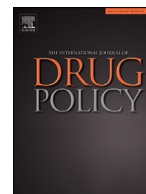




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Research Paper

The impacts of COVID-19 on structural inequities faced by people living with HIV who inject drugs: A qualitative study in St. Petersburg, Russia



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ABSTRACT

Background: People who inject drugs (PWID) living with HIV may be disproportionately impacted by pandemic restrictions. This study qualitatively explored the impacts of the SARS-CoV-2 pandemic on PWID with HIV in St. Petersburg, Russia.

Methods: In March and April 2021, we conducted remote, semi-structured interviews with PWID with HIV, health care providers, and harm reductionists.

Results: We interviewed 25 PWID with HIV (aged 28–56 years, 46% female) and 11 providers. The pandemic exacerbated economic and psychological challenges experienced by PWID with HIV. Simultaneously, barriers to HIV care access, ART prescription refill and dispensing and police violence, which hindered the health and safety of PWID with HIV, were themselves hindered from normal operations by the pandemic, significantly reducing these burdens.

Conclusion: Pandemic responses should account for the unique vulnerabilities of PWID with HIV to avoid worsening the structural violence they already experience. Wherever the pandemic decreased structural barriers, such as institutional, administrative, and bureaucratic challenges and state violence enacted by police and other elements of the criminal justice system, such changes should be protected.

Background

Efforts to limit the spread of SARS-CoV-2 through emergency restrictions have disproportionately affected marginalized populations (Cash & Patel, 2020). The inequities experienced by people who inject drugs who are living with HIV (PWID with HIV) are particularly concerning (The Lancet HIV, 2020). Experts predicted this population would be disproportionately impacted by more severe COVID-19 disease and greater mortality (Benzano et al., 2021; Dubey et al., 2020; Mirzaei et al., 2020; Vasylyeva et al., 2020; Volkow, 2020; Wei & Shah, 2020), and that the social marginalization, criminalization, and social stigma associated with substance use and HIV would cause this population to be disproportionately impacted by austerity measures, shrinking access to essential healthcare services, and the stressors of anxiety, social isolation, and

grief (Jemberie et al., 2020; Melamed et al., 2020; Mellis et al., 2021; Ornell et al., 2020).

Cross sectional studies conducted with PWID in North America and Europe during the COVID-19 pandemic have found that PWID face more barriers to effective social distancing and have experienced reduced access to HIV testing and reduced drug availability since the pandemic began (Ali et al. (2021); Genberg et al. (2021); Welle-Strand et al. (2020)). Program evaluations conducted in Europe, North America, Asia, and Africa suggested that most health care and harm reduction services for PWID, including HIV testing (Frost et al., 2021; Htun Nyunt et al., 2021; Kra et al., 2021), HIV treatment (Mistler et al., 2021), access to sterile injection equipment (Croxford et al., 2021; Van Hout et al., 2021), and post-overdose care in emergency departments (Collins et al., 2021), were negatively affected by the pandemic, though some

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programs were able to adapt quickly and innovate new forms of service delivery (Van Hout et al., 2021; Wenger et al., 2021). Qualitative research exploring how the COVID-19 pandemic has shaped the lived experience of PWID remains limited to studies of overdose risks and the necessity of harm reduction services during pandemic conditions in parts of the United States and Canada (Perri et al., 2021; Russell et al., 2021; Stack et al., 2021).

The Russian Federation (Russia) faces a growing HIV epidemic historically concentrated among PWID and exacerbated by stigma and the criminalization of substance use (Beyrer et al., 2017; Burke et al., 2015; Calabrese et al., 2016; Lunze et al., 2015; Stuijkyte et al., 2019). PWID in Russia have poor access to essential harm reduction services, even in the absence of a pandemic (Carnegy, 2015; Fedorova et al., 2013). Evidence-based opioid agonist medications for the treatment of opioid use disorder are illegal (Heimer, 2018), and linkage to HIV care among PWID with HIV is low (Idrisov et al., 2017; Lunze et al., 2020). Further, mandated state registration after a formal diagnosis of addiction allows entry into publicly-funded addiction care but deprives registered people of numerous rights and privileges, including the right to perform certain kinds of work or possess a driver's license, artificially limiting economic prospects of PWID (International Harm Reduction Development Program, Open Society Institute, 2009).

