The Social Relationship Context and Cultural Perspective of Injection Risk, a Comparison between US and Chinese Injection Drug Users

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Background

Extensive research has documented HIV and other blood-born virus infection risk of direct syringe sharing, as well as indirect sharing of other injecting paraphernalia.

In recent years, researchers have observed social determinants of injection risk behaviors; many of them incorporating personal network concepts and analyses into their study. Limited social network research has documented the patterns of HIV risk behaviors among different social relationship dyads, and fewer studies have attempted to examine the underling social norms that shape these differences. Furthermore, most network studies were conducted in western societies in which individualism is the predominant cultural value. Compared to European Americans, studies of Chinese and other collectivists show that they are more likely to share material and nonmaterial resources and also to share both good and bad outcomes.

The Chinese concept of 'self' is a 'relational self', which is very different from the rational, self-conscious, and autonomous Western concept of 'self'. Exploration into the cultural context of various relationship ties and injection risk behaviors will have significant implications to behavioral prevention intervention among injection drug users (IDUs).

Sites and Survey Samples

US study High-Risk Drug Use Settings (1997-2001) and **China study** Sociocultural Factors of Syringe Sharing and HIV Risk (2002- 2004) were selected for comparison because the 2 studies used very similar individual level and social network data collection methods and measures.

The Sites

- The US site was Hartford, the capital of Connecticut.
- The China Site was Jiangmen City of Guangdong Province located in the southern coast, just to the west of Hong Kong and Macao

The Survey Samples:

- **US sample** were recruited through outreach and peer referral. 254 active IDUs with valid social network data were included in analysis for this paper.
- 70.1% male, 29.9% female; 36.7% African American, 55.2% Hispanic/Latino, and 8.1% White and others.

- **China sample** were recruited via convenient sampling in was used and recruited 2 mandatory drug treatment centers Data from199 in-treatment IDUs were used in this comparison.
- 83.4% male, 16.6% female and mostly Han ethnicity (96.5%).

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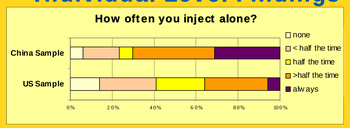
Survey Data Collection Methods

Main survey collected data at the **individual level**. i.e. frequencies of syringe sharing and injection equipment sharing behaviors in the last 30 days (US sample) or in the last 30 days before enrolled in treatment (China Sample)?

Social Network survey collected data at dyadic **relationship level**. Each participant was asked to list his/her network members who they used drug with, inject with, had sex with, or feel close to or received support from in the last 6 months. A total of 980 relationships ties from 199 Chinese IDUs, and 1388 ties from 254 US IDUs. Of those, 443 from the China sample, and 618 from the US sample injected illegal drugs together. Relationship strength indicators and injection syringe and other injection equipment related HIV behavior measures were collected for each dyadic tie.

Individual Level Findings



US IDUs were less likely to inject alone (last 6 months) than Chinese IDUs (last 30 days before treatment).

Social Network Survey Findings

Table 1. Syringe Sharing Rate and Injection Equipment Sharing Rate

US Sample (N=609)	Spouse / lover (n=37)	casual sex partners (n=10)	family members (n=30)	Friends (n=484)	Acquaintances (n=40)	P value
shared syringes	40.5%	10.0%	23.3%	17.4%	12.5%	.007 **
Shared Equipments	64.9%	50.0%	53.3%	50.2%	50.0%	.206
Chinese sample (N=443)	**Spouse / lover (n=27)**	**casual sex partner (n=10)**	**family members (n=5)**	**Friends (n=351)**	**Acquaintances (n=47)**	**P value**
shared syringes	37.0%	60.0%	40.0%	35.9%	36.2%	.780
Shared Equipments	40.7%	30.0%	20.0%	41.3%	48.9%	.752

- Syringes sharing among US IDUs were highest among spouses and lovers, followed by family members, and friends. But the differences of equipment sharing rates were not statistically significant across different relationship ties.
- Neither syringe nor equipment sharing rate appear different across different Chinese relationship ties.
- Overall syringe sharing is less common than equipment sharing among US IDUs, but there are no apparent differences among Chinese IDUs.

** Chi-square test significant at the 0.05 level (2-tailed).

Friend Ties

- All physical proximity indicators (P1-P3) predict syringe sharing among Chinese friend ties but only "days contact" predicts syringe sharing among US friend ties.
- Instrumental support (IS1&IS2) predicts both US and Chinese friend ties' syringe and equipment sharing behaviors. This association is generally stronger among Chinese.
- Emotional support (ES) predicts both sharing behaviors among US ties, but is a protective factor among Chinese friend ties.
- Emotion attachment (EA1&EA2) is not associated with sharing risk behaviors for both samples.

Acquaintance Ties

- For Chinese ties, no relationship indicators predict syringe sharing and only physical proximity (P1-P3) predicts equipment sharing.
- For US ties, all emotion related indicators correlate with equipment sharing. Only ES is predictor and EA2 was a protective factor for syringe sharing.

