

RIGHTS REPORTER FOUNDATION

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Different environments, different risk behaviours: Consequences of decreased coverage of needle exchange programs in Budapest and Belgrade



RIGHTS REPORTER FOUNDATION

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1. Background

The proportion of people who inject drugs (PWID) among new HIV infections and the number of infections in this group decreased considerably in many EU countries since the emergence of HIV epidemic in the mid-1980s (ECDC-EMCDDA, 2011). This decrease could not be achieved without implementing core interventions for PWID. One of the main intervention that international guidelines always include among key interventions to control blood borne diseases and infections among PWIDs is needle and syringe programmes (ECDC-EMCDDA, 2011; WHO, UNODC, & UNAIDS, 2012). There is substantial evidence to support the effectiveness of harm reduction interventions such as needle exchange programs (NEP) in reducing HIV and HCV transmission among PWIDs (see eg.: (Aspinall et al., 2014; Hagan, Pouget, & Des Jarlais, 2011; Palmateer et al., 2010), and there is compelling evidence of cost effectiveness of these interventions (Wilson, Donald, Shattock, Wilson, & Fraser-Hurt, 2015). While providing complex harm reduction services is an effective measure to control infectious diseases among PWIDS, decrease in coverage of these programmes, (because of decreasing funds for harm reductions services, the emergence of new substances or changes in substance use patterns) can lead to serious epidemics. We have seen recent examples of HIV epidemics in Greece (EMCDDA, 2012a) and in Romania (EMCDDA, 2012b). The same patterns could be found behind the outbreaks in both countries: the funds for NEPs were not sufficient, i.e. the available sterile injecting equipment were not enough, while PWIDs started to inject more frequently (because the growing popularity of stimulants, cocaine in Greece, new psychoactive substances in Romania).

In 2014 the two largest needle and syringe programs (operated by the NGOs Blue Point and Drug Prevention Foundation) have closed down in Budapest due to lack of funding and to political attacks from local mayors (Gyarmathy et al., 2016; Rácz, Gyarmathy, & Csák, 2016). In 2015 three out of four needle and syringe programs closed down in Serbia, including the only one in Belgrade operated by the NGO Veza, after the Global Fund to Fight AIDS, Tuberculosis and Malaria ended its last grants and the national government did not ensure the transition to domestic funding. In both capitals, thousands of injecting drug users were left without access to harm reduction services. These events could easily led to a public health problem, and increase the health risks of PWIDs. The consequences of this process were clear decades ago: “The puritanical paranoia that curbs needle exchange programs converts syringes into a scarce commodity that artificially inflates their monetary value on the street and logistically encourages addicts to share them and/or steal them.” (Bourgois, 1998).

PWIDs witnessed a significant change in the past years in Hungary. Before the emergence of new psychoactive substances (NPS) in 2010, heroin and amphetamine was the two sub-

stances that the overwhelming majority of PWIDs injected. Since then NPSs have become the dominant substances. The percentage of heroin users started to drop first, but gradually amphetamines was replaced by NPSs too (Rácz, Csák, & Lisznyai, 2015; Rácz, Csák, et al., 2016). During this period, the health risks of injecting use have increased substantially. The Hungarian National Center for Epidemiology has been studying the prevalence of HIV and HCV among PIWDs since 2006. The results showed that the prevalence of HCV doubled between 2011 and 2014, in 2014 the prevalence of HCV was 48,8% in the country (up from 24,1% in 2011), and 60,8% in the capital (34,2% in 2011) (Hungarian National Focal Point, 2016). Parallel with the rapid growth in hepatitis C epidemic there was a substantial reduction in funding of harm reduction programmes. Furthermore in 2014 the two largest needle exchange programmes was closed down. As a result, the coverage of NEPs dropped significantly (Gyarmathy et al., 2016).

In the past years similar situation emerged in Serbia. After closing down the programs financed by Global Fund in Belgrade, PWID were left without drop in centre, which provided regular services for them, but also without a place for gathering and socialization, where they were spending most of the time a day. NGOs have played an important role in the national HIV response in the past and they were crucial for several programme components (Đurić, Simić, & Hamelmann, 2016). To most PWIDs services such as sterile equipment, showers and baths were no longer available. Concerns for maintenance of prevention activities and a spread of HIV epidemic have been expressed (Cousins, 2018). Without a safe place, PWID groups split into many smaller groups, therefore it is harder to reach them.

According to the WHO NEP coverage indicator (WHO et al., 2012) the Hungarian coverage was insufficient to prevent the spread of HIV during 2010-2015. The same might be happening in Belgrade too. Most of the PWIDs “disappeared” from the healthcare and social welfare systems, they are unavailable for HIV and HCV screening. The state has lost sight of them. In the present research we examined the impact of the closure of needle and syringe programs on the lives of people who use drugs in Budapest and Belgrade. Though we aimed to explore the consequences of decreasing coverage of NEPs, the study revealed differences and similarities between the PWID communities of Belgrade and Budapest.

In the analysis we drew upon the theoretical framework of risk environment (Rhodes, 2002), which focus on the social determinants, and the contextual factors of risk behaviours, and sees individual practices as socially produced and shaped by factors exogenous to the individual (Rhodes, Singer, Bourgois, Friedman, & Strathdee, 2005; Strathdee et al., 2010). In an often-cited article on risk environments it was defined by Rhodes as the space – whether social or physical –in which a variety of factors interact to increase the chances of drug-related harm, and suggested four ideal types of environments, relevant for the

analysis of harm associated with drug use, namely physical, social, economic, and policy environments (Rhodes, 2002, 2009). In this paper We will use these concepts of different types of environments accordingly.

