

Is precariousness the blind spot of prevention and treatment of the use of psychoactive substances?

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Abstract

Background and aims: Prevalence of the use of psychoactive substances is high in precarious populations. Yet the influence of precariousness on the trajectory of drug users (DUs) has rarely been studied. For the first time, we conducted such a study with a representative group of DUs.

Methods: We combined a recruitment through a respondent driven sampling (RDS) with a 250 items questionnaire. The answers of our sample of 327 UD were studied according to a precariousness score (PS).

Results: The prevalence of precariousness ranged from low PS 48.9 %, average PS 30.9 % to high PS 20.2 %. Access to health services at the time of our survey concerned 61.8 % of DUs. Its prevalence was lower among DUs with the highest precariousness score (Low PS 72.5 %, Average PS 61.4 %, High PS 36.4 %) with an Odds ratio of 5.01 (CI95% 2.52-9.97; $p < 0.0001$) between low and high PS for a continuous follow-up. A higher dropout rate was also observed among the highest PS ($p < 0.0001$).

Despite differences in their socio-economic characteristics, DUs represented a homogeneous community with respect to their use of drugs. The more precarious DUs were younger, had an earlier age of initiation of injection, of experimentation of cannabis, alcohol, heroin as well as diverted opioid substitution treatments (OST). They had a more frequent and durable use of alcohol. Precariousness was also associated with lower educational levels, less contacts with one's parents, less search for information on the Internet for drugs and GPs for health and more housing and social rights as plans for the future.

Conclusion: In France, despite the fact that specialized care is free of charge, the lower access to for the most precarious DUs and their higher drop-out rates suggest that it is not adapted to their demand, which is more oriented towards socio-economic problems than towards drug use or harm reduction. This observation is all the more important as it concerns the youngest users. Our data suggest that precariousness influences the course of drug addiction from its onset. Lack of consideration of this population limits the ability to develop effective health policies.

Introduction

Precariousness has been defined as “the absence of one or more of the security features that allow people to assume their basic responsibilities and enjoy their fundamental rights. The resulting insecurity may be more or less widespread and have more or less serious and definitive consequences. It most often leads to extreme poverty when it affects several areas of life, tends to extend over time and becomes persistent, seriously compromises the chances of regaining one's rights and reassuming one's responsibilities on one's own in the foreseeable future” (1). Its relationship between drug use and precariousness is recognized and has been usually assessed through the prevalence of DUs among populations selected for homelessness, low income or low social security affiliation (1-9). These problems are often considered as being the consequence of using psychoactive substances. Less consideration has been given to their influence on the initiation of drug use, on its course and to the access to health services. Targeting at risk DU, many surveys are unable to give a global understanding of its influence on the initiation of drug use, on its course and to the access to health services (11-15). Like the majority of the studies of DUs, as is the case of surveys of the prevalence of hepatitis (16,17), the bulk of French publications (18,19) concern services for DUs, ignore GP's who prescribe 2/3 of the opioid substitution treatments (20), and ignore UD's outside these dedicated health services.

France remains a welfare state where social protection is important and care is free which applies to drug addiction for which services (SDUs) were set up in the early 1970s. From 1996, to treat heroin addiction, this offer was completed, in these SDUs, by the creation of methadone units and by the offer made to every GP of prescribing high dosage buprenorphine (21).

After the failure of a first snowball survey involving all Strasbourg's SDUs in 2011, we decided to switch to a RDS since it is the most widely used method for studying hidden populations (22). It serves, among others, the US CDC to assess the prevalence of HIV infections (23). The originality of our approach comes from its association with a questionnaire of more than 250 items, created by caregivers and DUs, covering every area considered relevant to better understand DUs' trajectories.

After hepatitis C (24), we present here the study of precariousness. This is the first quantitative study of this type involving a representative population of DUs regardless of an history of injection or of their access to the health services and aggregating three variables in a score of precariousness, created by the Observatoire Français des drogues et des toxicomanies to reflect the extremely precarious situation of many DUs (25). This recruitment allows us to position drug use with care supply according to this feature.

Methods

Study design

Our study was conducted in the greater Strasbourg area (15-64 years: 473 375 people). RDS was chosen to recruit a representative sample of DUs. The condition of their eligibility followed the European Monitoring Centre for Drugs and Drug Addiction definition of problematic drug use: injecting drug use or long duration /regular use of opioids, cocaine and/or amphetamines. (26).

