injecting Mexican Americans whose subculture maintains a distinct street identity and street-based criminal networks (Valdez et al., 2000). Third, gender roles in these families are centered in patriarchal and *machismo* paradigms that hyper-masculinize men and their position in the local society (Jorquez, 1984; Quintero & Estrada, 1998). These three contextualized identities provide a unique perspective to the meaning and interpretation of cultural values distinct from other subsets of Hispanics. The ecological paradigm asserts that individuals' behaviors are influenced by their function in a social context. The “self” is defined by social structures from multiple levels of influence, i.e., family, friends, school, work, community, and society (LeCompte & Schensul, 1999). For participants in this study, initiation and cessation were both greatly influenced by family, friends, school, work, community, and society.

The Dichotomous Cultural Values Paradigm

Culture influences perceptions of one's environment, personal responsibility, and drug use (Hongjie, Jian, Zhouping, Wei, & Zhiyong, 2010; Prado et al., 2008; Unger et al., 2002). For this study, cultural values functioned along a continuum from heroin use (negative or risk) to cessation (positive or protective). These findings are in accord with other studies demonstrating the influence of cultural values on health-risk behaviors (Chen & Unger, 1999; Unger et al., 2002). This study provides further evidence regarding the influence of cultural values on substance use. Cultural values continue to enable or inhibit recovery from substance abuse (Cuadrado & Lieberman, 2002; Valdez et al., 2008). This study suggests that a dichotomous relationship exists between the “positive” and “negative” effects of cultural values. For this particular cohort, the negative effects of cultural values greatly outweighed the positive effects. Moreover, domains concerning community, gender influence, personal ability to cease, and historical effects on heroin use and cessation were present throughout the data. Participants reported that factors directly involved with initiation were also directly related to cessation of heroin use. *Familismo* is an exemplar of this phenomenon—the vast majority reported both initiation and cessation of heroin use due to the direct influence of a family member. Moreover, while the initiation of IDU for all participants was through a male family member, cessation was, for most, influenced by a female family member. Gender in this regard played a significant role in both initiation and cessation.

Examples of this dichotomous paradigm regarding the negative and positive effects of cultural values are found in extant literature. In recovery, researchers found that men who maintained closer relationships with healthy families were more successful in maintenance of sobriety compared with those who maintained relationships with dys-functional families—a positive outcome (Lavee & Altus, 2001). In terms of substance abuse, families and social structures may enable or inhibit recovery, because cultural beliefs may dictate that substance abuse be viewed as a private family matter. In such a case, professional help and outside resources may not be considered—a negative outcome (Cuadrado & Lieberman, 2002; Soriano, Soriano, & Jimenez, 1994; Valdez et al., 2008). Further, strong family

cohesion or *familismo* has been associated with overall better mental health among Hispanics (Rivera et al., 2008). Conversely, negative “street-oriented” distressed home environments that include drug use, adults with criminal histories, and incarceration have been found to foster and contribute to deviant behaviors (Glick & Moore, 1990; Valdez et al., 2006). Children growing up in the “*barrio*” have been found to be at greater risk of criminal behavior, sexual activity, and substance abuse due to their proximity to individuals (such as *tecatos*) who carry out illicit behaviors (Valdez et al., 2006). In this study, *familismo* not only served to enable drug-using behaviors, but also served as a protective factor regarding participants' health, quality of life, living status, and ultimately, cessation.

Machismo, more than any other cultural value, is known to negatively influence health and substance use. The stigma and shame attached to drug abuse and its effects on the family also prevent or impede many Hispanics from seeking treatment. In this study, *machismo* was associated with initiation and prolonged heroin use. Individuals enrolled in methadone treatment also reported seeking out clinics in other parts of town to receive treatment due to the shame attached to not being able to “kick” heroin without formal treatment. Many stated that they preferred to drive longer distances rather than be seen at a local clinic receiving treatment. When further probed about this behavior, many stated that they would be thought of as “less than a man” for not being able to “kick” [stop using] without methadone.

“Cultural Collective Consciousness”