2. Method

We used Respondent Driven Sampling (RDS), a rigorous chain-referral method that allows unbiased estimation of the target population. RDS was developed by Douglas Heckathorn (Heckathorn, 1997) as part of a NIDA-funded HIV-prevention research project targeting PWIDs. As a sampling method, it was designed to reach at-risk, otherwise hidden groups important to public health and public policy. Its main advantage, that it is not a location-based sampling method (e.g. when PWIDs surveyed at needle exchange programmes) thus we can use it to gather information on PWIDs who have no access to harm reduction services. To assess the injecting equipment sharing practices of the former NEP clients, we used a group of questions on various injecting practices. The questions were based on the injecting risk questionnaire at the EMCDDA's best practice portal. The items were slightly modified to shorten the time needed to answer the questions: we asked the type of equipment sharing (e.g. sharing syringes, spoons, etc.) separately from the type of relationship they have with the person they shared with (e.g. acquaintance, sex partner, stranger).

The data collection took place in Budapest and Belgrade with the same questionnaire - the questionnaire included questions about drug use patterns and risk behaviours, health and social status, access to other services.

Sampling begun with a convenience sample of initial subjects (the seeds) through privileged access (Griffiths, Gossop, Powis, & Strang, 1993) (former workers of the closed programmes selected the initial subject). An important consequence of the RDS process, is that the results are not dependent on seed selection - to ensure this, there must be enough number of successive waves (Gile, Johnston, & Salganik, 2015; Lachowsky et al., 2016), thus the number of initial seeds should be relatively small.

We chose 4 initial seeds in each city, and each seed got 3 coupons to recruit another respondent from his/her social network. Each coupon had a unique identification code to be able to monitor and record the chain referral during the data collection. To ensure the referral of others by the seeds, we gave financial compensation to the respondents: 3 EUR for each respondent to complete the questionnaire, and the recruiter got an additional 1,5 EUR for each new respondent. As the continuous analysis of the sample and the referral chain is required in RDS during the data collection, we rigorously monitored the successive waves, and added new seeds if needed to reach the target sample size.

At Budapest the data collection started on 1st February 2018, in Belgrade, data collection started on 12th April. Though we could not reach the initial target of 150 in neither city, we closed the data collection on 31th July 2018 in both cities. The total sample size was 138 respondents in Belgrade and 100 respondents in Budapest.

Data analysis was conducted with IBM SPSS Statistics version 20.

3. Results

3.1 Demographics

The gender and age distribution was similar in the two cities, approx. two thirds of the respondents were male in both sample, and they were in their mid-thirties with the mean age of 35,6 years (in the total sample). Educational attainment was very low among the respondents, with being somewhat higher in Belgrade than in Budapest. In Belgrade 61,5% of the respondents had secondary education or higher, while in Budapest 72% had less than secondary education. We used a question about sources of income in the last month as a proxy for labour market situation. Around 40% had some kind of legal income in the last month.

3.2. Substance use

Almost everyone in both samples has used tobacco and alcohol (alcohol: 93% in Belgrade and 92% in Budapest, tobacco: 97%, 97% respectively). Tranquilisers and sedatives without prescription seems to be more frequently used in Belgrade ($p=0,000$) with almost half of the respondents using it regularly there, while in the Budapest sample it was 27%. Cannabis use was higher in Belgrade ($p=0,000$), both in terms of lifetime prevalence and last month use: while practically everyone tried it in Belgrade (99%) and almost two thirds used it in the last month, in Budapest 78% have ever tried and only 28% used it in the last month. Regular, daily use is also higher in Belgrade (28% vs 15% in Budapest).

The results shows that NPS are available in Belgrade, about 30% have tried these substances, but in general, they are not using it: last month prevalence is virtually non-existent. In contrast, NPS are the most prevalent, most frequently used substances among the former clients of the NEP in Budapest: 98% have tried synthetic cathinones, 85% have used it in the last month, and 67% use it regularly; life time prevalence of synthetic cannabinoids is 75%, last month prevalence is 47% and 38% using it almost daily.