We used a precariousness score (PS) created by the French Observatoire des Drogues et des Toxicomanies: (24). Its three items (Health coverage : 0: affiliated to a Social Security scheme with complementary coverage; 1: affiliated to a Social Security scheme without complementary coverage (including people with universal medical coverage or free health care for people on low incomes); 2: no Social Security scheme (with or without state medical assistance). Housing: 0: long-term (independent or with friends/family); 1: in an institution or temporarily with friends/family; 2: homeless or living in a squat. Origin of income : 0: employment income and/or unemployment benefits; 1: social welfare or funds from third parties; 2: other funds (illegal or unofficial) and no income)

We started with 3 “seeds” randomly recruited among DUs attending the same SDU. They were asked the number of DUs they had met in the previous 14 days (network size) and were given 3 coupons to recruit 3 respondents among their own social network who were due to show up less than 14 days later. Each wave of respondents, following the same rules, recruited the next wave until the final sample size was achieved. Our budget allowed financing the recruitment of 300 DUs representing a sample of 6 % of the total population of DUs of the greater Strasbourg area (27).

The completion by each respondent of a 250 items auto-questionnaire was followed by a cross examination of their answers in a private space by the same professional interviewer to assess their quality and completeness. The monetary recruitment incentive was 30 € for the completion of the interviewer-administered questionnaire and 20 € for each recruited DU. This amount, was considered to be a fair salary, recognizing an actual work, by the DUs who had validated the questionnaire. Since giving money unconditionally regarding its use to homeless and other low income individuals, among which DUs, has constantly been shown to improve their empowerment, this approach was considered ethical (28,29). The conduct of the study was in line with the ethical checklist (respect, beneficence, justice, and safeguards) provided by Semaan and al. (30).

Patients provided informed consent to participate to the study and to publish its results. This study was approved by the French CNIL (Commission Nationale de l'Informatique et des Libertés). Data was anonymous and used in accordance with the European GDPR.

Statistical analysis

RDS allows statistical adjustments for differential network sizes to produce estimates representative of the sampled population's network. RDS data weighting was used to compare the observed distribution of HCV screening between the observed and the weighted population as well as their homophily for sex, age, using RDSAT version 7.1.46 :

(http://www.respondentdrivensampling.org/reports/RDSAT_7.1-Manual_2012-11-25.pdf;

http://www.respondentdrivensampling.org/download/RDSATv7.1.46/RDSAT_windows-x64_7_1_46_noJRE.exe). We followed the “STROBE-RDS” reporting recommendation (21).

The items constituting the PS were compared to all the other variables. For ordinal or categorical variables chi-square and odds) ratio or Kendall tau-b were calculated. T-test or one-way ANOVA were performed for scale variables. Since multiple comparisons were performed, statistical significance was considered at an alpha of 0.01 to prevent the occurrence of too many statistically but not clinically relevant associations. To measure the association between dependent and independent variables, the significant variables were entered into binary logistic regression multivariate models and automatically chosen by forward stepwise selection procedure (2-sides, $p < 0.05$). Odds ratios (OR) and 95% confidence intervals (CI) were calculated from β coefficients and their standard errors. The Hosmer-Lemshew test was used to determine the goodness of fit of the models. The data were analyzed using IBM SPSS version 19.

Results

Respondent driven sampling and characteristics of drug users

We recruited 327 DUs in 2 months (February-March 2015). All participants met the conditions of the survey. None of the 3 chains were interrupted before it reached the planned number of inclusions, with a maximum number of 6 waves. The average number of DUs encountered during the 15 days preceding interviews was 13.6 (95% CI 11.6-15.5).

DUs characteristics are presented in table 1 (observed, weighted and homophily data). Since there were no significant differences between the observed and weighted data, the subsequent statistics were conducted with the observed data.

The highest prevalence of women under 20 (51.7% (95%CI 34.4-68.6)) disappeared gradually with age (overall average: 25.7% (95%CI 21.3-30.6) was independent from the PS.

