Circumstances, Pedagogy and Rationales for Injection Initiation Among New Drug Injectors

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Abstract

Injection drug use is especially risky for new injectors. To understand the social and environmental contexts in which risks occur, we interviewed individuals who had initiated injection within the past 3 years ($n = 146$, 69.2% male) about the circumstances and rationales for their initial injection events. Respondents typically initiated injection due to tolerance (49.3%) and/or for experimentation (61.1%). Most (86.2%) did not possess the technical skills required to self-inject, and relied on the assistance of someone older (58.5%). While low levels of syringe sharing (5.8%) were reported, a majority of respondents (60.5%) engaged in at least one type of behavioral risk. Female injectors were more likely than male injectors to rely on another individual (95.5 vs. 82.2%), often a sex partner (40.5 vs. 7.2%), for assistance. The diversity seen in early injection practices highlights the need for tailored prevention messages to reach this population prior to the onset of injection risk.

Keywords

Injection initiation; Drug injectors; Heroin; HIV; HCV

Introduction

The physical and social harms associated with injection of illicit drugs, including high risk for exposure to blood-borne pathogens, have been well-documented [1–3]. Unacceptably high HIV prevalence rates continue to be seen in drug injecting populations, and rates of HCV infection among IDU populations, notably among young cohorts of injectors with relatively recent onset of injection risk, are particularly alarming [4–6]. Multiple factors may account for early acquisition of HCV among populations with recent onset of injection risk. For example, drugs such as heroin and cocaine are typically sold in dry form, requiring substantial technical expertise in transforming them into soluble form for injection as well as in actually self-administering them. In addition, due to increases in police pressure on street-based drug markets, drugs such as heroin and cocaine are increasingly being sold in relatively closed

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markets, making access to these substances more difficult for new users [7]. Thus, newer injectors may not have the knowledge or technical skills that are necessary to exert control over all aspects of their early injections, and may therefore have to rely on more experienced injectors for assistance in accessing drug markets and developing the technical skills necessary to prepare and inject illicit drugs such as heroin. Inability to self-inject at injection initiation has been associated with higher rates of HIV infection [4], as has a longer interval between first assisted injection and first independent injection [4].

Risk for early acquisition of viruses such as HCV may be even higher for new female injectors, who have higher seroprevalence rates for both HIV [8] and HCV [9]. Overall, most features of injection initiation events show few gender differences [10–12]. However, increased sexual risk, compared with male new injectors, might help to explain this difference. Some studies have found that female injectors are more likely than male initiates to rely on sex partners to facilitate their injection practices [10,11,13,14], although at least one other study of young injectors in Baltimore [12] did not find this difference.

Although increased risk for exposure to blood borne pathogens during the early course of injection has been well-documented at an epidemiological level, most of the available evidence is derived from studies of other high risk youth populations in which injection risk was also prevalent [15], studies of older injectors in which a sample of newer injectors have been analyzed separately [5,16], or studies of young, but not necessarily newer, injectors [12]. Few studies have directly targeted new injectors as group in their own right. As a result, there is a general absence of a detailed description of how new injectors acquire technical skills needed to employ injection as a mode of drug administration and only limited information about how social factors influence the early course of injection risk.

This paper presents data from a study specifically targeting new injectors (3 years or less since initiation). It will describe the physical and social circumstances in which injection initiation occur, sources and types of injection pedagogy and the multiple rationales that new injectors offer for having initiated injection as a mode of drug administration. We also highlight differences in settings, groups, practices, and rationales in relation to gender.

Methods

Sampling and Recruitment

Targeted sampling methods were used to recruit a sample of 146 new drug injectors between the ages of 16 and 30 from public settings such as streets, parks, and other locations in the New York City metropolitan area where young drug users were known or thought to congregate. Participation was limited to injectors who had first initiated injection within 3 years of screening and involved a structured survey interview lasting approximately 45 min.