Fig. 1. Lifetime prevalence of psychoactive substances

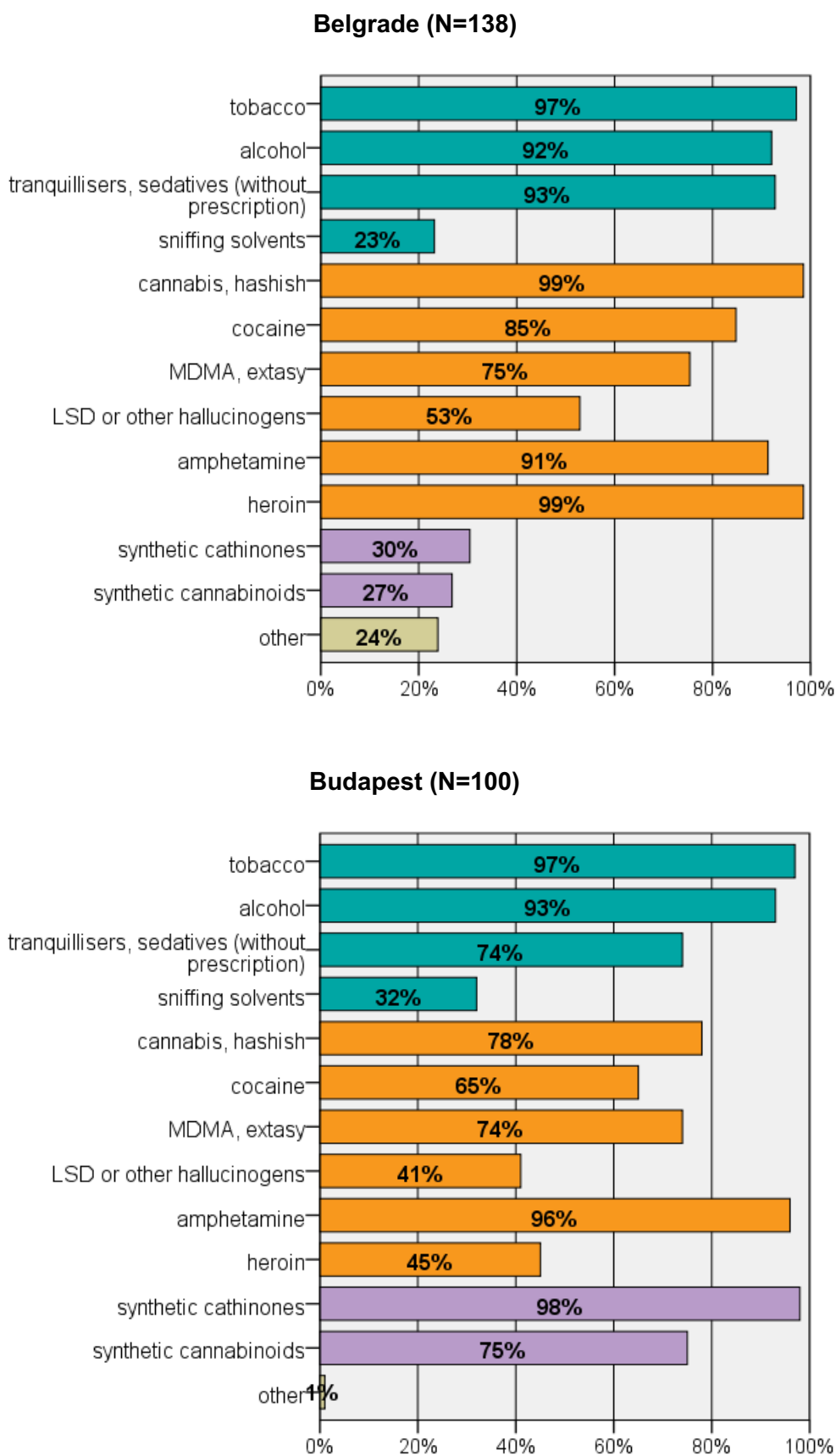
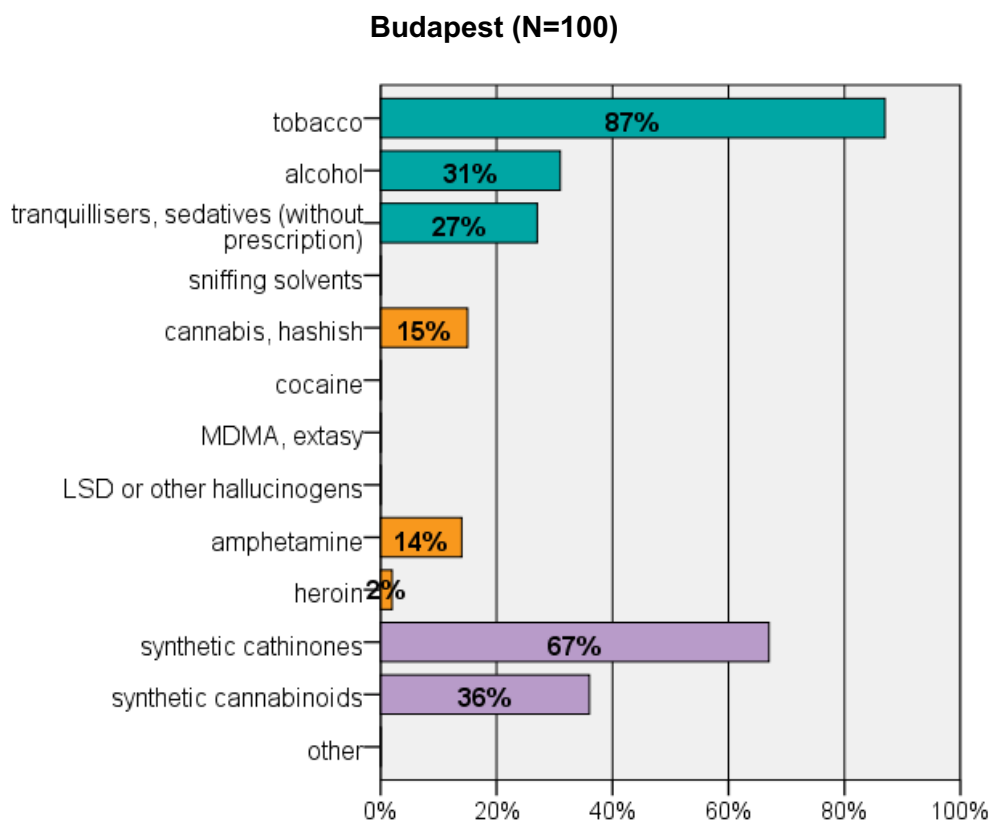
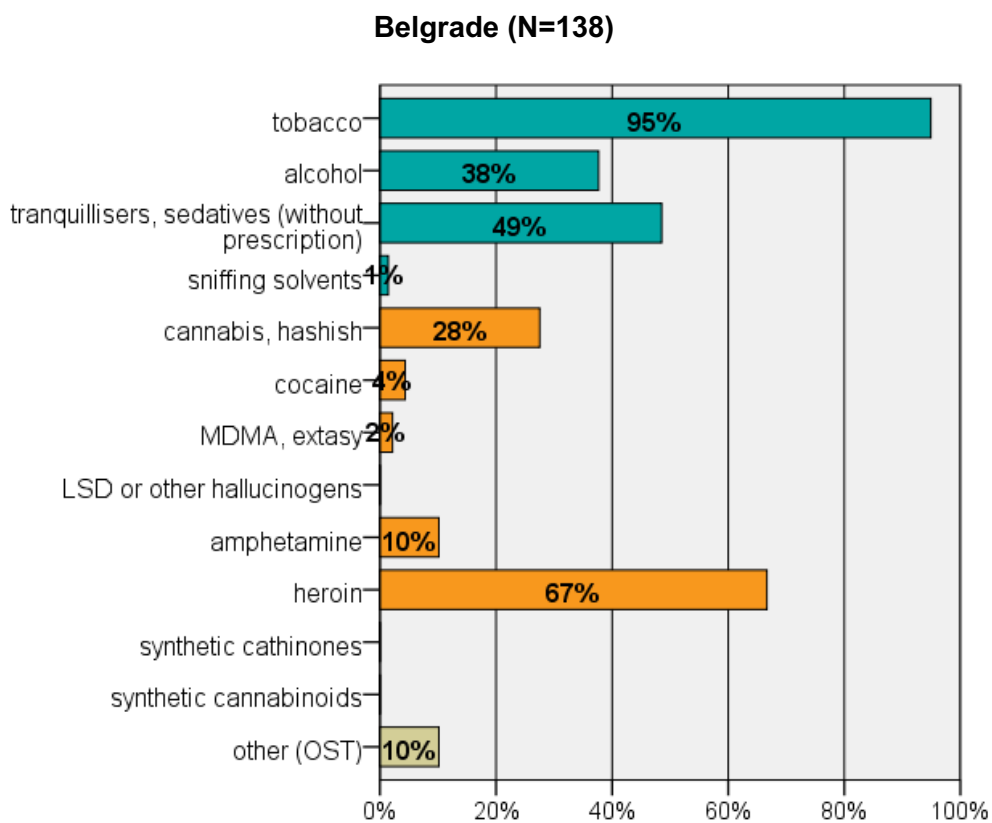