Emerging research considers how the global pandemic has altered the availability of and access to essential health and social services for PWID. Yet, pandemic impacts on PWID in regions characterized by a lack of essential treatment and harm reduction services for PWID and low coverage of HIV care remain poorly understood. The purpose of this study was to qualitatively explore the impacts of the SARS-CoV-2 pandemic on PWID with HIV in St. Petersburg, Russia. Specifically, we sought to explore pandemic-related changes in the local risk environment including drug markets, policing practices, and health care for HIV and substance use disorders; experiences with SARS-CoV-2 testing, illness, and treatment; and the economic and psychosocial challenges of pandemic restrictions.

COVID-19 response in the Russian federation

The first cases of SARS-CoV-2 in the Russian Federation were confirmed in Tyumen Oblast, in Western Siberia, on January 31, 2020 (TASS, 2020a). The first confirmed case in the city of St. Petersburg was announced on March 5—only the seventh confirmed case in the entire Russian Federation (Kommersant, 2020a). A serological survey conducted in St. Petersburg between May 27 and June 26, 2020 estimated that fewer than 10% of the population had contracted the SARS-CoV-2 virus (Barchuk et al., 2021). Approximately one year later, nearly half the city had been infected (Barchuk et al., 2022).

In late March 2020, authorities in St. Petersburg initiated temporary yet wide-spread shutdowns of commercial establishments, social and medical services, and public spaces such as parks and churches (Kommersant, 2020b). The city also imposed a strict self-isolation regime for residents aged 65 and older (Meduza, 2020). Nation-wide SARS-CoV-2 testing systems were deployed in January, and the Russian government reported that more than 165,000 tests had been carried out by March 23 (Federal Service for Surveillance on Consumer Rights Protection & Human Wellbeing of the Russian Federation, 2020). According to state media, the number of tests administered rose to more than 10 million by the end of May 2020, when numerous municipal governments, including St. Petersburg, announced the easing of pandemic restrictions (TASS, 2020b). Though SARS-CoV-2 testing was available free of charge at most healthcare facilities, specialized addiction facilities were not approved to administer the test despite a negative test result being required to enter withdrawal management services (Carroll et al., 2022).

On August 11, 2020, the Russian Federation's two-dose Sputnik V vaccine became the first SARS-CoV-2 vaccine to receive emergency authorization for public use (Russian Direct Investment Fund, 2022). The

vaccine was first made available in early December 2020 to healthcare workers, teachers, social workers, and certain "high risk" individuals; persons over the age of 60, with certain underlying health conditions, and who are pregnant were barred from receiving the vaccination during this initial release (Soldatkin, 2020). Persons over the age of 60 became eligible to receive the vaccine by the end of the month (Reuters Staff, 2020). Eligibility to people with chronic illnesses soon expanded, though uptake of the vaccine remained generally low. As of April 2021, approximately 10% of the Russian population had received at least one dose of the vaccine (Barchuk et al., 2022). A retrospective cohort review covering the first six months of 2021 found that an estimated 10.4% of people living with HIV and engaged in treatment at the Moscow City Center for AIDS Prevention and Control had received the vaccine—a rate comparable to the general population around that time (Gushchin et al., 2022).

Methods

Study design and data collection

This qualitative study was conducted as a follow-up to a randomized controlled trial testing the feasibility of a brief stigma coping intervention among PWID with HIV in St. Petersburg, Russia. Briefly, the *Stigma, Coping to Reduce HIV risks and Improve substance use Prevention and Treatment* (SCRIPT) study tested a psychosocial intervention designed to reduce the negative effects of HIV- and substance use-related stigma on mental wellness, substance use behaviors, and treatment seeking for HIV and substance use disorders (Luoma et al., 2023). Eligible participants were 18 years or older, reported HIV-positive status, current (past 30 days) injection drug use, and were not receiving antiretroviral therapy (ART) at enrollment (ClinicalTrials.gov, 2021). All participants were recruited via a harm reduction organization which provides free syringe services, HIV testing, and legal and counseling services.

In this follow-up study, we conducted semi-structured interviews in March and April 2021 with SCRIPT participants and healthcare providers of infectious disease and addiction services as well as staff from a local harm reduction organization. All participants were identified through participation in the parent study or professional networks. Specifically, community-based NGOs serving the stigmatized populations of PWID and people living with HIV (PWH) led participant recruitment for the parent SCRIPT study. Full details of this recruitment process have been published elsewhere (Rossi et al., 2021).