Respondents completed a written informed consent and were interviewed by a study ethnographer immediately in a local setting proximate to where they were recruited. Interviews were typically conducted in small restaurants or coffee shops, or similar settings that the ethnographer had pre-selected on the basis of safeguarding confidentiality and acquisition of high quality data (e.g., a location where a clear audio recording of the interview could be made). Respondents received $20 upon completion of the interview. All interviews, protocols and consent forms were approved by the Institutional Review Board at National Development and Research Institutes, Inc. To mask study criteria, a small number of potential respondents (*n* = 16) who did not meet the inclusion criteria were also interviewed; these respondents are not included in the data presented below.

Instrument

The survey instrument included the following 12 domains: demographics, economic resources, drug use (history and current patterns of use), first use of initial injection drug (including smoking, snorting, etc.), initiation into injection, current injection practices, syringe sources, sexual history, current sexual practices, social resources, service utilization and HIV knowledge. All interviews were digitally recorded. Completed surveys were entered into a database using Questionnaire Development Software (QDS; Nova Research Company; Bethesda, MD) and the resulting database was converted to, and analyzed using, SPSS (SPSS for Windows, Release 11.5. Chicago: SPSS, Inc).

Below we present data on respondent demographics and important characteristics of these initiation events. We focus on characteristics of the initial injection, how respondents first learned to inject (including characteristics of those who helped them with their initial injection, known as "trainers"), and the reasons given for initiating injection as a mode of drug administration. We present both overall data and comparisons, using chi-square analyses or independent samples *t*-tests, between male and female respondents.

Results

Demographics

Respondents were primarily male (69.2%) and averaged 22.4 years of age (range 16–30 years). More than half identified as White (56.6%), a large proportion identified as Latino/a (42.8%) with smaller proportions of African-Americans (2.7%) and Asian/Pacific Islander (2.7%). 8.3% of respondents endorsed more than one race/ethnicity category. Most described themselves as heterosexual (83.4%) and single (60.2%), and 28.9% were either in a committed relationship or married. Just under half (44.0%) did not complete high school. Nearly half (45.5%) considered themselves to be homeless, although more than half (54.1%) of those who self-described themselves as homeless reported that they had a place to sleep every night.

Significant differences were seen between male and female respondents (transgender was not included as a category in the gender analyses, as there was only a single transgender respondent in the sample) in sexual orientation, relationship status, education and homelessness. Female respondents were more likely to describe themselves as bisexual (34.1 vs. 4.0%, $P < .001$) and more likely to be in a committed (41.7 vs. 17.4%) or casual relationship (19.4 vs. 4.3%, overall $P < .001$). Female respondents were also more likely to have had some education beyond high school (45.2 vs. 22.2%, $P = .002$), although they were equally likely not to have completed high school (45.2 vs. 43.4%). Male respondents were more likely to define themselves as exclusively heterosexual (93.1 vs. 61.4%, overall $P < .001$); to be single (71.7 vs. 30.6%, overall $P < .001$), to consider themselves homeless (51.6 vs. 32.6%, $P = .038$) and to have ever spent a night in a homeless shelter (43.4 vs. 20.9%, $P = .011$). These data are presented in Table 1.

Circumstances of Initiation

Respondents were asked a series of questions about the circumstances in which they first injected. These questions included descriptive items, such as their age, where the event took place, the drug they first injected, and their history of using that drug, as well as more detailed questions regarding their rationale for initiating injection at that particular time and place.

Mean age of first injection of any illicit drug was 21.0 years of age (range 14–30 years of age). The majority of the sample (85.5%) initiated injection when they were 25 years of age or younger. Injection initiation occurred, on average, 520 days (just under 1.5 years; range 2 days–3 years) prior to the interview.

The majority of respondents (87.6%) reported that their first injection involved heroin, 11.7% that it involved powder cocaine; and 6.3% that their first injection involved some other illicit substance (typically "Speed" or ketamine). 5.5% reported that they injected multiple drugs at initiation (e.g., mixed heroin and cocaine, referred to locally as "speed-balls"). More than three quarters of the respondents (81.0%) had sniffed their injection drug at least once prior to initiating injection and nearly one quarter (21.4%) had smoked the drug before ever injecting. However, 16.7% of respondents reported that their injection initiation was the first time they had used their initiation drug.

Rates of reported syringe sharing were low. Only 5.8% of respondents reported that they had first injected with a syringe that had been used by another injector. However, more than one quarter (28.7%) of respondents reported having used a possibly unclean cooker, and 41.0% reported having shared a drug solution. Overall, nearly two-thirds (60.8%) of respondents reported having at least one of these injection risk factors at their initial injection.

