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## Syringe Sharing in Drug Injecting Dyads: A Cross-Classified Multilevel Analysis of Social Networks

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### Abstract

We examined the association of dyadic-level factors with syringe sharing among people who inject drugs (PWID) in Kerman, Iran. In a cross-sectional study, we collected data on 329 drug-injecting dyads by individual face-to-face interviews. An injecting dyad was defined as 2 PWID who knew each other and injected drugs together during the last 6 months. If they reported at least 1 occasion of syringe sharing, the dyad was considered high-risk. Dyadic-level factors associated with syringe sharing were assessed using cross-classified multilevel logistic regression. The rate of syringe sharing was significantly higher for dyads who were more intimate (adjusted odds ratio [AOR] 4.5, CI 95%, 2.3-8.6), who had instrumental support (AOR 2.1, 95% CI, 1.1-4.5), and who pooled money for drugs (AOR 4.1, 95% CI, 2.0-8.3). The rate was lower in same-sex dyads (AOR 0.4, 95% CI, 0.2-0.9) and in dyads who shared health information (AOR 0.5, 95% CI, 0.2-0.9). Findings highlight close-peer influences on syringe-sharing behavior.

### Keywords

dyad; syringe sharing; people who inject drugs; Iran

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**CONFLICT OF INTEREST:** All authors declare that they have no conflict of interest.

**ETHICAL APPROVAL:** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**INFORMED CONSENT:** Informed consent was obtained from all individual participants included in the study. PWIDs were given 80,000 rials (equal to ~2.67 USD) primary incentive (80,000 Iranian rials, or ~2.67 USD) as an incentive for participating in the study and 30,000 Rials (equal to ~1 USD) for each successful recruitment of an injecting peer. The study protocol was reviewed and approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences.

## INTRODUCTION

An estimated 208,000 people who inject drugs (PWID) live in Iran.(1) Nearly one-fifth are estimated to be infected with HIV,(2) which is a higher rate than other populations at elevated risk (ranges 1.2% to 4.5%), such as female sex workers and men who have sex with men. Unsafe injection practices, such as sharing syringes or other equipment, is reported as the main route of transmission.(3) In a national survey of PWID in 2010, our team found that 11% had shared a needle at their last injection, 40% had injected with a used needle or syringe, and 13% had shared injection equipment with others in the last month.(4) Mixing drugs in a shared cooker was also commonly reported. Many factors have been implicated as leaders to the sharing of syringes, including access to sterile syringes, having withdrawal symptoms, injecting in the street or outdoors, fear of being arrested for carrying a syringe, perceived risk for HIV, poor economic conditions, stigmatization and marginalization, support from a social network, heightened drug effects in peer groups, and lack of knowledge about HIV and hepatitis C risks.(5–10)

Iran is known as a pioneer of harm reduction programs in the Middle East.(11) A national network of drop-in centers (DIC) provide harm reduction services to PWID. Methadone maintenance treatment, free sterile syringes, free condoms, and HIV testing and counseling are provided by DIC on-site or through outreach activities. In addition to DIC, “triangular clinics” (ie, sites that provide free testing for HIV and sexually transmitted infections (STI), HIV/STI treatment, and harm reduction services) also help meet the needs of PWID and other high-risk groups.(12) Yet many PWID in Iran continue to inject with used syringes. (13)

While the above-listed structural and individual-level factors associated with injecting with used syringes have been studied in Iran,(5–10) less is known about the network and interpersonal factors that may lead to HIV transmission risk among PWID. Additionally, the DIC and triangular clinics are attempting to address several factors related to sharing syringes. These factors include poor HIV knowledge,(14) low rate of access to free syringe programs,(15, 16) and low rate of access to methadone maintenance therapy.(17–19) However, factors at the interpersonal, dyadic, or network levels that cause shared injection(20) are understudied and unaddressed among PWID in Iran.

