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Article

La desesperación in Latino migrant day laborers and its role in alcohol and substance-related sexual risk

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ABSTRACT

The purpose of this study was to better understand the relation between psychological distress and alcohol and substance related sexual risk in Latino migrant day laborers (LMDLs). In addition to examining the roles of depression and anxiety, it was also necessary to examine the role of *desesperación*, a popular Latino idiom of distress frequently expressed by LMDLs in response to the thwarting of major migration related life goals such as traveling to the U.S. in search of work to support families, projects and purchases in country of origin. Given the structural vulnerability of LMDLs to under-employment and frequent unemployment, LMDLs also refer to *desesperación* as a prelude to problem drinking, substance use, and sexual risk taking. Hence we developed and validated a scale of *desesperación* for LMDLs to explore this culturally relevant construct of psychological distress in this unique population of Latinos. Based on a cross sectional survey of 344 LMDLs, this study found that the *dissatisfaction* subscale of *desesperación* predicted alcohol-related sexual risk taking, while depression predicted substance-related sexual risk taking. These findings are discussed including implications of preventing alcohol and substance related sexual risk taking in LMDLs.

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En la desesperación puede ser que se siente uno solo, deprimido y triste y lleva el momento en que uno caiga.

[In a state of desperation, one can feel alone, depressed and sad and therein lies the moment when one falls].

The above quote is from one of the 12 Latino Migrant Day Laborers (LMDL) participating in a HIV prevention group, conducted by the first author, that were asked when they were most at risk for problem drinking and sexual risk taking. When this man answered, “Cuando estoy desesperado” [When I’m desperate], the facilitator asked what he meant by this term.

Latino migrant day laborers

LMDLs supply labor to the informal day labor market, a population composed almost entirely of impoverished and undocumented men from Mexico and Central America who gather at street corner work pick-up sites, in front of paint shops and hardware stores, to solicit temporary work (Valenzuela, 2003). In their National Day Labor Survey (NDLS), Valenzuela, Theodore, Melendez, and Gonzalez (2006), estimated this population to exceed 117,000 on any given day, with

about 40,000 in California (Gonzalez, 2007), providing cheap labor to the housing and building construction industry, landscape and gardening, moving furniture, and several other odd jobs. With regard to background characteristics, results from a survey of 481 male LMDLs conducted by Valenzuela (2003) in California, where the current study was conducted, describes them as predominantly Mexican (77%), and Central American (20%), 84% undocumented, 34 years of age and 7 years of education on average, 53% in the U.S. for less than 5 years, and 50% married or having a partner. While the NDLS is nearly a decade old, its historical import includes being the first and only national survey to yield baseline data to which to compare. For example, the current sample is about evenly divided between Mexicans and Central American, 92% undocumented, 40.5 years of age and 7.3 years of education on average, 15% in the US for less than 5 years (average=12.5 years), and 48% married or having a partner (see Table 1). Thus, our sample is older with more years in the U.S., most likely due to what we observe to be an aging segmented population, and the greater number of Central Americans reflects the Bay Area’s history as a popular destination for such immigrants.

Day laborers experience prolonged separations from home and family in their countries of origin, typically lasting years given the cost and danger of border crossings that inhibit circular migration. While such family sacrifices are viewed as a trade-off for earning money in the U.S., NDLS data demonstrated years ago that day labor is

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Table 1
Background characteristics of Latino migrant day laborers sample (N=344).

Characteristic	%	Mean	SD
Recruitment site			
San Francisco	75.9	–	–
Berkeley	24.1		
Nationality			
Mexican	46.5	–	–
Guatemalan	30.8		
Salvadoran	11.6		
Honduran	7.3		
Other	3.8		
Age at interview			
18–19	1.2	40.5	10.8
20–29	14.3		
30–39	33.7		
40–49	29.8		
50–59	18.3		
60–81	3.5		
Years in United States			
< 1–4	12.5	14.0	9.5
5–9	24.7		
10–19	40.7		
20–54	22.1		
Indigenous identity			
Non-indigenous	87.8	–	–
Indigenous	12.2		
Documentation status			
Undocumented	91.9	–	–
Green card	4.4		
Other residency	2.7		
Citizen	1.0		
Marriage status			
Married/partner	47.6		
Years of schooling completed			
≤ 6	48.6	7.3	3.4
≥ 7	46.5		

characterized by underemployment, frequently unemployment, with the vast majority earning wages below the federal poverty threshold (Valenzuela et al., 2006). Since the publication of the NDLS, the great recession, beginning in 2008, has only worsened the economic situation. Thus, vulnerability to poverty and psychosocial and health problems appears built into the LMDL experience.

Structural vulnerability to psychosocial and health problems

The structural vulnerability of LMDLs refers to their *positionality* in the U.S. characterized by harsh living and working conditions produced and reproduced by particular sets of global economic, political, social, and cultural factors (Organista et al., 2012). As such, structural vulnerability is inversely related to health and wellbeing in which documented problems such as alcohol and substance use and sexual risk taking are embedded. Our structural vulnerability framework derives from Gupta, Parkhurst, and Ogden (2008) who conceptualize health risk, and sexual HIV risk in particular, as a continuum of causality beginning with distal structural and environmental factors leading to proximal situational and individual level factors. For day laborers, structural environmental factors include lack of access to work authorization resulting in an undocumented population of workers generally earning poverty wages in exchange for difficult and dangerous work, and subsequent poor living conditions, thousands of miles from home and families (Organista et al., 2012). As documented below, the day labor experience results in considerable distress at the individual level, lack of healthy social networks and resources, lives restricted by immigration surveillance, and consequent participation in risky situations that increase the probability of problematic

drinking, substance use, and sexual risk taking given the lack of healthier options.