The authors propose the concept of the “cultural collective consciousness” to describe a phenomenon gleaned through the qualitative process. The collective community's behaviors and attitudes toward the *tecatos* are described richly in the qualitative data. The interactions between the conventional community and those involved in illicit activities are in essence bound by cultural identity where personal responsibility is based on that culturally bound behavior. For example, the quote given regarding a preference for protecting those involved in illicit activities and the unwillingness to report these illicit activities to the authorities is verbalized by the participants as “protecting your own.” These behaviors are reflected in the ambiguity, tolerance, and collective fear of community members described by participants regarding their illicit activities and the communities' lack of involvement or unwillingness to “get involved.” This concept is based on the work of Durkheim (1893), Mead (1934), and Lynch (1996) but with a central focus on the cultural influence. Culture influences the perceptions and interpretations of life's events and how they are communicated between individuals and throughout the community. Cultural beliefs and information endure and are disseminated because of the importance they provide to social groups that espouse them (Lynch, 1996). These concepts progress from individual attitudes to communal memes, and finally culminate in a “social mind” or a “collective consciousness” regarding the acceptance or rejection of certain behavioral norms (Durkheim, 1893; Lynch, 1996). Social norms, traditions, and mores are established within the socialization of family and the greater community regarding the acceptability of behaviors and actions. Activities are then contextualized according to an individual's environment, upbringing, and to a greater extent the characteristics of the community. A socialized “cultural lens” is then formed in communities defining acceptable behaviors. Therefore, activities such as substance abuse are viewed through the socialized cultural lens of that community. In this example, “the

collective consciousness” informs the community's perspective on the origins of, responses to, and remedies vis-à-vis substance abuse (Cunningham, 1994).

In economically challenged neighborhoods, a “cultural collective consciousness” of apathy and helplessness develops in reaction to negative environmental forces such as substance abuse and crime (Durkheim, 1893; Kerr, 2008; Mead, 1934). In this regard, individuals learn to act and react to certain stimuli through learned experiences, “significant symbols,” and conversations in contextualized societal relations (Kerr, 2008; Mead, 1934). If the “significant symbols” and conversations are negative in nature, individuals may participate in the negative behaviors (i.e., substance abuse, crime) or withdraw from participation in the community (i.e., unwilling to report illicit activities in the community due to fear of reprisal).

Neighborhoods with high rates of poverty and psychosocial strife, encompassed by high rates of crime and substance abuse, become less cohesive and are reluctant to engage in the monitoring needed to discourage illicit activities (Rosenfeld, Messne, & Baumer, 2001). Classic disorganization theory supports these assertions in that weak informal social controls foster criminal activities in disjointed communities (Kornhauser, 1978; Rosenfeld et al., 2001; Streeten, 2002). Individuals in this cohort live in disjointed and closed, but interconnected, enclaves situated within *barrios*. A culture of “negotiated coexistence” among conventional and criminal residents is achieved in these *barrios* through extensive neighborhood networks (Browning, 2009; Rose & Clear, 1998; Sampson & Raudenbush, 1997). The interconnectedness of these closed neighborhoods provides protection for individuals involved in illicit activities (Browning, 2009; Rose & Clear, 1998; Sampson & Raudenbush, 1997).

Studies have observed that in poverty-ridden minority communities, substance abuse and criminal activities are perceived as unavoidable and are tolerated by conventional residents (Browning, 2009; Liu, 2004; Rosenfeld et al., 2001; Silverman, 2004). This “negotiated coexistence” reinforces illicit activities because conventional residents are less likely to report criminal activities due to mistrust in authority, fear of reprisal, self-preservation, and the closed nature of these enclaves (Browning, 2009; Liu, 2004; Rosenfeld et al., 2001; Silverman, 2004). These “collective coping behaviors” to illicit activities in the community help to perpetuate the isolation and deterioration of the community for ensuing generations (Kuo, 2012).

CONCLUSIONS

This study endeavored to examine how aging Mexican-American IDUs defined traditional Hispanic cultural values, their adherence to these values, and the role these values played in their ability to stop using heroin. The ethnographic interviews elicited thick and rich descriptions of participants' drug use and the influence of cultural values. Most participants were unfamiliar with the terms used by academics to describe cultural values (i.e., *familismo*, *machismo*, *personalismo*, and *fatalismo*). Some were familiar with *machismo* mainly because of its dissemination in the English vernacular, but it was not widely recognized across participants. The academic method of labeling social behavior raises an

interesting discourse regarding the ability to disseminate and communicate findings to the general public. The challenge for researchers who assign terms to behaviors is the “goodness of fit.” Often researchers will use a term to describe a behavior rather than describe the behavior itself. This post hoc method of describing behaviors may not always be accurate. This study asked participants for descriptions of values and behaviors and then looked for corresponding terms in the literature. Cultural values exist in all cultures but the expression and interpretation may be different from one culture to another. Further research on cultural values across groups is needed to better understand cross-cultural differences.

Culture influences perceptions of substance use and how these perceptions are communicated within the community (Cuadrado & Lieberman, 2002; Hongjie et al., 2010; Prado et al., 2008). In the case of substance use, culture can influence familial views for causes, responses, assistance, enabling, and personal responsibility (Cunningham et al., 2010; Hongjie et al., 2010). Integrating cultural values into traditional psychotherapeutic and psychopharmacologic treatments for substance abuse, such as cognitive behavioral therapy, motivational interviewing, acceptance and commitment therapy, and medication therapies such as methadone, Suboxone, and Antabuse, can greatly improve the effectiveness of future interventions. A practitioner's understanding and application of cultural values in treatment as well as incorporating positive elements of familial relationships for support could potentially increase positive outcomes for substance users.