Precariousness is presented in table 2 and its relationship with age in Table 3. It was strongly related to the educational level ($p < 0.0001$): Before bachelor degree (Low PS 58.8% (95%CI 51-66.1), Average PS 79.2 % (95%CI 70.3-86)), High PS 92.4 % (95%CI 83.5-96.7)), University degree +/- Master (Low PS 21.3 % (95%CI 21.3-28.2)), Average PS 5.9 % (95%CI 2.8-12.4), High PS 0 %). There was no difference in PS for history of incarceration (49.5%). If moonlighting was related to precariousness (Low PS: 5.6 % (95%CI 3-10.3), Average PS: 19.8 %, (95%CI 13.2-28.6) High PS: 42.4 % (95%CI 31.2-54.4); $p < 0.0001$), it was not the case for illegal incomes (25.7 % (95%CI 21.3-30.7)). Precariousness was not related to sex.

Drug use

Drugs used over the course of life and within the last 30 days are presented in Table 4. Addiction (90.5 %) was not related to precariousness.

A history of injection was reported by 62.2% (95% CI 56.7-67.2) with 34.9% (95% CI 29.9-40.2) of needle-sharing and 29.1 % (95% CI 24.4-34.2) of syringes and needle sharing related to craving. They were unrelated to PS. In contrast, the age of onset of injections was younger (Low PS: 22.15 years (95% CI 21.1-23.2)/ Average PS: 20.1 years (95% CI 18.9-21.25) / High PS: 19.35 years (95% CI 17.7-21); Kendall's tau-B: $p < 0.0001$).

Access to dedicated health services

DUs formed 3 groups according to their use of health services: continuous, dropout and never used. The prevalence of continuous attendance increased with age from 10.3% (95% CI 3.6-26.4) below 20 years to 75.7% over 30 years (95% CI 63.4-81.1) while that of never use follows a reverse trend from 75.9% (95% CI 57.9-87.8) to 0% over 50 years. The dropout rate remains stable (13.8%, 95% CI 10.45-17.9). The relationship between precariousness and use of health

services is described in Figure 1. The odds ratio of a continuous use of HCS versus never attending them was 5.01 (CI95% 2.52-9.97) between DUs with the highest and the lowest level of precariousness and 2.13 (1.04-4.35) between DUs with an average level of precariousness and those with the highest level ($p < 0.0001$). Drop out was also more frequent between DUs with the highest and the lowest level of precariousness (3.98; CI95% 1.73-9.15) as well as between average and high level of precariousness (2.58 CI95% 1.07-6.22).

Before the age of 20, precariousness affected 45.5% (95%CI 26.9-65.3) of the DUs that had never had access to health services. The first contact with care for drug use was earlier in the most precarious (Low PS 26.3, Average PS 23.2, High PS 23.2; $p = 0.005$). High PS was more prevalent in SDUs (17.3 %) than in GPs' offices (8.1%, $p < 0.0001$). The number of drugs used in the past 30 days was not related to PS or to the history of care.

Among the 160 Low PS, 34 (21.25 % (95%CI 15.6-28.7) were still using drugs and did not consult health services at the time of the survey. They did not moonlight and had the same proportion of illegal activities as other DUs. They were different because of a better education (higher than bachelor: 31.1% / 21.9%, $p < 0.0001$) and a lower level of imprisonment (3.9% / 52.9%, $p < 0.0001$).

The prescription of an OST in the course of life was inversely related to PS (Low PS: 70% (95%CI 62.5-76.6)), Average PS: 60.4%, (95%CI 50.7-63.4) High PS: 31.8% (95%CI 21.9-43.8); $p < 0.0001$). On the other hand, there was no difference related to PS for the age of onset of the OST prescription.

The absence of relationship between HCV screening (82 % (95%CI 77.4-85.8) and PS may be explained by screening in prison. Among those who had never been to prison its prevalence was 55.2 % (95%CI 37.6-72) whereas it reached 100 % for those who had been imprisoned. Among DUs screened for HCV, the prevalence of infections (22.8%) was independent of the PS. HIV prevalence was low (1.7 %, 95% CI 0.75-4.03).

Sexual preferences were not influenced by PS, Condom use was related to the number of sexual partners ($p < 0.0001$) which was also higher among DUs with a HPS (Always use of condoms: LPS 20.9%, APS 27.9%, HPS 40%; $p < 0.0001$).