Challenging working and living conditions

Research on LMDLs documents lack of work as central to economic hardship manifested in inadequate housing and occasional homelessness, indebtedness, and difficulty maintaining relationships with partners in country of origin, or in establishing such relationships in the U.S. (Duke, Bourdeau, & Hovey, 2010; Negi, 2011; Nelson, Schmotzer, Burgel, & Crothers, 2012; Ordoñez, 2012; Organista et al., 2013; Quesada, 2011; Worby & Organista, 2013; Worby et al., 2014). A study of 219 San Francisco based day laborers found that two-thirds reported not getting enough to eat, and over half reported poor or fair health, problems associated with duration as a day laborer and financially supporting three or more people (Nelson et al., 2012). In a study of 89 LMDLs from 3 work pick up sites in the Los Angeles, Bacio, Moore, Karno, and Ray (2014) found that migration-related stress (i.e., job-related problems, daily hassles related to being a day laborer, missing children back home, etc.) was negatively related to self-reported health, which was in turn negatively related to depression. A study of over 100 day laborers surveyed in the San Francisco Bay Area found that almost 60% reported high rates of stress related to unstable lives, relationship and communication difficulties, and alcohol/substance use (Duke et al., 2010). Problematic alcohol and substance use, including in relation to work injury and sexual risk taking, have been the focus of most LMDL research as described below.

Work injury

Studies of work injury document its prevalence and negative impact on earnings, health and mental health. For example, 20% of NDLS participants reported work-related injuries with the majority receiving no medical attention (Valenzuela et al., 2006). In San Francisco, Walter, Bourgeois and Loinaz (2004) documented chronic anxiety about getting injured in day laborers given work characterized by a lack of safety equipment and training yet economic pressure to take dangerous chances. Further, when work injury did occur, Walter et al. found that it was typically internalized as personal failure to fulfill one's role as a provider to family back home, thus leading to shame, depression and inhibited communication with family. In a subsequent ethnographic study of 40 LMDLs in San Francisco, Walter et al. (2004) found that work injury was accompanied by depression, anxiety, alcohol and substance abuse.

Alcohol and risky sexual activity

Several studies document problematic drinking among LMDLs (Duke et al., 2010; Galván, Ortiz, Martinez, & Bing, 2009; Negi, 2011; Nelson et al., 2012; Solorio & Galvan, 2009; Worby et al., 2014) with emphasis on binge drinking. For example, in Nelson et al's. (2012) study of 219 San Francisco day laborers, they found only 3.2 drinking days per month or less yet a mean of 8.2 drinks on days in which drinking occurred. Further, drinking was greater in LMDLs with three plus years in the U.S. as compared to newcomers. A study of 365 Los Angeles day laborers also reported a history of binge drinking in nearly half of the sample as defined as 6 drinks or more at least once a month during the past year (Solorio & Galvan, 2009). Similarly, a survey of 102 LMDLs in Berkeley, California, found that seven beers was the average number of drinks per sitting, with a weekly average of more than 16 drinks, and that sexual relations commonly co-occurred with drinking (Organista & Kubo, 2005).

With regard to context, Worby et al. (2014) found in their qualitative study of 51 LMDLs that intentions to avoid drinking were common but frequently undermined a host of social–environmental

factors such as stressful living and working conditions, and being undocumented and separated from family. Peer pressure on the part of roommates in crowded housing was also reported by LMDLs as contributing to problem drinking (Worby & Organista, 2013).

With regard to HIV infection, 10% of 180 LMDLs in post-Hurricane Katrina New Orleans reported such a history in addition to sex with female sex workers (FSW) reported by nearly three-quarters of the sample, half of whom used condoms inconsistently (Kissinger et al., 2008). Binge drinking was also reported by two-thirds of the 75% of the sample reporting drinking during the past week. In a subsequent study of 125 post-Katrina New Orleans LMDLs, followed over an 18 month period, Kissinger et al. (2012) documented low condom use with regular partners, medium use with casual partners, and highest with female sex workers who appear to have provided condoms to LMDL clients. However, binge drinking was found to be associated with sex with FSW, while substance use was associated with inconsistent condom use with FSW and casual partners as was mobility within and outside of the state. Protective factors included having a regular partner and belonging to a social organization such as a church.

Substance use

While a review of the literature on problem drinking in Latino labor migrants in general, and LMDLs in particular, reveals alcohol to be the substance of choice (Worby & Organista, 2007), a handful of studies have focused on use of other substances, especially in post-Katrina New Orleans where day laborers were welcomed in efforts to rebuild the city. For example, in-depth interviews with 52 LMDLs in New Orleans revealed initiation and periods of daily use of crack cocaine, a drug not previously associated with Latino immigrants (Valdez, Cepeda, Negi, & Kaplan, 2011). In the latter study, *Fumando la piedra* [smoking crack cocaine] was attributed to a flourishing open air drug market and reported feelings of isolation and victimization on the part of LMDLs (i.e., worker rights abuses and wage theft by employers; being robbed of cash on the street given lack of access to bank accounts on the part of undocumented LMDLs). These LMDLs averaged 28 months since arriving in New Orleans and initiating high use of Marijuana (96%), Alcohol (90%), Cocaine (64%), and crack cocaine (48%).