Fig. 2. Regular use (almost every day) of psychoactive substances



As the coverage of sterile injecting equipment decreased in the target population, we asked the respondents about recent (last month) injecting drug use to assess the proportion of those, who are still using injecting as a route of administration. The two sites were different in this ($p=0,000$): while in Belgrade virtually everyone injected in the last month, in Budapest injecting use became less prevalent in the community. A relatively big proportion, one fifth of our sample did not inject – there were no significant difference in the proportion of recent injecting use according to sex or age. In parallel with the differences in the prevalence of substances, the primarily injected substances were different in the two cities ($p=0,000$). In Belgrade, the overwhelming majority of active injecting users were injecting opiates, In Budapest the overwhelming majority were injecting cathinones.

Table 1. Active injecting substance users

		Have you injected during the last 4 weeks?		Total
		yes	no	
Belgrade	N	137	1	138
	%	99,3%	0,7%	100,0%
Budapest	N	78	22	100
	%	78,0%	22,0%	100,0%
Total	N	215	23	238
	%	90,3%	9,7%	100,0%

Table 2. Primarily injected substance in the last 6 months among active injecting users

		opiates	cathinones (NPS)	amphetamine	cocaine	buprenorphine	MDMA	Total
		Belgrade	N	129	0	3	2	
	%	94,2%	0,0%	2,2%	1,5%	1,5%	0,7%	100,0%
Budapest	N	1	71	6	0	0	0	78
	%	1,3%	91,0%	7,7%	0,0%	0,0%	0,0%	100,0%
Total	N	130	71	9	2	2	1	215
	%	60,5%	33,0%	4,2%	0,9%	0,9%	0,5%	100,0%

3.3. Risk behaviours

We asked the active injecting users (injected in the last 4 weeks) about their injecting equipment sharing practices. It seems that in Belgrade the respondents reused their syringes more times, than in Budapest ($p=0,001$), while in Belgrade they used their last syringe three times on average, in Budapest the average number of reuse was 2,4. At the same time, the number of people they shared their injecting equipment with was higher in Budapest ($p=0,024$), with an average of 3,22 different people in the last 6 month in Budapest, and 2,17 in Belgrade. We asked about 10 types of injecting risk behaviour (see Fig. 3. and 4.). The results show different sharing practices in the two sites. In Belgrade the respondents practiced more equipment sharing than in Budapest ($p=0,000$), only 12% have not shared any injecting equipment in Belgrade, while it was 32% in Budapest.