One limitation of this study is the homogeneity of this population. The ability to generalize, even to other IDU populations, is limited by the unique experiences of these individuals including the time in which most were introduced to IDU. The Vietnam War, public opinion on drug use in the 1960's, deviance containment, and the marginalization of Mexican Americans during these times contributed greatly to the development of this culture and substance-using nature. Although *barrios* exist today, their experiences, types of drugs commonly used, and public perception of drug use are different.

Themes, such as filial responsibility, community, Mexican-American culture, male initiation of drug use, female support for cessation of drug use, historic trauma, and cultural values, should be further explored in larger, multiethnic longitudinal studies. Findings from this study could be disseminated and integrated into clinical practice, program development, and research interventions for those dealing with addiction and their families. Future studies are warranted to determine other cultural mediators associated with substance abuse.

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Biographies

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Luis R. Torres, Ph.D., is an Assistant Professor in the Graduate College of Social Work at the University of Houston and a researcher with both the Center for Drug and Social Policy Research and the Child and Family Center for Innovative Research. Prior to coming to the University of Houston, Dr. Torres completed a two-year National Institute of Drug Abuse (NIDA)-funded Post-Doctoral Research Fellowship in the George Warren Brown School of Social Work at Washington University in St. Louis. His research agenda focuses on health disparities, specifically cooccurring mental health, substance use and medical disorders in Hispanics, and on family-strengthening efforts with a focus on Hispanic communities. He is currently the Project Director of an NIDA-funded study examining health consequences of long-term injection heroin use in aging Mexican-American men. Dr. Torres is also a Co-Principal Investigator in a national implementation evaluation of grantees in the federal Hispanic Healthy Marriage Initiative, focusing on issues of cultural resonance and cultural adaptations, and a Co-Principal Investigator in a national study examining programs that serve Hispanic fathers. Dr. Torres, a native of Puerto Rico, has a Doctorate in Clinical

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Isabel Torres, Dr.P.H., is an Associate Professor at the Graduate College of Social Work, University of Houston, and a Visiting Associate Professor in the Department of Palliative Care and Rehabilitation Medicine and the Dorothy I. Height Center for Health Equity and Evaluation Research at the University of Texas MD Anderson Cancer Center. Her current area of research addresses ethnic health disparities in palliative cancer care with an emphasis on factors that influence the quality of advanced cancer care among underserved or vulnerable populations. She recently completed a National Cancer Institute (NCI)-funded research supplement to Promote Diversity in Health-Related Research titled “Caregiver Assessments of the Quality of Home Hospice Care: A Comparison Across 3 Ethnic Groups” and is expanding this line of inquiring through a 5-year NCI-funded Mentored Research Scientist Development Award (K01), titled “End-of-Life Treatment Preferences of Latino Medicare Beneficiaries with Cancer”. Dr. Torres has extensive expertise in conducting cross-national surveys that include the successful completion of three landmark cross-national surveys of Latin American physicians assessing the quality of advanced cancer care, parenteral hydration prescribing patterns, and attitudes and beliefs regarding communication with advanced cancer patients. Her research training and experience spans cross-cultural health, health services organization, survey and intervention design and analysis, and qualitative research methods. Her research interests include cancer health disparities, community-based participatory research, palliative and geriatric care, international health, medical mistrust/racism, and informed decision making. The recipient of numerous academic, research and community awards, Dr. Torres was recently invited by Lancet Oncology to participate in the 2011 Latin American Oncology Summit and in the Commission on the Status of Cancer Care in Latin America report to be published in 2013. Dr. Torres has well established, strong relationships with the Latino community(ies) and a proven track-record of successful collaborations with numerous members (investigators/core directors) of the proposed cross-institutional/disciplinary IHEC-TCC.

Patrick S. Bordnick, Ph.D., M.P.H., M.S.W., is the Director of the Virtual Reality Clinical Research Lab, the Child and Family Center for Innovative Research, the Center for Drug and Social Policy Research, and a behavioral scientist. Dr. Patrick S. Bordnick is a Professor with the Graduate College of Social Work, University of Houston. Dr. Bordnick has over 17 years experience in clinical and laboratory research on cocaine, marijuana, alcohol, amphetamine, and nicotine addiction. His research interests include clinical medication trials, treatment development, human laboratory studies, virtual reality, and novel data collection/techniques. Dr. Bordnick received research grants from the National Institutes of Health (NIH) grants for nicotine craving, alcohol craving, and vocational rehabilitation (VR) alcohol treatment development. Dr. Bordnick is also a Coresearcher on many NIH-funded projects and has had numerous state and privately funded projects on drug craving and reactivity. Dr. Bordnick received an international award in 2004 for outstanding scientific merit in VR drug abuse research from the Canada Chair in Cyber Psychology. As a human-computer interaction (HCI) futurist, Dr. Bordnick envisions a world where humans interact seamlessly with technology, to improve teaching, research, therapy, and aid in knowledge building. Using technology to solve real-world problems has been the hallmark of Dr. Bordnick's work. His current projects include virtual reality systems for assessing drug use triggers and craving, virtual reality treatment software for nicotine dependence, virtual reality programs for studying drug use contexts, web-based self-help programs for obsessive-compulsive disorder (OCD) and program to aid veterans locate resources, and testing clinical teaching systems based on artificial intelligence platforms. Dr. Bordnick is one of the foremost experts in the world on virtual reality cue reactivity.