The above psychosocial stressors, conducive to substance use in New Orleans, were corroborated by Negi (2011) in a focus group with 11 LMDLs, as were protective factors such as being able to send remittances back home, supportive friendships, and practicing one's religion (i.e., faith and attending church). However, Negi also noted the difficulty in securing such protective factors within the day laborer experience. Finally, Mills et al. (2013) conducted quarterly surveys with post-Katrina New Orleans LMDLs (N=93), over two and a half years, and found high rates of sex with female sex workers (76%), sex between men (73%), and crack cocaine use (86%), all more likely to have occurred since arriving in New Orleans rather than prior to migration, with the exception of binge drinking (27%). Further, men living with family in New Orleans were less likely to report sex with sex workers, yet men earning over \$465/month were more likely to report cocaine use.

Taken together, the New Orleans studies provide a compelling illustration of structural vulnerability to risky alcohol and substance use and sexual activity within a local environmental of pronounced access to such risky activities. One quote from the above study by Valdez et al. (2001) is especially relevant to the current study:

Desperation has caused me to use [crack] more. There is no work. I try to always keep some money in my pocket but when four or five days pass without work I get a feeling of despair. This causes me to use. I have nothing to do or keep me occupied. (p. 740)

Desesperación

The above quote, like the one at the beginning of this article, reveals use of the term *desesperación* by LMDLs as a prelude to risky behavior resulting from the thwarting of major migration-related life goals such as coming to the U.S. in search of work to support one's family. As such, this important construct warrants further conceptualization and research. Unfortunately, the literature on *desesperación* is very underdeveloped, characterized by a handful of studies mentioning use of the term by LMDLs to refer generally to the discord in their lives (Quesada et al., 2014), and more specifically to the dilemma of needing to leave one's family for prolonged periods, in order to support it, that could result in losing one's family (Organista et al., 2013). Shedlin et al. (2006) found that recent Latino immigrants in New York used the term *desesperación* to refer to frustration resulting from social isolation and not knowing local laws or acceptable behavior. Thus, to begin filling this gap in the literature, *desesperación* warrants better conceptualization and inclusion in studies of psychological distress in Latinos in general and LMDLs in particular as addressed below.

Desesperación is operationalized here as a culturally relevant Latino construct of psychological distress that contains elements of depression (e.g., sadness and despair expressed in the above quotes) and anxiety (e.g., worry about supporting family, losing family, anxiety about work injury as reviewed above) but also seems different from these two constructs of psychological distress. The difference from depression and anxiety was inferred from our qualitative data on *desesperación* and LMDLs, as well as our collective cultural familiarity with the term. We inferred this difference to include feelings resulting from the thwarting of the central migration-related goal of earning money and supporting one's family. More specifically, feeling such as frustration, angst, and feeling overwhelmed were inferred from many expressions of *desesperación* that included depression and anxiety, their synonyms, but often did not. In fact, the following quote explicitly excludes depression in its detailed reference to *desesperación* in the context of very difficult living and working conditions:

Because if you remember on TV and all there was news of a recession in the country and jobs were less...My kids, my mother, I can't help them with anything, there are no jobs. So you fall into a state of desperation....That period of time only lasted 4 months for me and I was able to skip it. I feel like right now that's behind me but what tomorrow holds remains to be seen.....I'd never gone through anything like that in my life to the point that several times I had to eat breakfast at the church because I didn't have anything. I woke up with only a quarter in my pocket. It's not that I would stay sleeping in the house or depressed in there, nothing like that. I would wake up, wash my face and run to the corner.....to Cesar Chavez [Ave.] or Bryant [St.] and 26th [to look for work].

Thus, as a culturally relevant idiom of distress, *desesperación* is expressed by Latino populations in general, but is conceptualized here as contextually relevant to LMDLs given the frequency with which they use the term to express distress in response to obstacles to achieving their most central goals of earning money to support families and projects back home such as buying a car, home, starting a small business, etc.; and as a prelude to succumbing to risk behaviors reviewed above.

Conceptualized here as a construct of psychological distress, *desesperación* is expressed by LMDLs in response to the multiple challenges of day labor in the U.S., many of which are captured in inventories of migration-related stress designed to assess a broad array of problems related to migration. For example, Hovey's (2001) Migration Stress Inventory (MSI), first used with a small sample of 102 LMDLs, revealed a four factor structure consisting of alcohol and substance use, relationship problems, communication

problems (e.g., with family), and lifestyle instability (Duke et al., 2010). More recent use of the MSI with a small sample of 89 LMDLs found a different factor structure of migration problems: job conditions, offspring (e.g., worry), migration (e.g., passage difficulties), and everyday hassles (e.g., transportation). Thus migration stress constitutes a broad inventory of problems while *desesperación*, conceptualized here as construct of psychological distress, is a response to migration stress.

Given this first ever effort to operationalize and measure *desesperación*, specifically for LMDLs, we would characterize its development as involving grounded theory based on the triangulation of three sources of data: (1) ethnographic research with LMDLs in which the theme *desesperación* emerged and was extensively queried; (2) review of scant literature which included a few anecdotal references to *desesperación* expressed by LMDLs; and (3) from our lifelong collective familiarity with the term as a predominately Latino research team able to develop and refine scale items as described in [Methods](#) section.