Table 3. How many types of injecting risk behaviour the respondents did during the past 6 months

		none	1-2 types	3-6 types	7 or more types	Total
Belgrade	N	16	17	28	76	137
	%	11,7%	12,4%	20,4%	55,5%	100,0%
Budapest	N	25	19	16	18	78
	%	32,1%	24,4%	20,5%	23,1%	100,0%
Total	N	41	36	44	94	215
	%	19,1%	16,7%	20,5%	43,7%	100,0%

If we examine in details the different risk behaviours we asked about in the questionnaire, we could find further consequences of the different drug market environment in the two cities. The most prevalent risk behaviour in Belgrade is the sharing of filters, which in Budapest is at the bottom of the list. “Using the same water (or bleach) as someone else for flushing out or cleaning” is another risk behaviour that shows important differences between the two sites. While in Budapest that was the second most frequent risk behaviour, in Belgrade it was the last. However, there are similarities in the distribution of risk behaviours. It seems that the risk behaviours indicating the community/cooperative nature of substance use are similarly frequent in both cities. (e.g. Put a used needle into a container or spoon that was then used by someone else; Drawn up from a container or spoon into which someone else had put a used syringe; Let someone else fill their syringe with a syringe you had already used). A further similarity in terms of injecting equipment sharing, that respondents were more likely to share with someone they already know. It was true in both cities; almost 90% said that they never share their equipment with strangers, compared to approx. 40% who never share with a friend or acquaintance.

Fig 3. Proportion of those who practiced the given risk behaviour in the last 6 months Belgrade

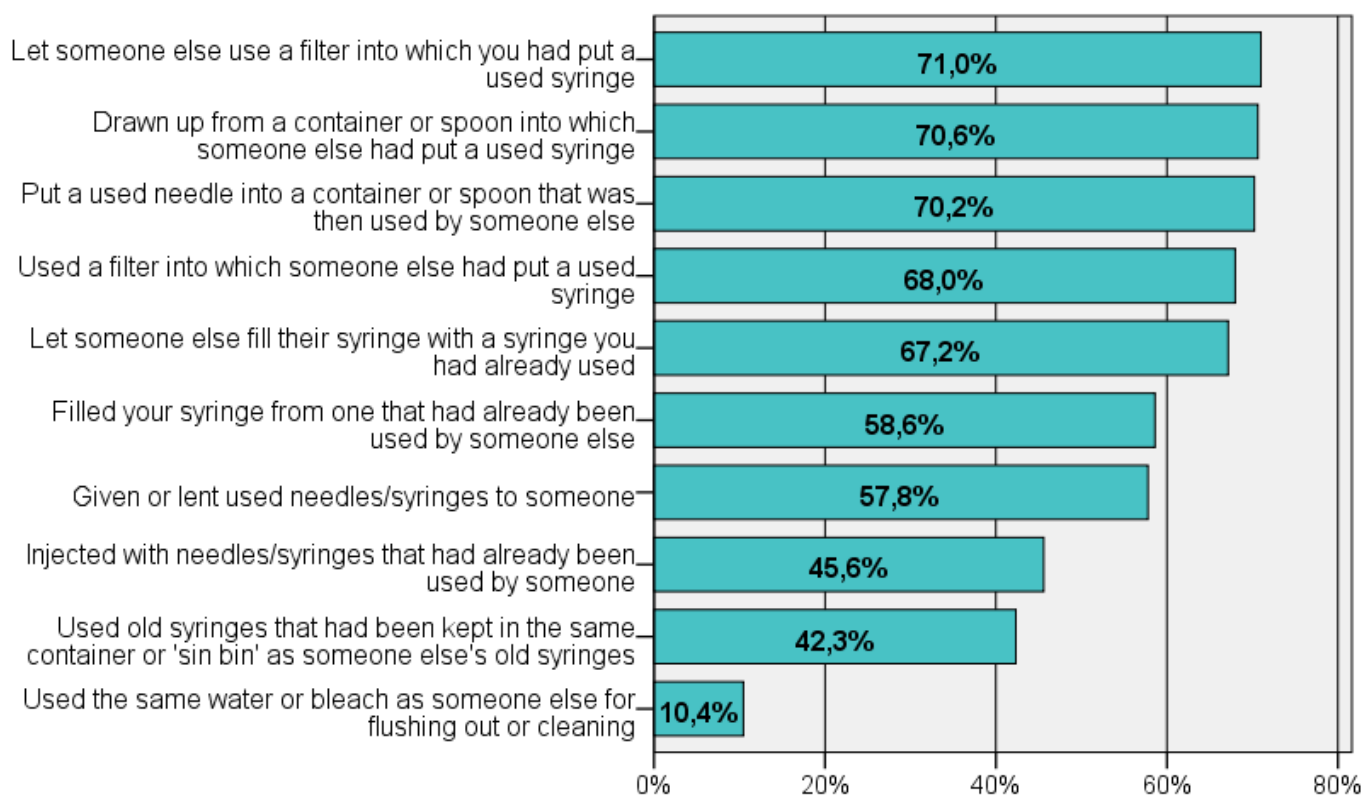
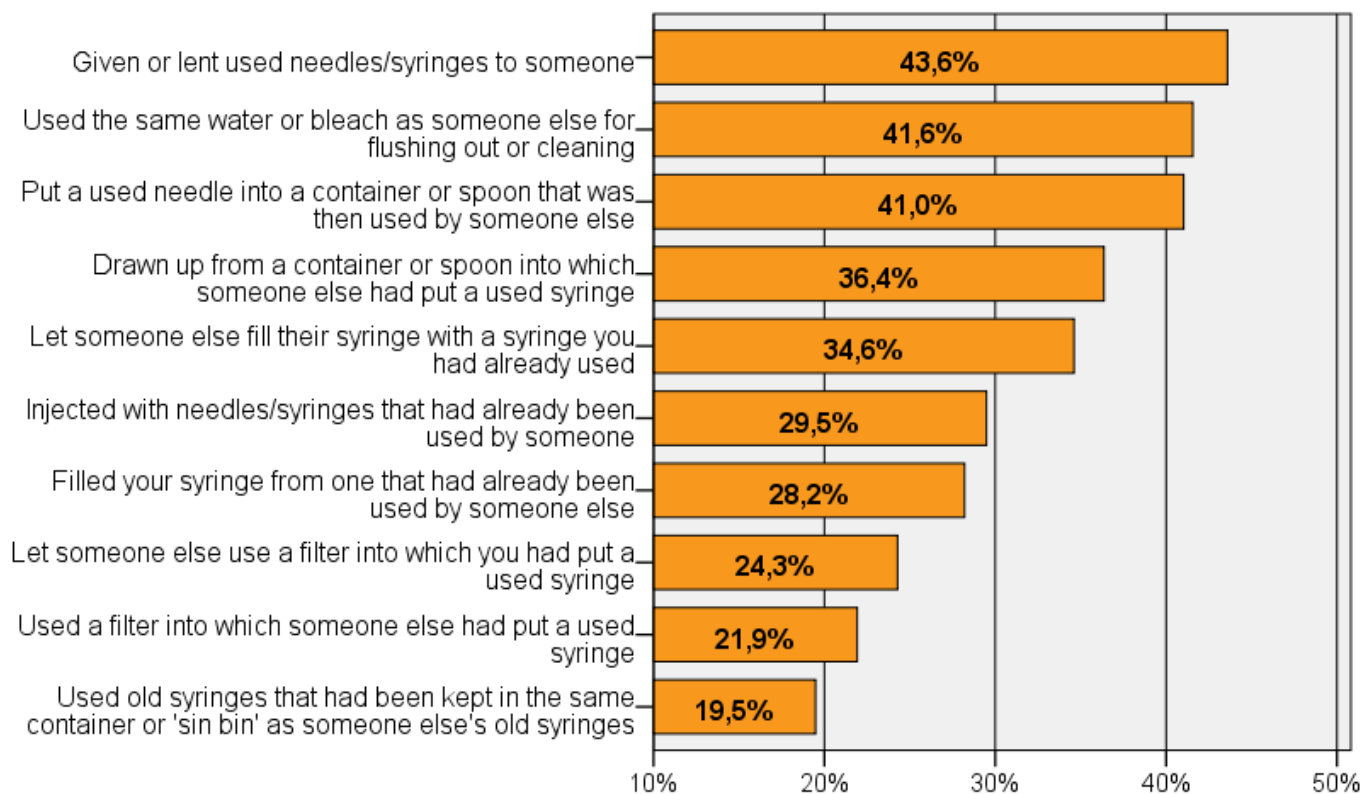