Sources of information

The different sources of information are presented in Table 5. Apart from GPs for health, friends remained the primary source of information. The use of social networks, predominant among the youngest was not influenced by PS, unlike the use of television watched by older DUs. The association between Internet access and precariousness was explained by its association with education level (high) and age (youth).

Fears and plans for the future

Fears were not influenced by precariousness. Finding housing (Low PS 15.6% (95%CI 10.8-22.1) /Average PS 50.5% (95%CI 40.9-60) /High PS 60.6% (95%CI 48.6-71.5); $p < 0.0001$), change of housing (Low PS 28.7% (95%CI 22.3-36.2)/Average PS 25.7% (95%CI 18.2-22.1)/High PS 9.1% (95%CI 4.2-18.4); $p = 0.006$), recovering social rights (Low PS 7.5% (95%CI 4.3-12.7)/Average PS 15.8% (95%CI 10-24.2) /High PS 36.4% (95%CI 25.8-48.8); $p < 0.001$) and changing of work (Low PS 11.9% (95%CI 7.7-17.8, Average PS 4% (95% CI 1.6-9.7), High PS 0%; $p = 0.002$) were the only plans for the future influenced by precariousness.

Contacts

Precariousness differentiated DUs by the number of contacts in the last 30 days with their parents (median Low PS 2, Average PS 1, High PS 0, Mann Whitney $p < 0.001$), with the number of dealers encountered (median Low PS 1, Average PS 2, High PS 2, Mann Whitney $p = 0.001$). The presence of a contact or the number of contacts with a dealer were not influenced by the attendance to care. The number of friends and of DUs was not related to precariousness.

Multivariate analysis

A step-by-step forward binary logistic analysis was carried out to specify the elements that differentiated the DUs with a Low PS from those with a HPS. All variables significantly associated with precariousness were entered. These results are shown in Table 6.

Discussion

For the first time, using a specific score created by the organization in charge of studying drug addiction in France to accommodate the particularly high precariousness of DUs (25) we have been able to study its significance, and especially its influence on the course of drug consumption and on access to care for a representative sample of DUs in a large French agglomeration (greater Strasbourg area, 15-64 years: 473 375 people). In less than 3 months, RDS allowed to recruit 327 DUs representing about 6% of the population of the problematic DUs (33). Two-third of these DUs attended services for their addiction and among them, two-third were treated by GPs.

Despite the absence of data on the prevalence of DUs' access to health services, we were able to assess the representativeness of our recruitment through their agreement with the known data such as the high heroin consumption specific to DUs in eastern France (31), the proportion of DUs receiving OST prescribed by GPs (20) as well as age and sex distribution, injection prevalence or precariousness for DUs attending specialized services for DUs (18,19). Thus, limited to the population included in the French surveys of specialized services for DUs and the hepatitis C Coquelicot survey of 2011 (17), we would have ignored 77.1 % of our sample and 80.3 % of the most precarious DUs.

We observed a community of DUs very diverse socio-economically, but homogeneous for the use of drugs. If, each characteristic was associated with a significant positive homophily, its level remained moderate, testifying to the absence of real boundaries between DUs' categories. This was true for precariousness that was, however, significantly associated to a different course of drug addiction.

Drug use followed the same pattern for all, in accordance with previous studies (33-35): It began in the early teens with cannabis and alcohol, followed by heroin and cocaine around 20. The other drugs appeared a little later with ketamine and diverted OSTs later. Poly-experimentation was the rule, reflecting the wide availability of products. Three fourth had a history of OST prescription. Moonlighting and illegal work were common. The lower prevalence of Illegal income than that reported by Debeck et al (35) may be related to difference in recruitment and in the use of welfare. Precariousness had an influence on this pattern. It was associated, as in low threshold services (18), with an earlier age of initiation of cannabis, alcohol, heroin use, of onset of injections and of OST misuse, with a more frequent alcohol use over the course of life as well as over the previous 30 days. The other information collected (lack of contact with the parents, school failure) placed this escalation as an early adaptation to an existential situation that drug use helped to support without resolving it, leading to school drop-out, higher unemployment, illegal work and, above all, moonlighting and homelessness, emphasizing the interest of very early prevention actions. This hypothesis is confirmed by the higher PS of DUs attending SDUs than GPs' offices, who are less able to provide social assistance and may ask to put the money of the consultation forward. Their higher homophily, since they had less contacts inside health services, can be linked only to encounters with less precarious DUs occurring around the use of drugs, confirming the existence of a drug related community. Housing, financial and educational deficits could contribute to the lower use of television and of the internet as sources of information. The relationship between precariousness and care by GPs explains why the most precarious had less recourse to them as a source of information on health. We have explained the low level of risk taken by the most precarious by group mimicry than by rational knowledge (24). This situation explains that finding a housing, with the desire to recover one's social rights-were the only plans for the future associated with high precariousness. If we confirm the interest of peer support emphasized by the predominant use of friends as sources of information, social networks, even if their use was lower than in the general population, should be also targeted since it was not influenced by precariousness.