First injection events occurred in a variety of locations, most commonly respondents' homes (23.4%); the homes of their injection trainers/helpers (20.0%); and parks, streets and other outdoor places (15.2%). Overall, 63.4% of initial injections took place in private settings, while 36.6% took place in public or semi-public settings.

No significant gender differences were seen on circumstances of initiation. These data are presented in Table 2.

Learning to Inject

Respondents acquired practical skills in self-injecting in a number of different ways, some of which reflected a strong degree of dependence on other more experienced injectors. 87.5% of respondents reported that one or more persons showed them how to inject, while 14.6% reported that they learned by observing others injecting and 4.9% taught themselves (respondents had the option to indicate more than one way in which they learned to inject, and 7.6% endorsed multiple responses).

Nearly all (92.4%) respondents reported that they were not alone when they first injected, and nearly two-thirds (64.4%) of these respondents reported that at least one older injector was present at their initial injection event. 86.2% of respondents reported that they had a trainer or helper for this initial injection, and described the characteristics of this person. More than half (52.0%) described their trainer/helper as a friend, while 26.4% described them as acquaintances, and 13.6% as boyfriend/girlfriend/spouse. 18.4% of these trainers were sex partners. The majority of respondents (58.5%) reported that the person who trained them was older, and more than one quarter (26.8%) reported that their trainer was at least 5 years older. On average, trainers were 2.7 years older than respondents.

We also assessed how long it took before respondents could inject independently. Only 13.4% of respondents indicated that they were able to inject themselves the first time they injected, and fewer than three quarters (74.5%) reported that they were ultimately able to self-inject. We asked a series of questions to determine how long it took for respondents to acquire the ability to self-inject. Overall, 66.4% of respondents were able to report the number of injections that they required before they could self-inject. Among these respondents, it took an average of 7.08 injections before they could self-inject (range 0–120; median 3.00). Among respondents who did not self-inject at their first injection event, it took an average of 8.89 injections before they could self-inject (range 1–120; median 3.00), and 28.6% of respondents required four or more injections before being able to self-inject.

Male respondents were more likely than female respondents to have learned how to inject by observing others (19.8 vs. 2.3%, *P* = .007), to describe their trainer as a friend (57.8 vs. 40.5%, overall *P* < .001), and to be able to inject themselves at their initial injection (17.2 vs. 4.7%, *P* = .044).

Female injectors were more likely than male injectors to have been taught how to inject by one other person (95.3 vs. 80.2%, *P* = .021), to report that they had a "trainer" at their initial injection (95.5 vs. 82.2%, *P* = .033), to describe their trainer as a romantic partner (33.3 vs. 3.6%, overall *P* < .001) and to report that their trainer was also a sex partner (40.5 vs. 7.2%, *P* < .001). These results can be seen in Table 3.

Rationales for Selecting Injection as Mode of Administration

Respondents were asked a series of questions about why they first injected and why they had not injected previously. The most common reasons for initiating injection were curiosity and peer influence (endorsed by 39.6% and 38.9% of respondents, respectively), to get a better high (34.7%), economics (13.9%, referring to the ability to use less of a drug, and hence pay less, when injecting rather than using another mode of administration) and increased tolerance to other modes of administration (12.5%). We aggregated responses into categories of tolerance (tolerance, better high, and/or economics, reported by 49.3% of respondents; note that respondents could endorse more than one of these responses) and experimentation (curiosity, peer influence, reported by 61.1% of respondents), and found that those who reported at least one tolerance response as a reason for initiation were more likely to become daily injectors (defined as ever injecting every day for at least 1 week, 78.8 vs. 48.3%, *P* < .001), while those who reported at least one experimentation response as a reason were less likely to become daily injectors (54.8 vs. 78.4%, *P* = .007). Differences between these groups in the number of days after initiation until respondents injected again were not statistically significant, although they were in the expected direction, with injectors who initiated for reasons of tolerance injecting again sooner, and injectors who injected for reasons of experimentation taking longer until their next injection.