Fig. 4. Proportion of those who practiced the given risk behaviour in the last 6 months Budapest



3.4. Acces to harm reduction services

As we aimed to assess the consequences of decreased coverage of harm reduction services, we asked the former clients of the NEPs what services they had used previously at the NEP, and what services they have access at present. We listed 15 types of services, both core harm reduction services (e.g.: sterile syringes, used injecting equipment disposal, HIV/HCV screening, etc.) and services that accompanied the needle exchange (e.g. clothes washing, internet access, help with other social services, etc.). There was significant decrease in availability of almost every service we asked about, the results indicate a serious decrease in coverage of harm reduction services in both cities, though in Belgrade the decrease was more dramatic (see Table 4-5).

In Budapest, almost 70% percent said that they can get sterile injecting equipment (filters, cookers, alcohol pads), although it was a significant decrease from nearly 95% at the closed NEP, in Belgrade only one fifth of the respondents had access to those at the time of the survey. More alarming is that the former clients of the NEP in Belgrade practically did not have access to used injecting equipment disposal while almost everyone could dispose their used equipment when the NEP was operating.

Table 4. Access to services at the closed NEP and access to services now - Belgrade

	Belgrade			
	Used it at the closed NEP		Currently have access to it	
	N	%	N	%
*Sterile needles/syringes	126	96,2%	99	73,9%
*Sterile injecting equipment (filter, cooker, alcohol pads)	126	95,5%	30	22,1%
*Used injecting equipment disposal/exchange	122	93,1%	2	1,5%
*HIV/HCV screening	119	90,2%	88	64,7%
*Vein care products	75	56,8%	17	12,6%
*Help with other substance use related services (eg.: rehab.)	79	61,7%	20	15,0%
*Information on substances	123	94,6%	58	43,6%
*A place to sit for a while	124	93,9%	98	72,1%
*Speaking with the social workers (general consultations, chatting)	105	80,2%	39	29,1%
Internet access (eg.: facebook, youtube)	102	78,5%	96	71,6%
*Help with other social services (eg.: unemployment, housing, etc.)	38	28,8%	5	3,7%
*Legal counselling	57	43,5%	17	12,7%
Special women's programme	n/a	n/a	n/a	n/a
Showers	104	78,8%	116	85,3%
Clothes washing	104	78,8%	108	79,4%