This follow-up study leveraged pre-existing contact with SCRIPT participants to recruit PWID living with HIV for interviews with two goals in mind: evaluating the implementation of the SCRIPT intervention and exploring the impacts of COVID-19 on the health and wellness of this population. The analysis presented here was undertaken in pursuit of the second goal. Healthcare services providers who participated in the SCRIPT study suggested additional providers to contact for interviews for the purpose of exploring institutional changes to healthcare service provision for PWID and for PWH during COVID-19. All participants in this follow-up study were selected through a range-maximizing sampling strategy, which sought to capture the broadest range of experiences and insights from eligible participants (Weiss, 1994). Specifically, members of the research team who helped implement the SCRIPT intervention in St. Petersburg (MV, EB, and DL) assisted in selecting SCRIPT participants to invite to an interview, intentionally including participants from the intervention and control arms of the parent study; participants who had and had not initiated HIV treatment since the intervention; participants living alone and with families; employed and unemployed participants; and participants representative of all genders and age groups included in the parent study.

A member of the research team (MV) contacted potential interviewees directly. Interviewees could choose to join the interview remotely over a video conferencing platform (on their preferred device or through a terminal provided in a private room at a Pavlov University research

clinic) or over a voice-to-voice call using their own smartphone and a messenger service, according to each participant's preference. Most interviews lasted about 60 min. We provided all participants (patients and providers) an incentive of 2500 rubles (approximately 34 USD at time of study) for their participation. Interviewers (TK and JC) followed a Russian-language guide that included the following *a priori* domains: personal history; past and current substance use; past and current treatment for HIV and/or substance use disorder; perceived changes to daily life and the illicit drug market during the pandemic; and perceived associated challenges or benefits. These domains were based on current research on the impacts of the COVID-19 pandemic on PWID (as detailed in the introduction) and the research team's specific knowledge of the Russian context. We recorded and transcribed all interviews in the original Russian.

Qualitative analysis

Verbatim transcripts of interview audio-recordings were independently read and thematically coded by three members of the research team (TK, JC, and MV). All three coders began by independently and redundantly open coding select interviews. The coders then discussed emergent themes and proposed coding schemes that resulted from individual open coding. Through this process, coders established a common codebook populated with a combination of inductive codes (emerged from the transcripts: family relationships, changes in substance use behaviors, social network changes, finances, and emotional/moral valences) and deductive codes (based on evidence in literature and/or specific study goals: HIV care access, substance use treatment access, drug market changes, police interactions, and stigma). This approach, and the codebook developed in accordance with it, were subsequently discussed and refined by the entire study team. Finally, one coder (JC) utilized this final codebook to conduct focused coding with all transcripts. The findings presented here emerged in this final stage of analysis. Interview excerpts presented here in English were translated from Russian by JC (a native English speaker with Russian fluency) and checked by TK and MV (native Russian speakers with English fluency). Analysis was performed using MAXQDA2020 qualitative analysis software (VERBI Software, Berlin, Germany).

Ethics statement

This protocol was approved by the Institutional Review Boards at Elon University (Elon, NC), Boston Medical Center (Boston, MA), and First Pavlov State Medical University (St. Petersburg, Russia).

Patient and public involvement

We consulted with community-based organizations, including practitioners and administrators, and with healthcare services providers in preparation for the SCRIPT study and for the follow-up study presented here. Initially, these consultations identified persons eligible for the SCRIPT study (PWID with HIV) as a population disadvantaged during the pandemic, and consensus emerged between researchers and community stakeholders that such an investigation merited a qualitative approach. To protect participant confidentiality, we will not reach out to individual participants to share the results from this study. However, the community organization that led recruitment and co-sponsors project dissemination events with Pavlov University will disseminate project findings to community members, providers, and policy makers.

Results

We interviewed 25 SCRIPT participants (age range of 20–56 years; 48% female). At the end of the parent study (March 2021), 20% were unemployed, 16% were receiving disability or pension benefits, 80% reported past 30-day injection drug use, and 32% were receiving ART

Table 1

Demographics of participants who use drugs and are living with HIV.