When asked why they had not injected prior to their initiation event, 26.1% of respondents indicated that they had been afraid of needles and 22.5% reported that they simply had had no prior opportunity to inject. Other common responses were that they had seen the effects of injection on others (14.8%), fear of disease (13.4%), fear of overdose (12.0%) and fear of addiction (12.0%).

While men were more likely than women (17.8 vs. 4.7%, *P* = .036) to report initiating injection for economic reasons, no other gender differences were seen. These results are shown in Table 4.

Discussion

Conventional epidemiological models would assume that risk for exposure to a viral pathogen would increase over time, reflecting increasing number of person-years-at-risk. However, there is ample epidemiological evidence suggesting that many serious viral infections, including HIV and HCV may be acquired in the early course of injection [4,5]. This paper has described a number of complex and inter-related factors that may explain these patterns in the epidemiological data and why new injectors may be at heightened risk for exposure to viral pathogens. Although reported rates of needle sharing at first injection are low in this group (as they are in many current IDU studies), rates of paraphernalia sharing are relatively high: Nearly two in three new injectors report sharing either a needle or drug solution, or using an unclean cooker, at their first injection. These behaviors are even more of a concern because for many respondents this sharing takes place in concert with older, more experienced injectors, who are

more likely to be infected with HIV and HCV. There are several reasons why these risk behaviors may be occurring. It is possible that new injectors are simply unaware of the risks to which older injection partners may expose them. More likely, novice injectors may have little control over their initial injection practices, and are therefore unable to avoid the high-risk injection practices that their trainers may engage in. Thus, while many new injectors reported that they used a separate, often new syringe (a "common knowledge" form of protection that has increased with the increased accessibility of sterile syringes through syringe exchange programs and pharmacies), they simultaneously reported that their cookers might not have been clean, or that their drug solution was prepared and distributed by (and hence shared with) their injection partner. Other findings from the present study indicate that new injectors often develop their own idiosyncratic strategies for reducing risk, such as selecting injection partners whom they perceive as less likely to be infected with blood-borne pathogens, or overestimating the faithfulness of sex partners with whom they inject [17]. In such cases, new injectors may believe that they are protecting themselves even as their strategies still expose them to high-risk behavioral practices.

The new injectors who participated in this study evidenced great variability in the reasons they gave for initiating injection as a mode of drug administration as well as in their early patterns of injection. Respondents who reported initiating injection due to increased drug tolerance (including directly reporting a physical tolerance, wanting a better high, and economic reasons for initiation, which often indicate that a respondent's drug use has escalated to the point where they can no longer afford the amount needed to ward off withdrawal) were more likely to describe a steady trajectory in which they moved to a pattern of regular injection relatively early in their injection careers. In contrast, respondents who reported initiating injection for reasons more consistent with social pressures and experimentation, including peer influence, and curiosity, were more likely to describe a more tentative trajectory, with sporadic use of injection and a somewhat delayed transition to regular injection. Different patterns of onset and trajectory, perhaps reflecting complexity in new injectors' purposes and intentions in initiating injection, present a major challenge in delivering early prevention messages to young injectors, who use drugs for varied reasons and with varied intensities. Young injectors' lack of connection to formal prevention and treatment services greatly limits access to comprehensive prevention information, including information that could be targeted to an individual injector's patterns of, and reasons for, drug use.

While female respondents were more educated, more likely to be in committed relationships and more likely to have a stable place to live, these social advantages were not entirely protective. Our findings suggest that female new injectors are indeed at greater risk than their male counterparts. They are more likely to learn to inject directly from another person, to describe this person as a romantic partner, and to report that this person is a sex partner, although fewer than half of our female respondents described their trainers as romantic partners and only one-third described their trainers as sex partners. While this finding is consistent with several earlier studies [10,11,13,14], it contradicts the results reported by Doherty and colleagues [12], although we did find, as they did, that the majority of our female new injectors reported that their trainers were friends or acquaintances.