Social network analysis is an approach to understanding the determinants of specific types of social relations between individuals that affect their individual behaviors.(21) In drug-injecting networks, syringe sharing is an act that occurs between at least 2 individuals, or within an injecting dyad.(22) Dyadic-level analysis can lead to a better understanding of the factors associated with syringe sharing.(23) For example, dyadic factors such as level of closeness and type of social support have been shown to be associated with syringe sharing between PWID.(23–25) However, studies that use simple regression models for social network analysis ignore the interdependency of such data (ie, the commonalities between “ego” and “alter”), and are therefore prone to bias.(26, 27) Social relations between individuals in a network may affect their behaviors and cause people in the same group to behave similarly. This is problematic when conducting dyadic or full network modeling.(28) Another complexity is that in dyadic-level analysis, each relationship is nested in a unique

combination of 2 individuals by crossing 2 or more higher-level classifications with one another.(29) Ignoring the cross-classified nature of data in a dyadic-level analysis may lead to biased and imprecise results.(28) Two models, generalized estimating equations (GEE) and multilevel analysis, take into account the interdependency of data in the network analysis. Given that GEE has limitations in parameter estimation and inefficiency when assumptions on a random structure are inappropriate,(29) multilevel modeling may be preferred for dyadic analysis.

With empirical data from a PWID network in an urban setting in Iran, we studied the association of dyadic-level factors on syringe sharing using cross-classified multilevel models. Identifying the patterns and dyadic-level factors associated with syringe sharing in PWID networks can provide useful information for developing novel, network-level interventions to further reduce the risk of HIV.

## METHODS

### Setting and study participants

This study was conducted in the city of Kerman, located in southeast Iran, which has a population of 850,000,(30) of which an estimated 1600 to 3800 are PWID.(31) The study began with a formative assessment phase that included in-depth interviews with 20 key informants, including current and former PWID, directors of harm reduction programs, and local public health authorities working with PWID in Kerman. The formative phase also identified PWID who could initiate chains of referral to other PWID who could be enrolled for the quantitative phase of the study. Eligible PWID were men and women aged 18 years or older, who reported injecting drugs in the past 12 months, and who lived or worked in Kerman. The recruitment started by selecting 5 eligible PWID who each had a large active network of other eligible PWID and good communication skills. Each recruited participant was asked to nominate and invite 5 PWID in their personal network to participate in the study. From October 2013 to March 2014, 147 PWID were recruited for the study; among them, 26 persons did not wish to report relationships with another PWID, and for 6 others these data were missing. Therefore, the final study sample consisted of 115 eligible PWID who reported having other PWID in their social network. These 115 PWID are referred to as “egos.”

We defined the social networks and risk networks in 2 steps. First, we asked PWID to list up to 20 people with whom they had had more than casual (ie, friends) contact during the past 30 days. This list was considered to be their social network. To help them accurately recall people in their network, we prompted them to consider persons in different categories, such as “people with whom you used drugs,” “people with whom you had sex,” “people with whom you live, hang out, or work,” and “family, relatives, and friends or other people in close relationships.” Second, we asked PWID to specify those in their social network who inject drugs. This sublist was considered to be their injecting or risk network. Overall, 115 recruited PWID named or “nominated” 329 PWID in their risk networks. These 329 are referred to as “alters.” Of note, the data therefore also include 329 ego-alter dyads for analysis.

## Measures

The dependent variable—syringe sharing—was defined as any receptive or distributive syringe sharing between an ego and alter. To measure syringe sharing, we asked 2 questions: (1) Have you ever used a syringe that had been used by 1 of the persons in your injecting network in the past 6 months? (2) Have you ever passed your used syringe to 1 of the persons in your injecting network in the past 6 months? Each ego and each of his/her nominated alters formed a dyad, which formed the unit of analysis. In dyadic data analysis, the focus of interest is not individual attributes; instead, the focus is on dyads and factors associated with having a high- or low-risk dyad.

The primary study outcome was the prevalence among dyads of syringe sharing in the last 6 months. A syringe-sharing dyad was defined as one in which the ego reported at least 1 occasion of syringe sharing with his/her alter during the last 6 months. Independent variables included duration of relationship between ego and alter, level of closeness (intimate, not intimate), sexual partnership (whether ego and alter engaged in sexual contact within the last 6 months), type of relationship (friend, family member, acquaintance), being concordant on sex, and social support. To measure social support, we asked egos to specify the type of support provided by an alter, such as money (instrumental support), listening to personal problems (emotional support), or sharing information on health-related issues (informational support), and whether they pooled their money to buy drugs. Sociodemographic characteristics of egos and alters were gathered. We also asked egos about their feelings and insights regarding drug use with their alters. Using a questionnaire, 3 trained staff conducted individual face-to-face interviews in a private room, either at a DIC or in a mobile van at street locations and venues populated by PWID.