*p<0,005

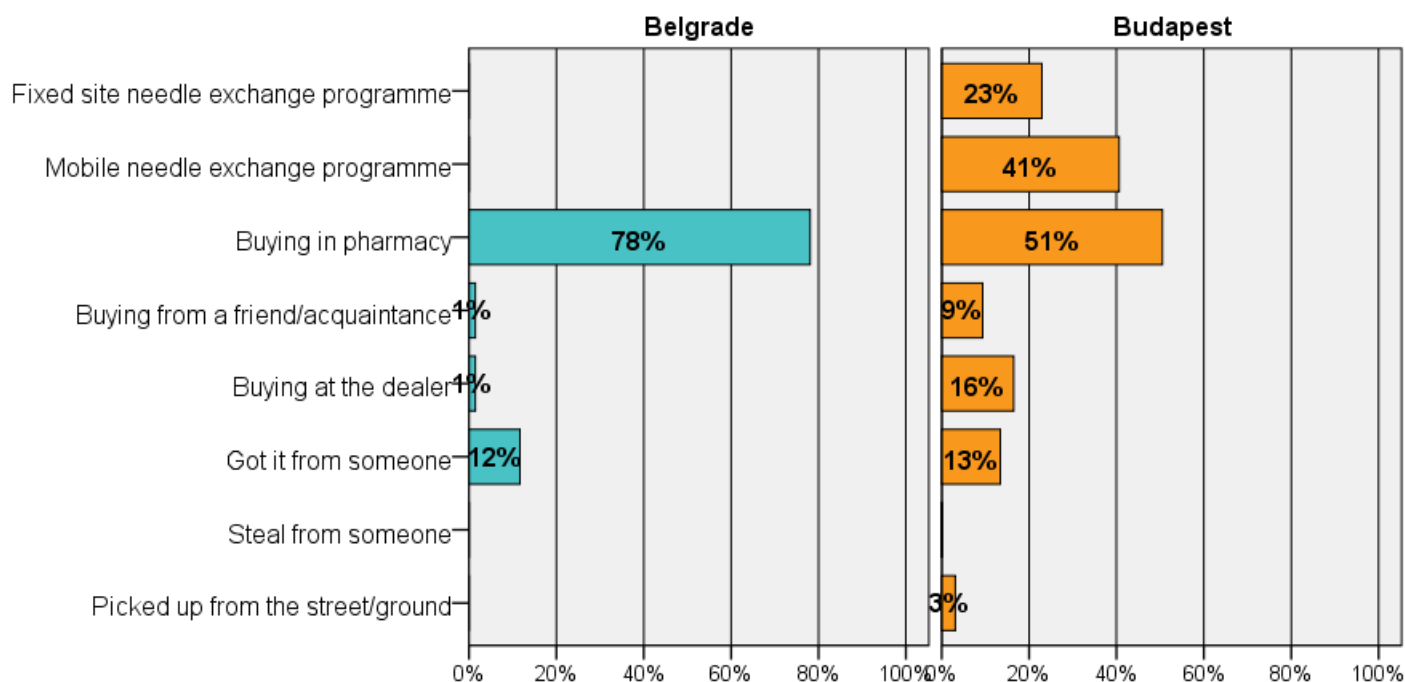
Table 5. Access to services at the closed NEP and access to services now - Budapest

	Budapest			
	Used it at the closed NEP		Currently have access to it	
	N	%	N	%
*Sterile needles/syringes	100	100,0%	83	83,0%
*Sterile injecting equipment (filter, cooker, alcohol pads)	96	96,0%	71	71,0%
*Used injecting equipment disposal/exchange	95	95,0%	69	69,0%
HIV/HCV screening	62	63,3%	53	53,5%
*Vein care products	84	84,8%	57	57,6%
*Help with other substance use related services (eg.: rehab.)	44	44,9%	29	29,6%
*Information on substances	58	59,2%	34	34,7%
*A place to sit for a while	69	69,7%	53	53,0%
*Speaking with the social workers (general consultations, chatting)	80	80,0%	56	56,6%
Internet access (eg.: facebook, youtube)	64	64,0%	65	65,7%
Help with other social services (eg.: unemployment, housing, etc.)	28	28,6%	25	25,5%
Legal counselling	10	10,0%	12	12,0%
*Special women's programme	24	32,9%	2	2,7%
Showers	n/a	n/a	n/a	n/a
Clothes washing	n/a	n/a	n/a	n/a

*p<0,005

In Budapest, the respondents have been in mobile NEP and in fixed sites NEP during the last 12 months while in Belgrade neither of them are options as no NEP is operating in the city. More than three quarters of the respondents got injecting equipment from mobile NEP, and 42% said that they used a Fixed site NEP at least once during the last 12 months. Indicating the low coverage of fixed site NEPs in the city, both “buying at the dealer” and “got it from someone” were more popular sources than fixed site NEPs. Buying in pharmacy seems to be the most popular option in Belgrade, almost every respondents (99%) got syringes from pharmacy during the last 12 months, the second most popular source of injecting equipment is “got it from someone” (61%). Pharmacies were major sources of syringes in both cities. Their role became more evident, if we narrow down to “often” and “regularly” used sources. Half of the respondents regularly got sterile syringes from pharmacies despite fixed and mobile NEPs available in Budapest.