The interpretation of later evolution is more uncertain because of the cross sectional design of our approach. The significant decrease in our sample size with age, more frequent among the most precarious and those who remained outside of care, suggests several interpretations that are not mutually exclusive:

- This trend could be related to a high mortality well documented among DUs (36-41) that can occur early in the course of drug use (40). Its impact will have been particularly important among the oldest DU who started their injections in the 1980s and paid a high toll to HIV before the introduction of HAART (42) and, until 1996, to overdoses before the liberalization of OST prescription as evidenced by the first cohort study of the OFDT conducted from 1992 to 2002, which was already too late to measure the real impact of the HIV epidemic (36). A higher death-rate related to precariousness could participate in this decline (43,44).
- Drug discontinuation, with or without medical support, is well documented by population surveys for tobacco, alcohol, and to a lesser extent, other drugs (45-48). In France, In general population surveys, the use of illicit drugs other than cannabis disappears after age 45, and, for cannabis, and, declines sharply after age 29 and disappears after age 60 (49). In our sample, the number of currently used drugs, lower than that of their total number consumed during life, reflects this reality. The female predominance observed among younger DUs in low threshold services (18) was found in our sample. Its disappearance with age implies that it does not translate a simple disaffection of care, but may be either related to a discontinuation of drug use in which pregnancies can play a role, or, less likely, to a recent masculinization of the use, or both. The absence of a relationship between the projects to stop drug use and duration of consumption, the number drugs consumed or the access to care explains that this phenomenon can occur at any time of drug use.
- The care provided in the SDUs may have enabled some users to get out of precariousness, but the low access to health services and the high dropout makes this evolution, at best, marginal.
- Last and not least, it could be related to a switch toward other drugs. In the 1980s, DUs unable to finance a sustainable consumption of heroin that had led them to an early initiation of injections (35) turned to an already present alcohol consumption, sometimes after an early and discontinued contact with a care unable to give them the answers they were waiting for. It was the rule in France before the introduction of a very wide OST offer in 1996. The recent high alcohol consumption among the most precarious and the lowest number of contacts with drug dealers are consistent with this hypothesis. Today, with the diversification of products and their distribution, we are witnessing a change in consumption (31). This trend has been observed in many French regions and worldwide (50,51). Young people living on the street use prescription drugs rather than heroin and cocaine at a time when, paradoxically, illicit drugs are being considered to treat psychiatric pathologies, reawakening the 1980s theory of drug use as self-medication. (52-56). They are easily accessible and inexpensive at the street level. The switch from heroin and cocaine to other psychotropic drugs, excluding these DUs from our study, would explain their disappearance.

From the PS, we can deduce three populations according to their use of SDUs, division which was subjectively obvious for the investigator who received the DUs (invisible, concealed and motionless):

- For 10.4% of the DUs (invisible) in our survey a better social integration was associated with a lack of care seeking, reflecting a consumption compatible with a normal social life reflected by the lower prevalence of unofficial work and incarceration history. The absence of university degrees and masters among the most precarious DUs reinforces the hypothesis of a deleterious interaction between precariousness and drug use that began as soon as drugs were experimented with.
- At the other extreme, several interpretations may explain that two-thirds of the DUs in great precariousness (concealed) remained outside the care at the time of our survey and that they disappeared with age, with the odds ratio by far the highest in our study. An offer that does not meet the expectations of precarious DUs would explain the importance of the link of precariousness with their low prevalence among consultants at the time of our survey, an early contact and a frequent abandonment when they had previously approached them, occurrence even greater among the youngest. This hypothesis is confirmed by the higher PS of DUs attending SDUs than GPs' offices, who are less able to provide social assistance and may ask to put the money of the consultation forward, by housing as their first demand and by the absence of influence of OST prescription, the number of drugs consumed or the contacts with drug dealers during the month preceding our survey. Our conclusion is in agreement with the finding of Luongo et al and of Phillips et al of the need for tailoring these services to this population (12,13) and with our observation that hepatitis screening was not a reason for consulting DUs (24).