Of note, we did not have access to all nominated alters. Therefore, we used an ego-centric network approach to collect network data: Instead of interviewing alters, all information about a dyadic relationship was collected by interviewing the ego. Figure 1 has a diagram of the recruitment and data collection process.

Participants were given a primary incentive (80,000 Iranian rials, or ~2.67 USD) and a secondary incentive (30,000 rials, or ~1.00 USD) for each successful recruitment of an injecting peer. To ensure that a nominated person was actually the person who had been invited to the study, we asked participants to provide additional information (ie, name, sex, age, address, and duration of contact) for each nominee and verified it with data collected from the referred person. For some cases, we also consulted with the outreach staff to confirm that social-network ties were real. In cases where the social connection was not confirmed, we omitted it from the analysis.

## Statistical analysis

The unit of analysis was the dyad; syringe-sharing status in the last 6 months was the primary outcome. We used cross-classified multilevel logistic regression(28) to examine the association between individual as well as dyadic-level attributes and the outcome of syringe-sharing dyads. The rationale for choosing this model was the possibility of simultaneous membership of PWID in different ties, which would have violated the assumption of

independency of observations in a regression model. In contrast with hierarchical multilevel models in which each lower-level unit belongs to only 1 higher level unit,(28) in cross-classified models each lower-level unit can belong to combinations of higher-level units formed by crossing 2 or more higher-level classifications with one another. In this manner, each tie (level 1) is nested within a special combination of ego-alter (level 2). The simplest form of the model can be written as follows:

$$\text{logit} \left( p_i(\text{ego}, \text{alter}) \right) = \alpha + u_{\text{ego}(i)} + u_{\text{alter}(i)} + e_{i(\text{ego}, \text{alter})}$$

where  $\alpha$  is the constant of logit of syringe-sharing tie,  $u_{\text{ego}(i)}$  is the effect of  $\text{ego}_i$  and  $u_{\text{alter}(i)}$  the effect of  $\text{alter}_i$  on this tie, and  $e_i$  is the residual error term.

We conducted both bivariate and multivariate analyses. We entered all variables with a bivariate  $P$  value  $\leq .2$  into the multivariate model. A backward-elimination (enter  $P < .05$ , remove  $P > .1$ ) method was used to select the variables for the final model, which had the lowest Akaike information criterion, the lowest Bayesian information criterion, and the significant likelihood ratio result. We used STATA software (version 12, College Station, Texas, USA) for data analysis. The level of statistical significance was considered to be  $P < .05$ .

## RESULTS

The mean age of egos and alters was 37.3 (standard deviation [SD] 8.1) and 34.6 (SD 9.3) years, respectively (Table 1). The majority of egos (91.3%) and alters (83.9%) were men, and only about 7.0% of either group were illiterate. The main source of income for egos (50.4%) and alters (42.2%) was conventional work. The majority of egos and alters were single (53.1% and 56.9%, respectively). About one-third of egos (35.6%) and alters (32.0%) reported syringe sharing within the last 6 months.

The mean and median numbers of people nominated by egos was 7.2 (SD 4.0) and 7.0, respectively (Table 2). Each ego, on average, nominated 3.4 (SD 2.6) persons in their risk network. Overlap between an ego's personal and risk networks was 50%. Relationships between egos and alters were based on injecting drugs together (21.6%), friendship (17.6%), living in the same neighborhood (14.0%), injecting at the same venue (12.5%), meeting in the same street (10%), work (8.5%), being in the same family (4.5%), intimate relationships (4.0%), being a prison mate (3.6%), being a schoolmate (2.7%), or being in the same hospital (0.9%).

Regarding insights into their relationships with alters, most egos rejected the statements that drug injecting is important (46.2% disagree, 2.7% strongly disagree) and that syringe sharing is important (65.3% disagree, 12.5% strongly disagree) (Table 3). Most egos also rejected the statement that their alter would oppose a cessation of injecting if the ego wanted it (56.8% disagree, 10.9% strongly disagree). A majority of egos disputed that it would be difficult to maintain a relationship with an alter who decided to stop injecting (52.3% disagree, 5.5% strongly disagree); likewise, most egos said that they would stop injecting if their alter did (53.4% agree, 11.2% strongly agree).