Demographic Characteristics	PWID with HIV (N = 25)
Male	13 (52%)
Female	12 (48%)
Mean Age (SD), in years	38 (8)
Married	11 (44%)
In a domestic partnership	5 (20%)
Widowed, divorced, or separated	5 (20%)
Missing or unreported	4 (16%)
Spouse/partner HIV status	
Positive	18 (72%)
Negative	1 (4%)
Don't know	2 (8%)
No partner	4 (16%)
Education	
Middle school or less	4 (16%)
High school	13 (52%)
Some higher education	6 (24%)
Completed higher education	2 (8%)
Employed full time	8 (32%)
Employed part time	7 (28%)
Unemployed	5 (20%)
Retired or disabled	3 (12%)
Missing or unreported	2 (8%)

(See Table 1). We also interviewed 11 healthcare and harm reduction professionals (age range of 36–54 years; 55% female).

Below, we first describe pandemic impacts unique to the experience of PWID with HIV. These include (1) changes in the local drug market, (2) changes in policing practices, and (3) adaptations in the clinical care of HIV and substance use disorders. We then describe generalized pandemic impacts that affect this population in unique ways. These include (4) experiences with COVID-19 testing, illness, and treatment, (5) economic impacts and financial worry, and (6) psycho-social challenges of quarantine and isolation.

Local drug markets

Similar to previous studies of regional drug markets in Eastern Europe (Mazhnaya et al., 2021), all but one PWID reported that they primarily acquire drugs by purchasing them online (typically on the dark web). Online drug purchases will prompt a contactless delivery that involves sending someone local out to hide the purchased drugs in a public location (a “dead drop”; Rus: *zakladky*) communicated to the buyer over encrypted messaging apps. The buyer then goes to the specified location to, hopefully, retrieve their purchase.

Changes in the local drug market during the pandemic were described inconsistently. Most PWID perceived no changes to speak of (“No, there was no change...No difficulty, everything was the same”). Some indicated that the market had undergone changes, which had occurred prior to or without connection to the pandemic. These included poor drug quality (“The quality is gross, in general”; “It’s always been lousy, and it stayed lousy”) and rising drug prices (“The price is always going up, regardless of the pandemic. It just always goes up”). One respondent reported price increases of in the first two weeks of the pandemic (“Everything went up in price about 300–400 rubles...even the [delivery runners] were quarantined and wanted to stop work.”) while another noted that Internet stores lowered prices at the start of the pandemic, which he attributed to declining sales as well as to an increased number of shops competing for the same population of buyers (“Well, [they did it] because there were no people... to get folks to buy things, to be competitive...because there are now many stores”).

PWID frequently reported that in the first weeks of the pandemic, when St. Petersburg residents were put under a strict quarantine order, accessing dead drops became riskier. One respondent described that dead drops carried risks even before the pandemics—especially the risk

that you would not be able to locate your purchase or that someone else had located it before you arrived (“*They are hard to find now. Sometimes you can’t find it so you paid and didn’t get your purchase*”). Similar to views on price and quality, respondents provided mixed reports about whether pandemic restrictions worsened or eased the logistical challenges unique to this form of delivery. Some respondents reported that, in the first weeks of lockdown, when few people were on the streets, many more police than usual patrolled the streets to enforce the quarantine (“*I noticed that there were more [police] in areas with dead drops*”). A few consumers felt their activities were obvious to the authorities when they were making their way to dead drops on the street, which discouraged frequent purchases. As one respondent observed, “*When this all started, people were all sitting at home and you’d be out alone like “Three Poplars in Plyushchikha” [a reference to a Soviet film], standing alone in a field.*” By contrast, one respondent reported that accessing dead drops became safer and less complicated during the pandemic, as the store she used began allowing consumers to specify the location of their dead drop for an extra fee: “*You pre-order, specify where you want it dropped, then pop out the front door to grab it...This was not the case before. During the pandemic [stores] did this. It’s more expensive of course.*”

Importantly, despite being asked directly, no participants reported rationing drug supplies, abstaining from drugs, or developing alternative strategies for obtaining drugs due to their substances of choice becoming unavailable or their usual means of obtaining it becoming inaccessible.

Police

Almost all respondents reported that following the first weeks of very strict quarantine, when more police were out on the street, visible police presence across St. Petersburg decreased significantly. Except for one who reported being stopped by police for occupying a park that had been closed due to the pandemic, all PWID reported that they had not been stopped by police since the pandemic began (“*During COVID, they never approached me. It’s interesting that it hasn’t happened even once*”). One was particularly surprised to have seen police on the street at all without being stopped, recalling, “*One time I didn’t even see them. But there was a [police] car that went right past us and everything. And they didn’t stop, didn’t get out, nothing.*”

This pattern contrasted sharply with the usual police interactions PWID experienced prior to the pandemic, when all reported being regularly targeted based on their appearance:

Participant: Well, one time, they were at the entrance to the metro, dug around [in my things] for inspection, took me away [to the station], and investigated me for the smuggling of narcotic substances.