The current study

Collectively, the above review of the literature conveys the embodiment of LMDL structural vulnerability as manifested in symptoms of depression, anxiety, and the popular cultural idiom of distress, *desesperación*. The purpose of this study was to better understand the relation between these forms of psychological distress and alcohol and substance related sexual risk in LMDLs in the San Francisco Bay Area. To achieve this goal, it was necessary to develop and attempt to validate a scale of *desesperación* for our study population. The following exploratory research questions were addressed in this study:

1. Can a scale of *desesperación* be validated to better understand psychological distress in LMDLs?
2. What is the relation of psychological distress (i.e., *desesperación*, depression, anxiety) to alcohol and substance related sexual risk in LMDLs?

Methods

Study design

A cross sectional survey of major LMDL work pick-up sites in San Francisco and Berkeley, was conducted over a 6 month period from February to July of 2014. In San Francisco, the 4 most active and populated work pick-up sites were sampled until interviewers exhausted available and interested day laborers. These 4 sites included one mega site located within, and on the streets surrounding our community partner, the San Francisco Day Labor Program (DLP) (4–6 dozen workers waiting each morning on average), two small sites (12–18 workers on average) and a one medium sized (2–3 dozen on average) work pick up site. A work pick up site in city of Colma was added when it was discovered that younger day laborers from San Francisco frequented this medium sized site bordering San Francisco to the south. In Berkeley, the one mega site, surrounding our community partner agency, and spanning the 6–8 block along Hearst Street corridor, was similarly surveyed (see [Table 1](#)).

Participants

Participants were 344 LMDLs, 261 (76%) from San Francisco and 82 (24%) from Berkeley, proportions deliberately sampled to reflect proportionate differences in city sizes in square miles (i.e., 49 & 10.5, respectively): San Francisco is 78% larger than Berkeley which in turn

is 22% the size of the former. While an imperfect proxy, proportions of LMDLs sampled from San Francisco and Berkeley are consistent with our observations of population size differences between the two cities over our past decade of research with this population. In order to conduct various planned statistical analyses, a power calculation was conducted and yielded a minimum sample size of at least 300.

To be included, LMDLs had to be Latino male day laborers 18 years of age or older, speak Spanish, earn more than 50% of their income from day labor, and have worked at least 3 different jobs in the past 6 months, but none more than two months. Inclusionary criteria were intended to approximate “full time” day labor status versus a few who use day labor to supplement regular part-time or full-time work. While a total of 346 LMDLs were surveyed, data from two participants were excluded when it became apparent during the interviews that one man was inebriated while the other did not understand the questions (i.e., answering “Don’t know” to most items until the interviewer terminated the survey), because he was indigenous and spoke only some Spanish as a second language.

Procedures

Participants were recruited using convenience sampling informed by: (1) regular research team meetings to monitor and adjust proportions of participants from San Francisco and Berkeley, as well as background characteristics (e.g., because men sampled from within the DLP were older than men waiting for work outside on the surrounding streets, we increased recruitment of the latter and decreased recruitment of the former); (2) over a decade of previous LMDL survey research by team members in San Francisco (Quesada, 2011) and Berkeley (Organista and Kubo, 2005) that familiarized us with locations and various sizes of work pickup sites; (3) knowledge of study population by our LMDL-serving community partners: 2 embedded within the San Francisco and Berkeley mega sites, and the other a block from one of the two smaller San Francisco sites; and (4) 3 years of pre-survey ethnographic research conducted by our research team. These multiple sources of information and experience allowed our team to map out in advance, and reconfirm through naturalistic and participant observation, the most active and populated work pick up sites to sample, and to adjust sampling when necessary.

Our 3 subcontracted community partner agencies, each of which serves LMDLs in various capacities, facilitated recruitment by introducing our study and team to LMDLs both inside the agency, as well as outside at pick up sites, for 3 years prior to the survey during which time we conducted ethnography in order to develop our survey instrument (i.e., selection of existing scales and development of *desesperación* scale described below). Thus, when potential survey participants were approached by interviewers, most were familiar with our presence in the community and our study described as learning about the day laborer experience including sexual health, alcohol and substance consumption.

Interviewers screened potential participants by reading a script briefly describing the study, inclusionary criteria, voluntary and anonymous nature of study, and offering an incentive of \$40 for participating in the survey. If interested, the majority of participants were escorted to nearby private offices within our community partner agencies where the interviewer read them informed consent and, if agreeable, administered the survey in Spanish using a computerized laptop version of the survey instrument. Only in about 10% of interviews (i.e., when agency was too far from work pick up site) were interviews conducted in nearby cafes screened in advance for sufficient quietness and privacy, as well as café owner consent. There were no refusals to participate; only on rare occasion (less than 5%) was the opportunity to work chosen over participation.

Interviewers were a team of predominately BA level, bilingual and bicultural Latino young adults trained by the researchers to recruit, screen, and administer the survey to participants. Included was a middle aged day laborer referred by a community partner agency to participate on the research team as expert informant (e.g., to consult when developing scale constructs such as *desesperación*) and on the interview team.

Measures

Demographics and migration-related background characteristics

Basic demographic background characteristics such as age, education, marital status, etc.; were collected in addition to more population specific variables such as country of origin, language fluency (e.g., Spanish, English), ethnicity (e.g., indigenous), history of migration to the U.S., etc. To assess documentation status, five items were adapted from the NDLS (e.g., citizenship, work authorization, asylum status, etc.) and updated to reflect newer forms of documentation (e.g., U-visas for victims of violent crime; the 2012 Deferred Action for Childhood Arrivals program). Table 1 contains the demographic profile of our survey sample.