The overlap between sex and injection partners among many female new injectors highlights complexities in injection decision-making that extend well beyond the injection context itself, reflecting the dynamics of intimate relationships that may substantially disadvantage female injectors [18]. Other studies have shown that male partners of female injectors more frequently shared paraphernalia outside of sexual relationships, thus making it more likely that men will introduce infection into the relationship than women [18]. Others have also highlighted the different gender dynamics around obtaining drugs and injection equipment and performing the injection [13]. Therefore, it may be necessary to develop risk reduction strategies that address

the complex relationship dynamics that women whose injection partners are also their sex partners must contend with.

It is notable that the new injectors who participated in this study were not recruited through large groups of injectors. While many respondents were referred by other study participants, this tended to occur in the context of a single friend, and very rarely did we identify large groups of young, new injectors. However, our respondents were not typically injecting alone, but often with older injectors, and their infection risk remains high. Although we cannot determine how long our respondents maintained these injection relationships, we know of many respondents who continued to inject with older injectors even when they were able to inject independently. We also know of many respondents (28.3% of the sample) who went onto initiate other new injectors, and many who directly injected others (46.6%), thus continuing the pattern of new injectors relying on more experienced injectors for their initial injections.

Finally, it should also be noted that the influence of trainers/helpers is complex, and far from uniformly negative. While paraphernalia sharing was frequently reported by new injectors, many trainers and helpers provided positive, harm reducing influences at the same time as they were exposing novice injectors to behavioral risks. For example, some respondents reported that their trainers discouraged their initial injection, only agreeing to help when it was clear that the respondent would otherwise go elsewhere for their initial injection. In these cases, trainers were trying to protect these respondents from the potential danger of injecting with a stranger, even though they were facilitating, and participating in, risky injection practices. During these initial injections, many trainers also carefully monitored the amount of drugs used for the initial injection, in an attempt to minimize the danger of overdose. Respondents often reported that this monitoring was essential, as they had been accustomed to using larger quantities of drugs via smoking or inhalation. According to some respondents, trainers directly prevented the use of dangerous quantities of drugs. Thus, the risk of injecting with a more experienced injector must be balanced against the knowledge and skills that experienced injectors bring to the injection process, even when these practices confer some risk for HIV and HCV transmission.

As with any study that focuses on stigmatized behaviors, validity of self-report data can be a concern. However, other studies have shown that drug injectors can recall their injection initiation event [19]. There is also the risk that data can be deliberately falsified, and we took a number of additional precautions to minimize the likelihood of this. First, our interviews were conducted by experienced ethnographers, who were encouraged to clarify inconsistent information as the interview progressed. These ethnographers also recruited respondents, including a small number of subjects who were not eligible, and were thus able to screen these respondents for eligibility and consistency of recall throughout the recruitment process. However, we were not able to verify injection history through direct observation of injection marks ("tracks"), because many of our respondents were too early in their injection careers to have developed these marks. Our instrument was relatively brief, usually completed in less than 45 min, with little repetition and few extraneous questions, and respondents did not appear distracted or rushed during the interview process. Nevertheless, it was apparent to respondents that the survey was focused on drug use in general, and drug injection in particular, and the possibility of social desirability and other types of self-report response biases cannot be ignored.

In conclusion, this study illuminates the diversity in individual characteristics, patterns of drug use and early injection practices among new, young injectors. It also highlights the risks that these injectors face as they go about acquiring the knowledge and behavioral skills necessary to prepare and inject drug solutions. Their inability to avoid risky injection practices, whether due to lack of knowledge or lack of control over the injection process, coupled with their

reliance on older, more experienced injectors (and for many women, reliance on sex partners), puts them at particularly high risk for acquisition of HIV and HCV. This high level of risk among an extremely vulnerable population poses a particular public health challenge, as the individuals most in need of knowledge and skills may not yet have access to the venues in which this information is typically transmitted. If we are able to develop sources of prevention information that can reach drug users prior to the onset of injection as a mode of drug administration, we may be able to limit the risks that new injectors face.