Yi Ren, M.A., is currently a Ph.D. student of the Graduate College of Social Work at the University of Houston since 2011. Yi received a Bachelor's degree in English Culture and Language from the University of International Relations in Beijing, China, in 2002. In 2004, she received a Master's degree in Social and Public Policy with an emphasis on China's welfare policy design from Leeds University in England. In 2011, she received her second Master's degree in Sociology from the University of Houston. Yi's professional and research interests included cross-ethnic and cross-national research in child welfare policy and substance abuse.

Melissa I. M. Torres, M.S.W., is a Ph.D. student at the University of Houston's Graduate College of Social Work. She is currently a Research Assistant for at the University of Houston's Center for Drug and Social Policy Research and the University of Texas Health Science Center's School of Public Health. Her work, internship, and volunteer experiences have ranged from being an outreach worker to conducting HIV tests to researching and advocating for child trafficking victims during legislative sessions of Texas. Her research interests include international sex trafficking, global AIDS, IDUs, conflict, and crisis response, all from a feminist perspective and with a focus on Latina/os. Her current projects and research focus on heroin use in Latino communities, Latinas in the international sex trade, and HIV risk behaviors among high-risk social networks.

Freddy Deleon, M.S.W.

Irene Pericot-Valverde is a Ph.D. student at the Department of Psychology of the University of Oviedo, Spain. In 2009, Irene completed her degree in Psychology from the University of Barcelona and finished her Master degree on Personality and Behavior in 2010. In the same year, Irene has been awarded with a predoctoral scholarship at the University of Oviedo. Mrs. Pericot-Valverde research field is focused on the efficacy of virtual reality exposure techniques for smoking cessation. As a member of the Addictive Behaviors Research Group at the University of Oviedo, her major research areas are the assessment, prevention, and treatment of addictive behaviors. Specifically, her research lines are the use of contingency management techniques, the assessment of impulsivity and neuropsychological functioning, and the use of cue exposure treatment through virtual procedures.

Tenee Lopez is currently an undergraduate student attending the University of Houston with a major in biochemistry. She began taking an interest in research while enrolled at the University of Texas at Brownsville during her freshman year and worked with Dr. Luis Colom in his Septo-Hippocampal Pathophysiology lab. But it was not until she became a recipient of the NIDA Underrepresented Minorities 2011 Summer Research Program that she began to focus on drug abuse research. Once at the University of Houston, she began working with Dr. Luis Torres in the Center for Drug and Social Policy Research. Then during the summer of 2012, she undertook a project with Drs. Patrick Bordnick and Luis Torres as part of University of Houston's Summer Undergraduate Research Fellowship (SURF) program. She is also a proud midshipman in the Naval Reserve Officers Training Corps (NROTC) program at Rice University to serve as a commissioned officer upon graduation, with the hopes of becoming a Naval doctor in the near future.

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TABLE 1

General demographics ($N = 26$)

	n	%	$\bar{x}$	SD
Age (range 45–75)			58.9	9.4
Nativity				
United States	26	100.0		
Education				
No high school	13	50.0		
GED	12	46.2		
Some college/grad	2	7.7		
Years formal education	8		8.2	8.5
Marital status				
Single	7	26.9		
Married	7	23.1		
Cohabiting	1	3.8		
Separated or divorced	12	49.2		
Have at least 1 child	21	80.8		
Employment				
Employed	4	15.4		
Unemployed	5	19.2		
Disabled	5	19.2		
Retired	12	38.5		
Currently homeless	2	7.7		
Problems with family over past 6 months				
Never	14	53.8		
Sometimes	10	38.5		
Often	2	7.7		
Satisfied with family interaction				
Somewhat	6	23.1		
Very much	20	76.9		
Family encouraged cessation of drug use				
Never	12	46.2		
Sometimes	4	15.4		
Often	10	38.5		
Age of 1 st time heroin use			17.1	5.2
Age when started weekly use			18.5	5.4
Age when last used heroin			51.3	8.9
Average duration of heroin use			31.15	11.54