Desesperación

To capture *desesperación* as operationalized above, 13 items were developed by our team to assess the frequency with which participants currently experience a variety of negative moods (e.g., frustration, feeling overwhelmed, anger, disappointment) in response to thwarted major migration-related life goals (e.g., lack of progress in one's life, not earning money needed). The process of item development utilized by our team involved the following: (1) conferring with our qualitative data on *desesperación* and LMDLs; (2) conferring with anecdotal literature on *desesperación* and LMDLs; (3) using the team's collective cultural familiarity with *desesperación* to discuss and decide upon candidate items for field testing; (4) refining items by field testing a draft of the scale by conducting 6 cognitive interviews with LMDLs to assess both comprehension of items as well as more openly asking if the items reflected their current knowledge and/or experience with *desesperación*.

Similar to scales of depression and anxiety, *desesperación* items were assessed on a 5-point Likert scale (from All of the time to Never with Sometimes as a mid-point) and examples include: How often do you feel frustrated by the lack of progress in your life? How often do you feel angry about not earning the money that you need? Examples of reverse scored dissatisfaction items, intended to minimize a response set, include: How often do you feel satisfied with the progress in your life? How often do you feel content with your situation here in the U.S.? Finally, given the description of *desesperación* as a prelude to risky behaviors on the part of LMDLs, a 14th item inquired about the frequency of falling into various vices or *vicios* (as the men say) or problematic responses to *desesperación*: Do you sometimes feel so desperate (*desesperado*) that you allow yourself to fall into the following problems? Examples of options include drinking too much, using drugs, having sexual intercourse without condoms, getting into arguments, etc. (Check all that apply) (see Appendix A).

Depression

Symptoms of depression were assessed with the 10 item version of the Center for Epidemiological Studies Depression Scale (CES-D), known as the Boston short-form CES-D (Kohout, Berkman, Evans, & Cornoni-Huntley, 1993), that retains the original 4 point response scale from Radloff's (1977) original 20 item version of the CES-D. This version was selected based on its satisfactory psychometric comparison to the full (20-item) CES-D when used with Mexican migrants (Grzywacz, Hovey, Seligman, Arcury, & Quandt, 2006). The CES-D assesses how often, over the past week, a person has experienced symptoms of

depression such as restless sleep, poor appetite, feeling lonely; with following responses options (0=Rarely or None of the Time, 1=Some or Little of the Time, 2=Moderately or Much of the time, 3=Most or Almost All the Time). Scores range from 0 to 30, with high scores indicating greater depressive symptoms. A slight alteration of items was made by our team from the first person verb form (i.e., "During the past week, I felt depressed") to the second person ("During the past week, you felt depressed") to be consistent with the phrasing of the rest of our interviewer-administered survey instrument. The CES-D evidenced high internal reliability consistency with our sample as indicated by an alpha coefficient of .82.

Anxiety

Symptoms of anxiety were assessed by the 7-item Generalized Anxiety Disorder screening instrument (GAD-7) (Spitzer, Kroenke, Williams, & Lowe, 2006). The Spanish version for Mexico made available by the publishers of the instrument was used (<http://www.phqscreeners.com/>). Anxiety scores are calculated by assigning scores of 0, 1, 2, and 3, to the response categories of Not at all, Several days, More than half the days, and Nearly every day, respectively. GAD-7 total score for the seven items ranges from 0 to 21 with scores of 5, 10, and 15 representing cutoff points for mild, moderate, and severe anxiety, respectively. The GAD-7 evidenced high internal reliability consistency with our sample as indicated by an alpha coefficient of .85.

Alcohol and substance related sexual behavior

Assessment of sexual risk during the past 6 months included unprotected sex with various types of partners, such as female and male sex workers and non-sex workers and transgendered females; and types of sexual behaviors such as anal and/or vaginal sex. These items were adapted from those developed by Galvan, Ortiz, Martinez and Bing (2009) to assess sexual behavior in LMDLs. We modified these items by embedding question about alcohol and substance use: "Yes" to any reported vaginal or anal sex triggers a short series of follow up questions regarding the frequency with which the respondent drank alcohol before or during sex, used substances before or during sex, and used condoms (Always, Most of the time, Half of the time, Less than half of the time, Never). For the purpose of this study, sexual risk is dichotomized as Yes (1) if alcohol use before or during sex was greater than Never with any of the above sex partners other than a regular monogamous sex partner, and No (0) if Never. The same dichotomy of sexual risk was calculated for substance-related sexual risk. In the case of substance use, participants were asked how often they did drugs like crack, cocaine or methamphetamine ("Tina", Crystal) before or during vaginal and/or anal sex with different types of sex partners.

Analysis of data

One-way frequencies and measures of central tendency and variability were computed to characterize the sample. Prior to performing analyses, positively worded items were reverse scored so that higher scores indicated more *desesperación*. Exploratory factor analyses (EFAs) were performed to investigate the factor structure of the *desesperación* scale. EFAs were performed using Mplus 7.3. Due to the ordinal nature of the *desesperación* items, factor loadings were estimated using weighted least-squares with a mean and variance adjustment (Mplus estimator WLSMV) (Rhemtulla, Brosseau-Liard, & Savalei, 2012). The number of factors retained was based on the number of eigenvalues > 1, and any two of the three following global model fit criteria being met: Bentler's comparative fit index (CFI) ≥ .95, the root mean square error of approximation (RMSEA) ≤ .06, and the standardized root mean square residual (SRMR) ≤ .08 (Hu & Bentler, 1999). Multifactor solutions were rotated using the geomin algorithm (Browne, 2001). Following extraction of latent factors via

EFA, each factor's subscale was evaluated for internal consistency reliability via Cronbach's coefficient alpha, computed in Stata 13. Convergent and divergent validity were then assessed using Pearson correlations in Stata 13.