Acknowledgments

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Table 1

Demographics

Gender	N	%
Male	101	69.2%
Female	44	30.1%
Transgender (not included in analyses)	1	0.7%

	Overall	Male	Female	Significance
Age				
Mean	22.4	22.5	22.3	n.s.
Range	16–30	16–30	16–30	
Race/ethnicity				
Asian	2.7%	2.0%	4.5%	n.s.
Black/African-American	2.7%	2.0%	4.5%	n.s.
Caucasian/White	56.6%	54.5%	61.4%	n.s.
Latino/a, Hispanic	42.8%	44.6%	38.6%	n.s.
Native American	1.4%	2.0%	0.0%	n.s.
Other	2.8%	3.0%	2.3%	n.s
More than one race	8.3%	6.9%	11.4%	n.s.
Sexual orientation				$P < .001$
Straight/heterosexual	83.4%	93.1%	61.4%	
Gay/lesbian/homosexual	3.4%	3.0%	4.5%	
Bisexual	13.1%	4.0%	34.1%	
Relationship status				$P < .001$
Single	60.2%	71.7%	30.6%	
Married/living with domestic partner	4.7%	3.3%	8.3%	
Divorced	2.3%	3.3%	0.0%	
Committed relationship	24.2%	17.4%	41.7%	
Casual relationship	8.6%	4.3%	19.4%	
Level of education				$P = .002$
Did not complete high school	44.0%	43.4%	45.2%	
Completed high school/GED	26.9%	34.3%	9.6%	
Some education beyond high school	29.0%	22.2%	45.2%	
Homelessness				
Has a place to stay every night	77.9%	76.2%	81.8%	n.s.
Considers self homeless	45.5%	51.6%	32.6%	$P = .038$
Ever spent a night in a homeless shelter	36.6%	43.4%	20.9%	$P = .011$
Night in homeless shelter in past 2 months	18.0%	21.4%	9.8%	n.s.
Night in a public place in past 2 months	56.6%	59.4%	50.0%	n.s.

Table 2

Circumstances of initiation

	Overall	Male	Female	Significance
Age at injection initiation				
Mean	21.00	21.02	20.95	n.s
Range	14–30	14–30	14–29	
14–20	50.3%	49.5%	52.3%	
21–25	35.2%	37.6%	29.5%	
26–30	14.5%	12.9%	18.2%	
First drug injected				
Heroin	87.6%	86.1%	90.9%	n.s.
Powder cocaine	11.7%	10.9%	13.6%	n.s
Speed	2.1%	3.0%	0.0%	n.s.
Ketamine	2.1%	3.0%	0.0%	n.s.
Other	2.1%	3.0%	0.0%	n.s.
Multiple drugs	5.5%	5.9%	4.5%	n.s
In what other ways had you used [initiation drug] before?				
Sniffed	81.0%	82.2%	77.8%	n.s
Smoked	21.4%	23.3%	16.7%	n.s
Used orally	3.2%	3.3%	2.8%	n.s
Used in some other way	0.8%	0.0%	2.8%	n.s
Did not use prior to injecting	16.7%	15.6%	19.4%	n.s.
Location of initiation event				n.s.
Respondent's home	23.4%	22.8%	25.0%	
Trainer's home	20.0%	19.8%	20.5%	
Other injector's home	11.0%	9.9%	13.6%	
Other private home	9.0%	8.9%	9.1%	
Indoor venue (e.g., club, restaurant, store bathroom)	10.3%	11.9%	6.8%	
Workplace	0.7%	1.0%	0.0%	
Outdoor venue (park, street)	15.2%	16.8%	11.4%	
Car	6.9%	4.0%	13.6%	
Shooting gallery	2.8%	4.0%	0.0%	
Other	0.7%	1.0%	0.0%	
Private settings	63.4%	61.4%	68.2%	
Public/semi-public settings	36.6%	38.7%	31.8%	