We identified a total of 329 injecting dyads, within which 71 (21.6%; 95% confidence interval [CI], 17.3–26.4) shared syringes within the last 6 months (Table 4). A majority of dyads were based on friendship (56.5%), were not a sexual relationship (92.4%), had lasted 5 or fewer years (68.1%), were not an intimate relationship (62.6%), entailed no instrumental support (60.2%), and were between persons of the same sex (86.9%).

The frequency of syringe sharing varied with different subtypes of dyadic relationships. Syringe-sharing dyads were significantly more frequent among family members (39.1%,  $P = .003$ ), sexual partners (52.0%,  $P = .001$ ), those who were intimate (39.9%,  $P < .001$ ), those who shared instrumental support (34.3%,  $P < .001$ ), and those who pooled money for drugs (34.3%,  $P < .001$ ).

In multivariate analysis (Table 4), the odds of syringe sharing in a dyadic relationship in the last 6 months were significantly higher between intimate friends (adjusted odds ratio [AOR] 4.5, 95% CI, 2.3–8.6), those who shared instrumental support (AOR 2.1, 95% CI, 1.1–4.5), and those who pooled money for drugs (AOR 4.1, 95% CI, 2.0–8.3). The odds of syringe sharing were significantly lower in dyadic relationships between PWID who were the same sex (AOR 0.4, 95% CI, 0.2–0.9) and between those who shared informational support (AOR 0.5, 95% CI, 0.2–0.9).

## DISCUSSION

Our study measured the levels and correlates of syringe sharing among PWID in an Iranian city. Our finding that 21% of dyads had shared syringes within the last 6 months compares with 26% (receptive) in New York, USA,(32) and 41% in St Petersburg, Russia.(25) The decision to share a syringe may be affected by a variety of factors, such as level of HIV-related knowledge, perceived risk, having access to sterile syringes, and social networks. Despite a relatively high level of HIV knowledge among Iranian PWID(33) and access to syringe exchange programs,(34) variables such as low perceived risk, high levels of discrimination and stigmatization, and social network or dyadic-level factors may explain the continued unsafe injecting and ongoing transmission risk observed in the present study as well as in previous research.(33, 35, 36)

Among dyadic-level factors, we found that borrowing money, pooling money for buying drugs, and having an intimate relationship were associated with a higher likelihood of syringe sharing. Syringe sharing was less likely to be reported in dyadic relationships of the same sex or in those where health information was shared. As previously noted, syringe sharing is not a random event(22). Similar to previous studies,(37, 38) we also found that PWID are more likely to share a syringe with a close and supportive injecting partner.(39, 40) Furthermore, the increased likelihood of syringe sharing between PWID who share or borrow money suggests the importance of financial factors(41) in dyadic relationships. Such ties may be shaped by limited economic resources and the illegal nature of drug use.(42) For example, syringes might be shared more often among users who pool their money for cheaper bulk purchases of drugs.(43)

Close relationships may be associated with syringe sharing through a process of strengthening social ties.(37) In a social network study of young users in Australia who injected drugs,(38) the main reason reported for syringe sharing with an intimate partner was the feeling of trust and confidence that the partner was not HIV infected. A review of studies among PWID in intimate heterosexual relationships showed that syringe sharing occurs with close emotional involvement and commitment.(44) In our analysis, when we controlled for other covariates, we did not find that emotional support had an independent effect on syringe sharing. While this may be due to overcontrolling for variables such as level of closeness, it could also indicate that syringe sharing is more strongly affected by instrumental support or other factors in our model.

Interestingly, we found that syringe sharing is more likely to happen in dyadic relationships between male and female PWID, rather than between those of the same sex. This could be explained by the gender and power inequalities in male-female relationships.(25) We did not study the direction of syringe sharing (receptive vs distributive), but, as reported in previous studies, female injecting partners of male PWID may be more likely to be the receptive partner in a syringe-sharing event.(45) The effects of gender power dynamics within PWID networks in Iran need to be further investigated.