Predictive validity was assessed by regressing the alcohol use during sex and other substance use during sex risk variables onto the *desesperación* subscales along with anxiety and depression using logistic regression analysis in Stata 13. Results of scale validation analyses and predictive validity with regards to alcohol and substance related sexual risk is reported below.

Results

Desesperación scale validation

In response to the first research question, this study succeeded in validating a scale of *desesperación* to better understand psychological distress in LMDLs as described in the following scale validation analyses. There were no missing data on the *desesperación*, depression, and anxiety survey items, so the full *N* of 344 was used for the factor, reliability, and convergent validity analyses reported below.

Exploratory Factor Analyses (EFAs)

The sample correlation matrix revealed two eigenvalues greater than 1 (factor 1=5.20; factor 2=1.78), which accounted for over 50% of the available variance. Therefore, initial EFAs extracted one to three latent factors. The one factor solution did not fit the data well (CFI=.78; RMSEA=.16; SRMR=.10) and several items had factor loadings below .50. However, the two-factor solution did fit the data well (CFI=.96; RMSEA=.08; SRMR=.04). All items loaded onto their primary factors at .57 or higher. The rotated factor loadings indicated that all positive items loaded primarily onto factor 1, which we labeled *frustration*, and all negative items loaded primarily onto factor 2, which we labeled *dissatisfaction* (see Table 2). The two factors were correlated at $r=.54$, and the correlation matrix for all scale items are listed in Table 3.

Reliability

The coefficient alpha value of the scale composed of the items from the first factor, *frustration*, was .84 while the alpha value for the second factor's subscale, *dissatisfaction*, was .73. For both subscales, removal of any item worsened rather than improved the alpha values, suggesting that all items should be retained in each subscale.

Convergent/divergent validity

The first *desesperación* factor, *frustration*, was positively correlated with anxiety ($r=.66$) and depression ($r=.67$). Interestingly, the second *desesperación* factor, *dissatisfaction*, while also positively correlated with anxiety ($r=.20$) and depression ($r=.45$), was correlated less strongly with those constructs than was *frustration*. Even though *frustration* was strongly correlated with both depression and anxiety, *frustration's* shared variance with these constructs was less than 45% per construct, demonstrating that while there is some overlap between *frustration*, *dissatisfaction*, anxiety, and depression, the two *desesperación* subscales also contain considerable unique variance.

Psychological distress and alcohol and substance related sexual risk

To address the second research question, Logistic regression analysis was utilized to examine the relation between psychological distress (i.e., depression, anxiety, and in the case of *desesperación*, entering both factors/subscales separately in addition to the full scale) and

alcohol- and substance- related sexual risk among the 211 participants who reported alcohol- and substance-related sexual behavior. Results indicated that the *dissatisfaction* subscale of *desesperación* was positively associated with an increased odds of alcohol-related sexual risk (OR=1.85, 95% CI=1.24, 2.77; $p=.003$) while *frustration*, anxiety, and depression were not significantly associated with alcohol use and risky sex (all p 's > .13; Table 3). Substance related sexual risk was also found to be positively associated with depression (OR=3.23, 95% CI=1.02, 10.17; $p=.046$), but not *frustration*, *dissatisfaction*, anxiety, or depression (all p 's > .14; Table 4).

Problem behaviors in response to *desesperación*

In response to the *desesperación* scale's sole descriptive item, "Do you sometimes feel so desperate that you allow yourself to fall into the following problems?" most (58%) indicated "None/Does not apply" in response to the problem behavior options listed below. However, noteworthy percentages of the sample reported getting into arguments (24.4%), drinking too much (20%), using drugs (9.3%), getting into fights (8.7%) and having unprotected sex (7.0%). The very few participants who indicated "Other" specified responses such as "Don't want to see anybody", "Insult people" and "Blame self, hate self". Hence these descriptive data corroborate links between *desesperación* and outcomes of concern.

Discussion

With regard to better understanding the relation between psychological distress and alcohol and substance related sexual risk in LMDLs, it was found that the *dissatisfaction* subscale/factor of *desesperación* significantly predicted alcohol-related sexual risk, one of the more widely documented sexual risk factors in LMDLs (Kissinger et al., 2008; Organista & Kubo, 2005). More specifically, scoring low on positively worded items (i.e., How satisfied are you with the progress in your life? How often do you feel that you are solving problems in your life?) predicted alcohol use before and during sex, while scoring high on negatively worded items (i.e., How often do you feel like there are no solutions to your problems? How often do you feel like giving up on your life goals?) was not predictive. It may be that positively worded items more sensitively capture *desesperación* than negatively worded items as this construct is operationalized in this study. That is, it may be easier for LMDLs to endorse the lower frequency of positive life goals than to endorse the higher frequency of failure to achieve such centrally important goals within the day laborer experience.