Table 3

Learning to inject

	Overall	Male	Female	Significance
How did you learn to inject?				
Directly from one person	84.7%	80.2%	95.3%	*P* = .021
Directly from more than one person	2.8%	3.0%	2.3%	n.s.
From service provider	0.7%	0.0%	2.3%	n.s.
From observing others inject	14.6%	19.8%	2.3%	*P* = .007
Self-taught	4.9%	6.9%	0.0%	n.s.
From the internet	1.4%	2.0%	0.0%	n.s.
Other	2.1%	3.0%	0.0%	n.s.
Others present at initial injection				
Respondent was alone	7.6%	9.9%	2.3%	n.s
Other injectors present at initial injection				
None	3.0%	3.3%	2.4%	n.s.
One	58.3%	55.6%	64.3%	
More than one	38.6%	41.1%	33.3%	
At least one older injector	64.4%	66.3%	60.5%	n.s.
Trainer characteristics				
Reported having a trainer	86.2%	82.2%	95.5%	*P* = .033
Trainer gender				
Male	69.6%	74.7%	59.5%	n.s.
Female	30.4%	25.3%	40.5%	
Older	58.5%	59.0%	57.5%	n.s.
Respondent–trainer relationship				*P* < .001
Parent	0.0%	0.0%	0.0%	
Sibling	1.6%	2.4%	0.0%	
Other relative	1.6%	2.4%	0.0%	
Friend	52.0%	57.8%	40.5%	
Acquaintance	26.4%	27.7%	23.8%	
Romantic partner	13.6%	3.6%	33.3%	
Other	4.8%	6.0%	2.4%	
Sex partner	18.4%	7.2%	40.5%	*P* < .001
Older than respondent	58.5%	59.0%	57.5%	n.s.
Same age as respondent	9.8%	9.6%	10.0%	
Younger than respondent	31.7%	31.3%	32.5%	
Average age difference (years)	2.68	2.81	2.43	n.s.
Self-injection				
Able to self inject at injection initiation	13.4%	17.2%	4.7%	*P* = .044
Ever able to self-inject	74.5%	77.2%	68.2%	n.s.
Have not injected since initiation event	5.6%	5.0%	7.0%	n.s.
Among those who injected at least one more time:				
Able to self-inject at injection initiation	12.8%	16.0%	5.1%	n.s.

	Overall	Male	Female	Significance
Did not self-inject until next injection	12.9%	15.2%	8.1%	n.s.
Needed more than 3 injections before able to self-inject	35.2%	30.3%	48.0%	n.s.
Needed more than 4 injections before able to self-inject	28.6%	24.2%	40.0%	n.s.
Median number of injections until able to self-inject	3.00	3.00	4.00	
Mean (SD) number of injections until able to self-inject (among those who did not self-inject at initiation only)	8.89 (17.05)	7.80 (18.05)	11.30 (14.68)	n.s.

Table 4

Reasons for injecting

	Overall	Male	Female	Significance
Why did decide to inject the first time? (all respondents)				
Curiosity	39.6%	40.3%	37.2%	n.s.
Better high/instantaneous rush	34.7%	33.7%	32.2%	n.s.
Economics	13.9%	17.8%	4.7%	$P = .036$
Coercion	0.7%	1.0%	0.0%	n.s.
Peer influence	38.9%	39.6%	37.2%	n.s.
Problem with other mode of administration	2.8%	3.0%	2.3%	n.s.
Tolerance to other mode of administration	12.5%	9.9%	18.6%	n.s.
Other	24.3%	22.8%	27.9%	n.s.
Tolerance (aggregated)	49.3%	48.5%	51.2%	n.s.
Experimentation (aggregated)	61.1%	62.4%	58.1%	n.s.
Was there any reason you had not injected before?				
Never had the opportunity	22.5%	22.2%	23.3%	n.s.
Fear of disease	13.4%	15.2%	9.3%	n.s.
Fear of needles	26.1%	25.3%	27.9%	n.s.
Fear of overdose	12.0%	12.1%	11.6%	n.s.
Fear of addiction	12.0%	12.1%	11.6%	n.s.
Stigma/taboo	9.2%	9.1%	9.3%	n.s.
Seen the effects on other people	14.8%	16.2%	11.6%	n.s.
Other person directly discouraged injection	0.7%	0.0%	2.3%	n.s.
Other mode of administration was adequate/custom/routing	6.3%	7.1%	4.7%	n.s.
Did not know how	5.6%	6.1%	4.7%	n.s.
Other	30.3%	27.3%	37.2%	n.s.

	Yes	No	Significance
Reason for initiation—tolerance			
Ever injected daily	78.8%	48.3%	$P < .001$
Number of days until injected again	21.3	46.6	n.s.
Reason for initiation—experimentation			
Ever injected daily	54.8%	78.4%	$P = .007$
Number of days until injected again	44.7	17.4	n.s.