The main finding of the present study is that, while networks of PWID can act as sources of social and financial support, such support may come with increased acquiescence to the sharing of syringes.(36) Therefore, PWID networks and dyads may be appealing targets for prevention interventions. For example, a promising network-based intervention was reported to be effective in reducing HIV incidence among PWID in Ukraine.(46) A more recent successful network intervention in Odessa, Ukraine showed that using social network techniques including prioritizing networks of the recently infected individuals is more efficient than changing risk behaviors in finding undiagnosed HIV+ PWID and also recently-infected PWID and referring them to HIV treatment and to other services.(47, 48)

This potential is further bolstered by the finding in our study that PWID have sizable personal and injecting networks. Moreover, ignoring contexts and social connections has been a key factor in the failure of prevention programs targeting PWID.(49, 50) Using a social-network approach to prioritize relationships, locate undiagnosed HIV-positive PWID, (51) and find recently infected PWID(52) could be more efficient for case finding. In Iran, where two-thirds of HIV infections are undiagnosed,(53) integration of network-based strategies with current HIV testing programs should be considered. Peer-based education programs and interventions using opinion leaders have been shown more effective than individual-based HIV intervention programs.(46, 54–56) In our approach, adding a name generator and relationship questions to routine data collection forms allowed harm-reduction messages to be more effectively transmitted through more-influential peers. Future studies should adapt such network-based intervention programs for the Iranian context and assess their effectiveness.

Our findings are subject to several limitations. First, we measured injecting and sexual behaviors by self-report, which may have resulted in underestimations. Second, we recruited PWID via a nonrandom peer chain referral strategy. This method may preferentially recruit



persons who have more social ties, thereby limiting generalizability. Third, we did not collect data from people who rejected our invitation to the study. Fourth, the majority of our participants were male. While this reflects the actual makeup of the PWID population in Iran, our data provide limited information about female injecting networks. Finally, we acknowledge the ego-centric nature of our data collection; information on ego-alter relationships was collected by interviewing only egos and not their nominated alters.

While acknowledging the limitations of our study, we also assert that it is the first in Iran to successfully measure unsafe injecting against dyadic-level factors. Findings could be used to design and pilot network-level interventions to prevent or reduce syringe sharing among active injecting populations. Interventions involving peer-to-peer education or opinion leaders have been effective in different settings,(54–56) and their applicability in the Iranian setting should be evaluated in future research that has refinements focusing on specific dyadic relationships.

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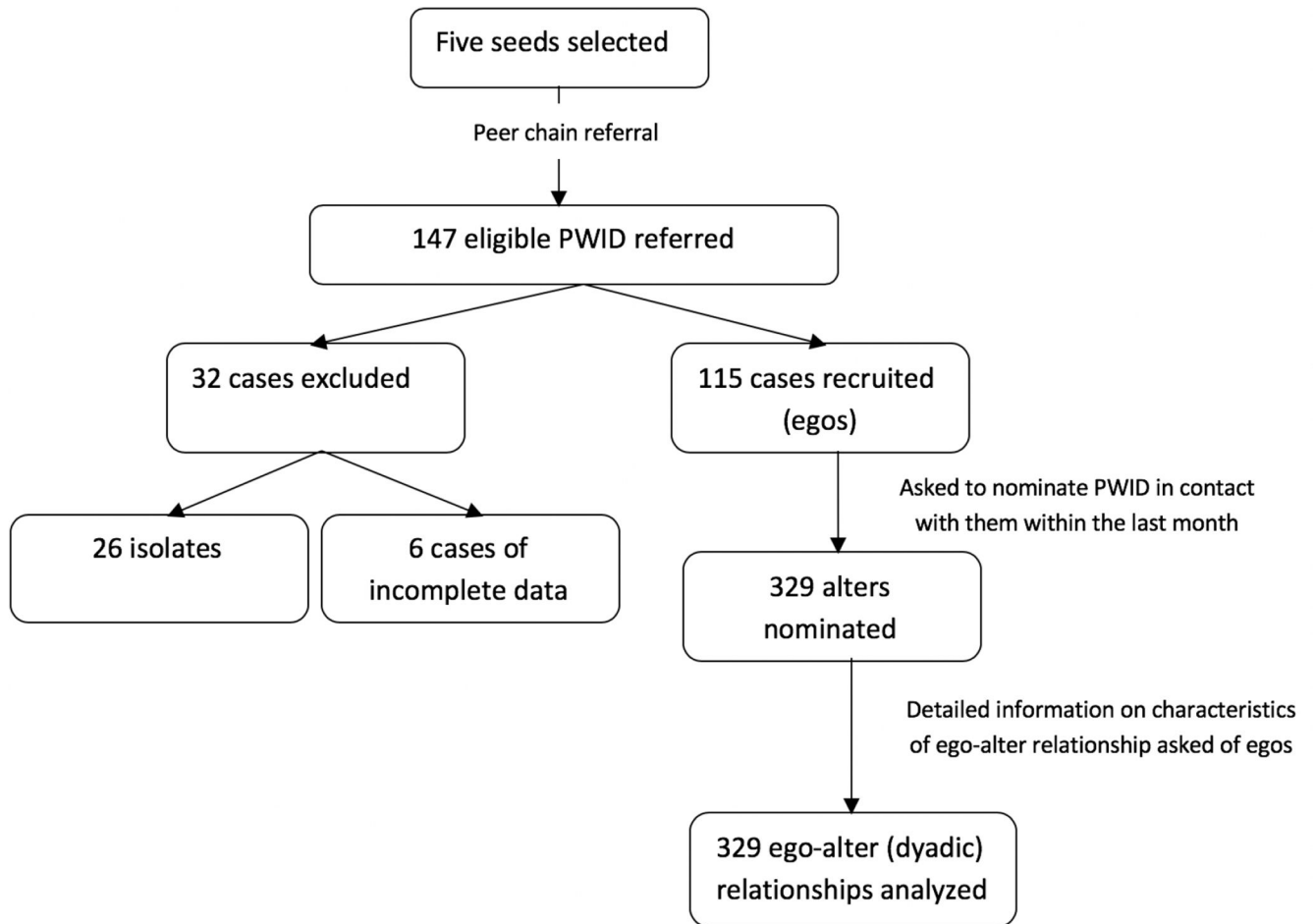
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**Figure 1.** Recruitment of study participants and data collection for people who inject drugs (PWID) egos and their nominated alters, Kerman, Iran, 2013-2014.