Exploration of the above relationship was possible given the successful validation of a scale of *desesperación* consisting of two subscales, *frustration* and *dissatisfaction*, with respect to thwarted efforts to achieve centrally important life goals on the part of LMDLs living and working in the United States. While the two subscales overlap with depression and anxiety, especially *frustration*, both contain sufficient unique variance so as to be considered distinct from anxiety and depression. For LMDLs, this distinction seems to include feelings of frustration and dissatisfaction with one's progress on central migration-related life goals, feelings frequently referred to as a prelude to engaging in risky behaviors. For example, data from the scale's sole descriptive item enumerated concerning percentages of problem behaviors (e.g., arguing and fighting, alcohol and substance use, unprotected sex) in response to feeling very *desesperado* [desperate]. Much more research is warranted to better understand *desesperación* both as a cultural idiom of distress expressed by Latinos more generally, and as part of the emotional embodiment of structural vulnerability in LMDLs assessed here.

Interestingly, depression was found to predict substance-related sexual risk while *desesperación* did not. Why depression and not *desesperación* should be predictive in this case is unclear

Table 2
Factor loadings from exploratory factor analysis: two-factor solution (N=344).

Item #	How often do you feel...	Frustration	Dissatisfaction
1	Frustrated about the lack of progress in your life?	0.63	0.05
3	Overwhelmed by the obstacles in your path?	0.69	0.04
4	Angry about not earning the money that you need?	0.62	0.02
6	You were not going to be able to reach your life goals?	0.64	0.01
7	Shame about sending less money home than you want?	0.58	0.05
8	Giving up on your life goals?	0.71	0.06
10	There are no solutions to your problems?	0.76	−0.10
12	You just don't care about anything anymore?	0.82	−0.23
13	The desire to escape your worries?	0.83	−0.26
2	Satisfied with the progress in your life? (R)	0.04	0.65
5	Confident about the goals in your life? (R)	0.01	0.57
9	Satisfied with your situation here in the U.S.? (R)	−0.07	0.72
11	You are solving your problems? (R)	0.01	0.71

Note: Factor loadings were estimated using Mplus 7.3 with a weighted mean and variance-adjustment (Mplus estimator WLSMV). (R) Reverse-scored item.

Table 3
Correlation matrix for desesperación scale items (N=344).

Item	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
I. Frustrated with lack of progress in life	1.00	<.001	<.001	<.001	.007	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
II. Satisfied with progress in life	−0.30	1.00	<.001	<.001	<.001	.001	<.001	<.001	<.001	.001	<.001	.001	.004
III. Overwhelmed by obstacles in path	0.52	−0.27	1.00	<.001	.003	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
IV. Angry not earning money needed	0.38	−0.23	0.44	1.00	.015	<.001	<.001	<.001	<.001	<.001	.004	<.001	<.001
V. Confident with goals in life	−0.15	0.4	−0.16	−0.13	1.00	<.001	.001	<.001	<.001	.008	<.001	<.001	.147
VI. Thinking not reaching life goals	0.35	−0.17	0.41	0.39	−0.28	1.00	<.001	<.001	.014	<.001	<.001	<.001	<.001
VII. Shame sending less money than want	0.35	−0.23	0.39	0.42	−0.18	0.35	1.00	<.001	<.001	<.001	<.001	<.001	<.001
VIII. Giving up on life goals	0.35	−0.26	0.44	0.38	−0.24	0.41	0.36	1.00	<.001	<.001	<.001	<.001	<.001
IX. Satisfied with situation in US	−0.20	0.41	−0.25	−0.23	0.33	−0.13	−0.20	−0.21	1.00	.001	<.001	.092	.051
X. No solutions to problems	0.38	−0.18	0.37	0.33	−0.14	0.45	0.34	0.43	−0.17	1.00	<.001	<.001	<.001
XI. You are solving your problems	−0.23	0.43	−0.26	−0.16	0.36	−0.23	−0.20	−0.30	0.48	−0.27	1.00	.030	.002
XII. Do not care about anything	0.36	−0.14	0.34	0.29	−0.19	0.30	0.23	0.45	−0.09	0.45	−0.12	1.00	<.001
XIII. Desire to escape worries	0.32	−0.15	0.42	0.30	−0.08	0.33	0.34	0.39	−0.11	0.46	−0.17	0.49	1.00

Notes: Pearson correlations appear in the lower triangle of the matrix; p-values for correlations appear in the upper triangle of the matrix. N=344 for all correlations. Variables appearing in the correlation matrix are original item variables prior to reverse-scoring.

Table 4
Logistic regression of alcohol- and substance-related sexual risk and psychological distress variables (N=211).

Independent Variable	Dependent variable			
	Alcohol use Adjusted odds ratio (95% CI)	p	Drug use Adjusted odds ratio (95% CI)	p
Desesperación (frustration)	1.20 (0.67, 2.16)	.545	0.99 (0.47, 2.09)	.985
Desesperación (dissatisfaction)	1.85 (1.24, 2.77)	.003	1.22 (0.73, 2.04)	.452
Anxiety	0.56 (0.26, 1.20)	.137	0.48 (0.18, 1.31)	.150
Depression	1.06 (0.42, 2.68)	.907	3.23 (1.02, 10.17)	.046

and warrants further study, especially given the lack of literature linking substance use to sexual risk taking in LMDLs. With regard to depression, a recent study of 89 LMDLs from the Los Angeles area found that migration related stress (i.e., difficult working conditions, daily hassles like transportation, worry about offspring, migration problems) was inversely related to self-reported health which in turn was negatively related to depression (Bacio et al., 2014). Similar to *desesperación*, depression is a likely response to the structural vulnerability of LMDLs, and is documented here for this first time as predictive of substance use before and during sex. Considering the increasing number of articles documenting substance use in LDMLs beyond alcohol (Kissinger et al., 2008; Mills et al., 2013; Negi, 2011; Valdez et al., 2011), more substance focused research is needed including its relation to sexual risk.