- At last, DUs who found their balance in the current offer of care (motionless) where the OSTs "evened out" drug use rather than led to its discontinuation. Their intermediate precariousness allowed them to adapt to the constraints of social life with the help of SDUs' teams as reflected by a significantly higher prevalence of Social Integration Income (Continuous 59.4 %, Dropout 33.3 %, Never 21.3 %; $p < 0.0001$). The high level of viral screening and access to hepatitis treatments we observe (24) is consistent with the harm reduction role of the dedicated services by Kennedy et al (57).

Conclusion

Our survey, studying, for the first time, the influence of precariousness among all the at-risk DUs of a French urban area, provides information essential to understand the course of drug use and the access to dedicated services. Precariousness does not appear to be first a consequences of drug use, but rather, on the contrary, the consequence of profound emotional and social dysfunctions that predate drug use, leading to its experimentation at the same time as the social situation deteriorates. Thus, no simple solution can be found in the pharmacological treatment of these addicts whereas what is sought concerns the healing of the psychological and the social harm. Our finding may be surprising since access to the dedicated services is easy and free in France, however the particularly high rate of unemployment and the deficit of access to social housing among the young may explain this discrepancy (58,59). We believe, agreeing with Kiluk et al. (60) that sustained abstinence cannot be accepted as the only end-point of the treatment of DUs. For most users, and even more so for the most precarious, providing solution to educational, housing, income, work and social security problems should be considered at least at the same time as providing psychological and substance use disorders treatments. Once found effective solutions, depending of the local situation, we believe that, as for the detection and the treatment of viral infection (23), conditional cash transfer could be an effective approach to implement them if the proposed offer meets expectations. These conclusions need to be validated by other similar studies conducted in different environments and by cohort whose selection would follow the same design. If our conclusions were confirmed, the evaluation of healthcare policies related to drug use, including harm reduction measures, should be re-evaluated.

Declarations

Ethics approval and consent to participate and to publication

This study was approved by the French CNIL (Commission Nationale de l'Informatique et des Libertés). The database was anonymized.

Consent for publication

Apart from the 3 initial seeds to whom the study was presented by FD, all the other respondents were recruited by peers who explained the setting of the study. They decided voluntarily to be included in the study even before getting in touch with FD. All recruited DUs gave an informed consent to participate and to publication.

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Availability of data and material

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests (FDs' salary was paid y the grant)

Author's contribution

P Chossegros and F Di Nino conceived the study and supervised all aspects of its conduct. PC conducted the statistical analysis. PC and F Di Nino wrote the first and subsequent manuscript drafts.

Author's information

P Chossegros was involved in the treatment of hepatitis B, C and D since the end of the seventies and of HIV infections since the beginning of the AIDS epidemic. He was the cofounder of a healthcare network for DUs in Lyon in 1993 and participated in the creation of the National Healthcare Network en 1997 of which he has been President until 2003.

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Tables

Table 1: Distribution of observed and weighted prevalence of DUs' characteristics and their homophily