Spouse/Lover Ties

For both Chinese and US ties, only physical proximity (except P1, which is not an appropriate measure here) predicts syringe and equipment sharing, and this association is more apparent among Chinese ties.

Family Member Ties

For US sample (n=30), the only correlates of syringe sharing are P3 (r= .472 *), IS2 (r = -.552 *), and EA2 (r=.053*). Nothing predicted equipment sharing. Chinese sample is too small n=5? .

Casual Sex Partner Ties

No relationship indictors predicts any sharing behavior for both Chinese (n=10) and US ties (n=10).

Table 2. Pearson Correlations Between Relationship Indicators and Syringe / Injection Equipment Sharing among US and Chinese IDUs Relationship Ties

Relationship Indicators	US Friends (N =484)		Chinese Friends (N = 351)		US Acquaintances (N =40)		Chinese Acquaintances (N =47)		US Spouse/ Lover (N = 37)		Chinese Spouse/Lover (N =27)	
	Shared syringes	Shared equipment	shared syringes	Shared equipment	Shared syringes	Shared equipment	Shared syringes	Shared equipment	Shared syringes	Shared equipment	Shared syringes	Shared equipment
P1. Months known X	-.057	.068	.135 **	.058	.009	.081	.135	.281 *	-.175	.101	-.113	-.367 * *
P2. Days contacted X	.145 ***	.072	.126 **	-.016	.085	-.225	.225	.534 * * *	.055	.084	.215	.531 * *
P3. X Lived with you	.134 **	.087 *	.144 **	.087	-.061	.160	.227	.251 *	.300 *	.164	.410**	.443 * *
IS1. Can go to X when need money	.097 **	.178 ***	.150 **	.203 ***	-.174	.197	-.053	-.024	.165	.206	-.012	-.074
IS2. can go to X when need a place to stay	.100 **	.188 ***	.212 **	.189 ***	.265 *	.420 **	.045	.104	.007	.062	.162	.043
ES. Can tell problem, ask for advice or support from X	.093 **	.105 **	-.118**	-.055	-.154	.306 **	.102	.234	.065	-.017	-.076	.235
EA1. How much you trust X	-.008	.049	-.055	.453	-.255	.441 **	-.101)	.023	.011	.098	.175	.308
EA2. How much it affect you if X disappeared from your life	.002	-.015	-.077	-.025	-.305 *	.338 **	.038	-.180	.243	.123	.271	.173

* Correlation is significant at the 0.10 level (2-tailed), ** Correlation is significant at the 0.05 level (2-tailed); *** Correlation is significant at the 0.01 level (2-tailed).

Cultural meaning related to sharing from China Study In-depth Interviews

- Chinese IDUs often give high priority to maintaining or not harming harmony relationship (not necessary good friendship) with others.

- Have a strong sense of obligation to share drugs with drug user friends, or pool money to get drugs when a friend had no money or not enough money.

- Expressing concern about whether or not everyone's contribution matched the amount of drugs he/she received was considered inappropriate,

- When someone felt the division was unfair, or contributed more than others, he/she usually won't confront network members openly but rather try to avoid such social situations.

- Friends are expected to engage in "rénqíng" (sympathy, reciprocity, sets of social norms and rules to maintain social relationship). But no need to follow this rule with someone who is not close to.

- Use drug together often involve very high HIV risky practices because Chinese IDUs often mix drug solution in large syringes (popular size is 2ml)

Summary of Findings

- **At the individual level, US IDUs are more likely to inject with others compared with Chinese IDUs.**
- **Frequency of injection equipment sharing is much more common than syringe sharing among US IDUs and slightly more so among Chinese IDUs.**
- **Among US IDUs, the syringe sharing rate is highest among spouse/lover ties, followed by family member ties and friend ties. But the sharing rate difference among various ties in Chinese sample was not statistically different.**
- **Relationship indicators that predict syringe and injection equipment sharing are different in items and strength among different relationship ties. This is true for both US and Chinese samples.**
- **Similarly between US and Chinese friend ties in that physical proximity, instrumental and emotional support predict syringe and equipment sharing, with the difference that physical proximity matters more for Chinese.**
- **Similarly between US and Chinese spouse/lover ties in that only living together predict syringe sharing, with the difference that days contact also predict equipment sharing.**
- **The pattern among acquaintance ties are different between Chinese and US samples. For Chinese only physical proximity predicts equipment sharing and nothing predicts syringe sharing. But emotional support/attachment and "can go to X if need a place to stay" matters for US IDUs.**
- **Syringe and other injection equipment sharing can not be fully understood when focus on individual alone. Social network characteristics, social relationship types and related social cultural norms must also be considered.**

Summary of Findings

- **More effective intervention calls for research in understanding the cultural context and social norms related drug use practices and HIV risk behavior among different relationship ties, .**
- **Current prevention intervention strategies developed in the US or other western countries must incorporate targeted social cultural norms among Chinese IDUs, and be tailored to IDUs in various relationship ties.**