Implications for the prevention of alcohol and substance related sexual risk in LMDLs are many and include clinical assessment and intervention such as screening for *desesperación* and depression simultaneous with sexual risk taking assessment given this study's demonstrated association. Given the documented tendency for day laborers to internalize failure to thrive economically in the U.S. (Walter, Bourgeois, Loinaz, & Schillinger, 2002), clinical intervention could begin by helping LMDLs to externalize this problem by reframing it as built into the day labor experience as currently constructed in the U.S.

However, while providing clinical services to mitigate individual level distress (e.g., including Spanish language alcohol and substance abuse treatment and sexual risk prevention) may be necessary, it will not be sufficient unless the structures of vulnerability for this population are addressed given how psychological distress is built into the day labor experience. Thus, access to work authorization alone would be a major macro-intervention towards improving working conditions and pay, the ability to support selves locally and families in country of origin, improving living conditions, and providing the freedom needed to travel back and forth across the border in order to remain networked with communities, families, including spouses, back home.

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Appendix A. Desesperación scale

Ahora, tengo algunas preguntas sobre sus sentimientos

1. ¿Con qué frecuencia se siente frustrado por la falta de progreso en su vida?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

2. ¿Con qué frecuencia se siente satisfecho con el progreso en su vida?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

3. ¿Con qué frecuencia se siente inundado (abrumado) con los obstáculos en su camino?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

4. ¿Con qué frecuencia se siente enojado por no ganar el dinero que necesita?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

5. ¿Con qué frecuencia se siente seguro sobre las metas en su vida?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

Now I have some questions that have to do with your feelings

1. How often do you feel frustrated about the lack of progress in your life?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

2. How often do you feel satisfied with the progress in your life?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

3. How often do you feel overwhelmed by the obstacles in your path?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

4. How often do you feel angry about not earning the money that you need?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

5. How often do you feel confident about the goals in your life?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

6. ¿Con qué frecuencia ha llegado a pensar que no podría alcanzar las metas para su vida?

- Todo el tiempo
- La mayoría del tiempo
- Algunas veces
- Pocas veces
- Nunca

7. ¿Con qué frecuencia se siente avergonzado por mandar menos dinero a su familia de lo que quisiera?

- Todo el tiempo
- La mayoría del tiempo
- Algunas veces
- Pocas veces
- Nunca

8. ¿Con qué frecuencia siente ganas de abandonar sus metas?

- Todo el tiempo
- La mayoría del tiempo
- Algunas veces
- Pocas veces
- Nunca

9. ¿Con qué frecuencia se siente contento con su situación aquí en E.U. (de trabajo, vivienda)?

- Todo el tiempo
- La mayoría del tiempo
- Algunas veces
- Pocas veces
- Nunca

10. ¿Con qué frecuencia se siente como que no hay soluciones para sus problemas?

- Todo el tiempo
- La mayoría del tiempo
- Algunas veces
- Pocas veces
- Nunca

6. How often have you started to think that you were not going to be able to reach your life goals?

- 4=All the time
- 3=Most of the time
- 2=Some times
- 1=A few times
- 0=Never

7. How often do you feel shame about sending less money home than you would want?

- 4=All the time
- 3=Most of the time
- 2=Some times
- 1=A few times
- 0=Never

8. How often do you feel like giving up on your life goals?

- 4=All the time
- 3=Most of the time
- 2=Some times
- 1=A few times
- 0=Never

9. How often do you feel satisfied with your situation here in the U.S. (work, living situation)?

- 4=All the time
- 3=Most of the time
- 2=Some times
- 1=A few times
- 0=Never

10. How often do you feel like there are no solutions to your problems?

- 4=All the time
- 3=Most of the time
- 2=Some times
- 1=A few times
- 0=Never

11. ¿Con qué frecuencia se siente como que está solucionando los problemas en su vida?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

12. ¿Con qué frecuencia se siente como que ya no le importa nada?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

13. ¿Con qué frecuencia siente el deseo de escaparse de sus preocupaciones?

- Todo el tiempo
 La mayoría del tiempo
 Algunas veces
 Pocas veces
 Nunca

14. ¿A veces se siente tan desesperado que se deja caer en los siguientes problemas?

Leer las opciones

Todas las que apliquen

- Tomar demasiado
 Usar drogas
 Tener sexo sin condones
 Discutir con otros
 Pelear (físicamente) con otros
 Llamar la atención de la policía
 Otro? - Por favor especifique

- Ninguno/No se aplica

11. How often do you feel like you are solving problems in your life?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

12. How often do you feel like you just don't care about anything anymore?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

13. How often do you feel the desire to escape your worries?

- 4=All the time
 3=Most of the time
 2=Some times
 1=A few times
 0=Never

14. Do you sometimes feel so desperate (desesperado) that you allow yourself to fall into the following problems?

Read the options

All that apply

- 1=Drinking too much
 2=Using drugs
 3=Having sexual intercourse without condoms
 4=Getting into arguments with others
 5=Getting into fights
 6=Coming to the attention of police
 7=Other? - Please specify
 9=None/Does not apply

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