**Table 1.**

Sociodemographic characteristics of recruited persons who inject drugs (PWID) egos (N=115) and their nominated PWID alters (N=329), Kerman, Iran, 2013-2014.

	Egos (N=115) n (%)	Alters (N=329) n (%)
<b>Age, years (mean, SD)</b>	37.3 (8.1)	34.6 (9.3)
<b>Sex</b>		
Female	10 (8.7)	53 (16.1)
Male	105 (91.3)	276 (83.9)
<b>Level of education</b>		
Illiterate	8 (6.9)	23 (7.0)
Primary school	7 (6.1)	81 (24.6)
Guidance school	23 (20.0)	55 (16.7)
High school	44 (38.3)	58 (17.6)
Diploma	25 (21.7)	48 (14.6)
University	8 (7.0)	9 (2.7)
Don't know / did not state	---	32 (9.7)
<b>Main source of income</b>		
Work	58 (50.4)	139 (42.2)
Income assistance <sup>1</sup>	16 (13.9)	49 (14.9)
Family	22 (19.1)	44 (13.4)
Drug dealing	12 (10.4)	40 (12.2)
Begging	4 (3.5)	19 (5.8)
Sex work	3 (2.6)	14 (4.3)
Stealing	0 (0)	3 (0.9)
<b>Marital status</b>		
Single	61(53.1)	182 (56.9)
Married	31(26.9)	64 (20.0)
Divorce/widowed	23(20.0)	74 (23.1)
<b>Syringe sharing within the last 6 months</b>	41 (35.6)	107 (32.0)

<sup>1</sup>From either governmental or nongovernmental organizations, including Imam Khomeini committee, welfare organization, and nongovernmental organizations.

**Table 2.**

Network characteristics of people who inject drugs (PWID), Kerman, Iran, 2013-2104.

Personal network size	
Minimum	1
Maximum	18
Mean (SD)	7.2 (4.0)
Median	7.0
Drug-injecting network size	
Minimum	1
Maximum	13
Mean (SD)	3.4 (2.6)
Median	3
Average percent of overlap between personal and drug-injecting networks	50%

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**Table 3.**

Insights of people who inject drugs (PWID) egos (N=115) on injection practices with their nominated alters (N=329), Kerman, Iran, 2013-2014.