	Observed Nb	Observed % (CI95%)	Weighted % (CI95 %)	Homophily
Follow-up:				
Never	79	24,1 (19,46-28,74)	24.6 (18-33)	0.222
Continuous	202	61,8 (56,53-67,07)	61.9 (53.1-70.1)	0.156
Dropout	45	13,8 (10,06-17,54)	13.5 (8.5-18.5)	0.09
Sex :				
Men	243	74,3 (69,56-79,04)	71.1 (64-77.7)	0,093
Women	84	25,7 (20,96-30,44)	28.9 (22.3-36)	-0.137
Age :				
<20	29	8.9 (5,81-11,99)	7,7 (3.7-1.26)	0.198
20-29	96	29,4 (24,46-34,34)	26.3 (20.3-35.7)	0.08
30-39	114	34,9 (24,46-34,34)	33.4 (27.3-43.2)	0.114
40-49	70	21,4 (16,95-35,85)	27.4 (17.3-30.7)	0.073
>49	18	5,5 (3,03-7,97)	5.2 (2.8-7.8)	0.054
Injections:				
Yes	202	61,8 (56,5-67,07)	60.5 (53.6-68.5)	0,135
No	125	38,2 (32,93-43,47)	39.5 (31.5-47)	0,118
VHC screening (serology)				
Positive				
Negative	61	17 (11-24)	16.9 (11.2-23.6)	0,159
Unknown	206	61 (53-69)	60.9 (53.3-68.7)	0,125
	60	22 (15-30)	22.2 (14.6-29.9)	0,154
Precariousness				
Low	160	48.9 (43.6-54.3)	52.8 (40.2-51)	0.103
Average	101	30.9 (26.1-36.1)	32.2 (26.3-36.2)	0.038
High	66	20.2 (16.1-24.9)	15.0 (11.6-19.4)	0.255

Homophily refers to the tendency to recruit in the same category with a metric between 1 (recruited and recruits in the same category) and -1 (recruited and recruits in a different category) Heckathorn's suggests that any value of Homophily ≥ 0.3 as intermediate homophily and any value ≤ -0.3 as strong heterophily

Table 2 : Precariousness and its categories

Precariousness Score	0	1	2	Total % column
Health Coverage				
Low	123 (76.9)	35 (21.9)	2 (1.3)	160 (48.9)
Average	5 (49.5)	38 (37.6)	13 (12.9)	101 (30.9)
High	0 (0)	29 (43.9)	37 (56.1)	66 (20.2)
Total (% line)	173 (52.9)	102 (31.2)	52 (15.9)	327 (100)
Housing				
Low	118 (73.8)	29 (18.1)	13 (8.1)	160 (48.9)
Average	22 (21.8)	26 (25.7)	53 (52.5)	101 (30.9)
High	0 (0)	6 (9.1)	60 (90.9)	66 (20.2)
Total (% line)	140 (42.8)	61 (18.7)	126 (38.5)	327 (100)
Income				
Low	108 (68.1)	16 (10.0)	35 (21.9)	160 (48.9)
Average	18 (17.8)	6 (5.9)	77 (76.2)	101 (30.9)
High	0 (0)	0	66 (100)	66 (20.2)
Total (% line)	127 (38.8)	22 (6.7)	178 (54.4)	327 (100)

For each table Kendall's tau-b $p < 0.0001$

Health coverage : 0: affiliated to a Social Security scheme with complementary coverage; 1: affiliated to a Social Security scheme without complementary coverage (including people with CMU universal medical coverage or free health care for people on low incomes); 2: no Social Security scheme (with or without AME state medical assistance). Housing: 0: long-term (independent or with friends/family); 1: in an institution or temporarily with friends/family; 2: homeless or living in a squat. Origin of income : 0: employment income and/or unemployment benefits; 1: social welfare or funds from third parties; 2: other funds (illegal or unofficial) and no income.

Tableau 3: Distribution of the precariousness score following age

	Low (% PS)	Average (% PS)	High (% PS)	Total (% total)
<20 years	5 (17.2)	13 (44.8)	11 (37.9)	29 (8,9)
20-29 years	44 (45.8)	29 (30.2)	23 (24.0)	96 (29,4)
30-39 years	60 (52.6)	33 (29.9)	21 (18.4)	114 (34,9)
40-49 years	37 (52.8)	23 (32.9)	10 (14.3)	70 (21,4)
>49 years	14 (77.8)	3 (16.7)	1 (5.8)	18 (5,5)
Total (% precariousness)	160 (48,9)	101 (30,9)	66 (20,2)	327 (100)

Kendall tau-b $< 0,0001$

Table 4: Prevalence of drug use and injections throughout life and during the last 30 days