Fig. 5. Sources of injecting equipment – often and regularly in the last 12 months (Belgrade N=138, Budapest N=100)



4. Discussion

There were similarities between the former clients of NEPs in the two cities: a typical member of the target population was a man in his mid-thirties, with low educational attainment, and poor labour market position. This was a general characteristic of the PWID regardless of the geographic location. It seems that the gender specific distribution of the sample is a general characteristic, although the same structural forces could affect the smaller proportion of female substance users in both cities: women might have to hide more their substance using habits than man, due to stronger stigmatization of women who use drugs. Thus the proportion of women among marginalized injecting drug users might be higher than our sample suggest, and the coverage of services might be even worse for women than our research shows – research methodologies should address this issue in the future. Lifetime prevalence of legal substances was another characteristic that did not differ much between Budapest and Belgrade; illegal substances on the other hand indicated a distinct drug market environment: NPSs were the most popular substances in Budapest, while in Belgrade traditional substances were the most widely used illegal drugs. Further difference among the former clients of NEPs that in Budapest different routes of administration became popular: some were smoking synthetic cannabinoids instead of injecting synthetic cathinones, some choose inhalation (smoking from aluminium foil) as an alternative for injecting. In Belgrade that was not the case, despite the decreased access to injecting equipment, smoking was not an option due to the poor quality opioids in the streets. The differences in substances used and the differences in the routes of administration could

be the consequences of the differences in the substances available in the local drug market, which is among the structural and environmental factors that can shape the practises, and risks of PWID according to the social science literature on risk environments (Rhodes, 2009; Rhodes & Simic, 2005; Strathdee et al., 2010).

The results showed different sharing practices in the two sites, although from a public health perspective both communities are under a serious risk: in both sites the overwhelming majority did share their injecting equipment. However, in Belgrade the situation seems to be more severe, as more than half of the sample practiced seven or more types of risk behaviour in the past 6 months (compared to quarter of the respondents in Budapest), and the decrease in access to harm reduction services was greater than in Budapest. It is more likely that the respondents shared injecting equipment with someone they have already known, and it was true in both cities. There are similarities in the distribution of risk behaviours also: the risk behaviours indicating the community/cooperative nature of substance use are similarly frequent in both cities. (e.g. Put a used needle into a container or spoon that was then used by someone else; Drawn up from a container or spoon into which someone else had put a used syringe; Let someone else fill their syringe with a syringe you had already used). These similarities suggest that substance use is a community activity, where substance use, buying and dividing it, preparing the solution, etc. happens between acquaintances. It might also suggest, that injecting and substance use requires trust, as sharing with strangers hardly happens. The common characteristics of social context for PWID communities (e.g. being criminalized, marginalized, stigmatized) could result in similar syringe mediated drug sharing practices (Grund et al., 1996).

The differences in the prevalence of individual risk behaviours on the other hand could represent the differences in the environmental factors shaping the injecting practises in the two communities. Sharing filters was among the most prevalent risk behaviours in Belgrade but it was one of the least prevalent in Budapest. In Budapest PWID are not using filters, because NPS can be easily dissolved in water without any acid or heating, so it is a common belief that NPS does not require filtering. In contrast, for opiate users filters are important, not just because they are part of the equipment, but because they can be used as a “cotton shot” if someone is in withdrawal. Unlike in Belgrade, sharing the water is very common in Budapest. It suggests, that among the PWID in Budapest, water is a scarce commodity, which might be because they are shooting in parks and abandoned buildings, so they only have as much water as they bring with them. As they are buying and using the substance together, there is usually one water bottle with them, and they are using it together.

The WHO’s NEP coverage indicator (WHO et al., 2012) for Hungary in 2017 was 21 syringes/IDU/year (Hungarian National Focal Point, 2018), what is way beneath the 100 syringes/

IDU/year required for middle coverage. As in Belgrade the only NEP closed in 2015, NEP coverage is practically non-existent. The results on the access to harm reduction services showed that even a very low coverage of NEPs (like in Budapest) could have positive effect on the availability of sterile equipment. Although the two cities are different in terms of the available sources of injecting equipment, pharmacies were major sources in both cities. As pharmacies are not able to reduce public health risks because they are not a harm reduction service, this is an important result, that shows how inadequate coverage could divert PWID to inadequate services.

The significant decrease in access to accompanying services in both cities could indicate the complex problems those substance users face, and the subtle role a NEP could play beyond providing harm reduction services. As the closing of an NEP decreased the access to such simple things as “a place to sit for a while” or “speaking with the social workers (general consultation, chatting)” in both cities, it means that closing an NEP might terminate the only institution the clients have connection with. The PWID who were clients at those NEPs are typically marginalized people who are further stigmatized because their drug using habits, they are in the process of disaffiliation (Castel 2000). Thus the decreasing coverage of harm reduction services could increase the risks through changing the characteristics of the physical environment and the policy environment, but also could increase the risks through an unfavourable change in the social environment.

Our results emphasize that drug related harms are generated in a complex system with intricate connections amongst diverse, heterogeneous actors, in an ever-changing assemblage (Duff, 2016). We tried to illustrate in this paper how the diverse everyday practices of injecting, combined with the different substances available, the social context of injecting, the physical environment where the substance use occur, could shape the risk behaviours of PWID and the risks of substance use as such. The differences in the prevalence of individual risk behaviours represent the differences in injecting practises in the two communities, and these differences underline the importance of tailoring harm reduction services to the specific needs of the local PWID community. Nevertheless if we would like to implement interventions that can effectively reduce the health risks of substance use, it is necessary to consider environmental, structural factors influencing the consequences of substance use, and aim for responses that could promote an enabling environment (Duff, 2009), despite it could be hard to transform these factors into variables affecting public health indicators directly.

5. Acknowledgment

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