Statement	Strongly agree n (%)	Agree n (%)	Disagree n (%)	Strongly disagree n (%)	Don't know n (%)
Injecting drugs is an important part of the relationship I have with my alter.	15 (4.6)	108 (32.8)	152 (46.2)	9 (2.7)	4 (1.2)
Sharing syringes is an important part of the relationship that I have with my alter.	4 (1.2)	46 (14.0)	215 (65.3)	41 (12.5)	3 (0.9)
If I wanted to stop injecting drugs, my alter would oppose it.	12 (3.6)	30 (9.1)	187 (56.8)	36 (10.9)	14 (4.3)
If my alter stopped injecting drugs, it would be more difficult to maintain our relationship.	12 (3.6)	71 (21.6)	172 (52.3)	18 (5.5)	9 (2.7)
If my alter stopped injecting drugs, I would probably do so.	37 (11.2)	176 (53.4)	63 (19.1)	4 (1.2)	7 (2.1)

Note: Variations in numbers are due to missing data for individual variables



**Table 4.**

Characteristics of dyads and syringe-sharing dyads (last 6 months), people who inject drugs (PWID), Kerman, Iran, 2013-2014.

Characteristic	Dyad frequency (N=329) (column %)	Syringe-sharing dyad frequency		Crude OR (CI 95%)	P value	Adjusted OR (CI 95%)	P value
		Yes (n=71) Frequency (row %)	No (n=258) F frequency (row %)				
Type of relationship							
Friend	186 (56.5)	38 (20.4)	148 (79.6)	1			
Family member	69 (21.0)	27 (39.1)	42 (60.9)	2.5 (1.3-4.6)	.003	1	--
Acquaintance	56 (17.0)	6 (10.7)	50 (89.3)	0.5 (0.2-1.2)	.1		
Had sex with each other in the last 6 months							
No	304 (92.4)	58 (19.1)	246 (80.9)	1			--
Yes	25 (7.6)	13 (52.0)	12 (48.0)	5.8 (2.1-15.9)	.001		
Age difference between ego and alter							
5 years	148 (45.0)	32 (21.6)	116 (78.4)	1		1	.58
>5 years	181 (55.0)	39 (21.6)	142 (78.4)	0.9 (0.5-1.2)	.86	0.8 (0.4-1.6)	
Ego has known the alter							
5 years	224 (68.1)	39 (17.4)	185 (82.6)	1		1	
>5 years	105 (31.9)	32 (30.5)	73 (63.5)	2.1 (1.1-3.8)	.01	1.9 (0.99-3.7)	.05
Level of closeness							
Not intimate	206 (62.6)	22 (10.7)	184 (89.3)	1		1	
Intimate	123 (37.4)	49 (39.9)	74 (60.1)	6.5 (3.1-13.4)	<.001	4.5 (2.3-8.6)	<.001
Consulting on health-related issues (informational support)							
No	149 (45.3)	33 (22.1)	116 (77.9)	1		1	.03
Yes	180 (54.7)	38 (21.1)	142 (78.9)	0.9 (0.5-1.2)	.8	0.5 (0.2-0.9)	
Consulting on personal issues (emotional support)							
No	155 (47.1)	26 (16.8)	129 (83.2)	1		1	.05
Yes	174 (52.9)	45 (25.9)	129 (74.1)	1.7 (0.9-3.1)		0.8 (0.4-1.8)	.68

Characteristic	Dyad frequency (N=329) (column %)	Syringe-sharing dyad frequency		Crude OR (CI 95%)	P value	Adjusted OR (CI 95%)	P value
		Yes (n=71) Frequency (row %)	No (n=258) Frequency (row %)				
<b>Borrowing money (instrumental support)</b>							
No	198 (60.2)	26 (13.1)	172 (86.9)	1	<.001	1	
Yes	131 (39.8)	45 (34.3)	86 (65.6)	3.5 (1.9-6.3)		2.1 (1.1-4.5)	.03
<b>Pooling money for drugs</b>							
No	152 (46.2)	14 (9.2)	138 (90.8)	1	<.001	1	
Yes	177 (53.8)	57 (32.2)	120 (67.8)	4.8 (2.5-9.2)		4.1 (2.0-8.3)	<.001
<b>Ego and alter of the same sex</b>							
No	43 (13.1)	14 (32.6)	29 (67.4)	1	.08	1	
Yes	286 (86.9)	57 (19.9)	229 (80.1)	0.5 (0.2-1.1)		0.4 (0.2-0.9)	.03

Excluded from final model due to very small sample size