	Age of initiation	Life (%)	Life IV (%)	30 days (%)	30 days IV (%)
Cannabis	14,1 15.6/14.8/14*	97,6	0	80,7	0
Heroïn	17,2 21.5/19,4/18.3*	92,4	52	67,2	19,3
Cocaine	17,8	92,7	37,6	48,6	14,4
Ecstasy	18,3	79,9	9,5	21,7	0
Alcohol	14,7 17.4/16,9/14.8*	79,2 73.1/81,2/90.9**	0	60,6 50/69,3/72.7**	0
Diverted OST	21,4 25,5/23,75/20,5*	73,1	25,1	47,4	11,3
Amphetamine	19,7	72,2	18,3	26,4	4,9
LSD	19,2	68,2	4,6	15,9	0
Hallucinogen	19,1	69,7	1	12,2	0
Benzodiazepine	20,1	56	4,3	35	0,9
Ketamine	24,6	47,4	12,2	9,8	1,8
Codeine	18,4	38,4	2,4	14,7	0,6

Life: % Lifelong use

Life IV: % lifelong injections

30 days: % use during the last 30 days*

30 days IV: % having injected during the last 30 days

OST: opioid substitution therapy

.../.../... : Low/Average/High precariousness score when different for precariousness score

* Kendall tau-b p=0,001, ** Kendall tau-b p<0,0001

Table 5 : Sources of information

Sources of information	Generalist %	Health %	Drugs %
None	4	11.9	9.8
Friends	67.9	37	60.2
Family		14.1	8.9
Television	65.4 67.4/56/31.4*	26.3	32.1
Press (free)	44	12.8	15.3
Press (paid for)	14.7	2,4	5.8
Internet	52.8 66.9/45.5/30.3*	29.4 39.4/21.8/16.7*	41,9 53.8/31.7/28.8*
Social Networks	24.8	7.6	10.1
GP		55 65/55.4/30.3*	32.1 43.1/29.7/9.1*
CSAPA, CAARUD		27.5	25.1
Pharmacy		11.3	8.3
Stand		15.3	23.9
Booklet		26	29.1

* : Kendall tau-b p<0.0001

.../.../... : Low/Average/High precariousness score when significantly different

Table 6: Binary logistic regression (forward stepwise selection) for precariousness score (Low versus High precariousness scores)

	B	Wald	Sig	Odds ratio	95% CI of OR	
					Lower	Upper
Source GP health	1.517	5.453	0.020	4.558	1.276	16.285
Source Internet drugs	-1.638	5.919	0.015	0.194	0.052	0.727
Contact parents	-2.430	18.302	0.0001	0.088	0.029	0.268
Contact drug dealer	0.194	8.218	0.004	1.1214	1.063	1.385
Age	-0.004	8.611	003	0.910	0.854	0.869
Follow-up GP	-1.932	7.943	0.005	0.145	0.038	0.555
Alcohol (30 days)	-1.689	6.341	0.012	0.185	0.050	0.688
Finding housing	-1.810	9.377	0.002	0.164	0.051	0.521
Social rights	-2.933	11.703	0.001	0.053	0.010	0.285
Education	-1234	10.666	0.001	0.291	0.139	0.611
Constant	10.429	25.033	0.0001	33826.670		

Hosmer and Lemeshow test : 2.554 ; CC : LPS: 94.4 %, HPS: 84.8 % Total: 91.6 %

CC: correctly classified

Figures

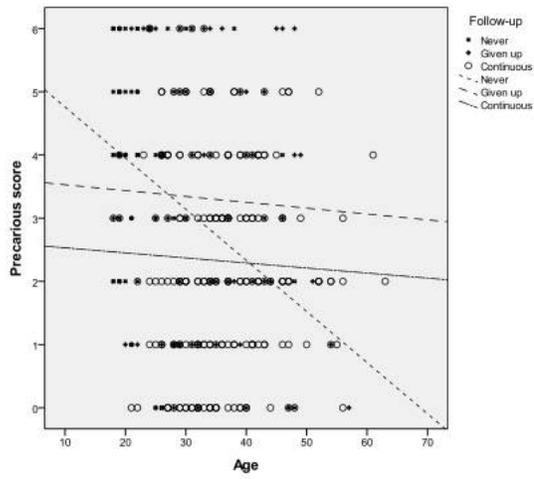


Figure 1

Distribution of the precarious score following age and use of health services for DUs. Lines are linearly fitted to each subgroup.