Interviewer: How do you think they recognize or identified you as someone who could be suspected of carrying [drugs]?

Participant: Well, when your clothes are wrinkled, your scruffy, unshaven, with a hangover, so to speak, you look like a person who has used drugs for a long time, it’s obvious.

Prior to the pandemic, PWID described police officers demanding bribes (“*There are a lot of things they can do [to you], the end result of which is always, just, ‘Give me 5000 [rubles; 67USD].’*”); making false accusations (“*They came to my house saying they had information that I had been using drugs there.*”); and planting false evidence (“*There’s just the worry that they might plant something on me, like happened the last time... I was sentenced for [the drugs] they planted in my car.*”) Many participants described being stopped by police in such ways at least monthly prior to the pandemic (“*[Police stopped me] once or twice a month, consistently*”).

HIV care and addiction treatment

HIV and substance use disorders are treated within separate sectors of the Russian healthcare system (Lunze et al., 2020), and each responded differently to the pandemic. An addiction specialist reported

that barriers to HIV treatment experienced by her patients had reduced during the pandemic. This was due, in large part, to the AIDS Center implementing a phone-based prescription refill service in response to the COVID-19 pandemic. She said, “*During the pandemic, those who were already on [ART] did not have to see a doctor, they could just call on the phone—call the hotline—refill their prescription and go out to get it.*” Home delivery of ART was also newly available through the AIDS Center during the pandemic. One participant, who had been receiving ART uninterrupted since 2018 described “*[The AIDS Center] bringing ART medications to my house*” as a very positive development during the pandemic, as this ended her hours long commute to the AIDS Center to pick up her medication: “*I live on Ladozhskaya [metro station], and the [AIDS] Center is on Baltiyskaya [metro station]. That’s very far away...The ride there is 2.5 h [by metro], plus another half hour [of surface transit] from there.*” As well, the process of initiating ART appeared to be streamlined. One participant who began ART during the pandemic echoed the ease of this process; rather than having to appear before a medical commission, “*I just showed my passport, and they gave me the therapy, a three-month supply, and that’s it, I left.*”

By contrast, the outpatient addiction treatment shut down over concerns about SARS-CoV-2 transmission as the pandemic began. No PWID with HIV reported seeking addiction treatment during the pandemic at the time when interviews were conducted and thus did not share perspectives on treatment access. A common theme was the restriction of individual rights (losing driver’s license, losing child custody, trouble finding a job, etc.) that follows state registration for persons diagnosed with addiction, which is required to receive public sector free treatment:

Interviewer: Have you ever had the desire to receive addiction treatment, to go to detox, in order to not use?

Participant: No, I mean, maybe, but if you got to treatment that means they’ll put you on the registry, and there will be a lot of limitations, you know?...That’s the whole problem.

Many others shared previous experiences receiving addiction treatment in specialized inpatient facilities, producing minimal or even negative health outcomes (“*I’ve gone many times, each time they advertise new medications...after the first day I always realize it’s the same...medicines. They do not help at all*”).

One provider in a public outpatient addiction clinic reported that most patients who were in receiving treatment for substance use disorders through her clinic’s programs had come for three months of court-mandated treatment. “*Most of them do not want to be treated,*” she said, but the remainder who are there voluntarily do. The gap in care during the pandemic affected these groups differently:

Provider: And they are waiting... they were blowing up my phone asking “When [can we come back]?”

Interviewer: Meanwhile, new court decisions have been made and new ones [people more recently mandated into treatment by the courts] are waiting for their turn?

Provider: Of course.

Nevertheless, due to the virtual absence of interest in treatment among the PWID with HIV interviewed for this study, these barriers to addiction treatment were, for our study population, largely theoretical.

COVID-19 testing, illness, treatment, and vaccination

Participant views of the SARS-CoV-2 pandemic and COVID-19 disease varied. One did not believe that the SARS-CoV-2 virus was real (“*I don’t think that this virus actually exists...*”). Some reported being little bothered by the pandemic (“*Yea, in principle, nothing changed. Just that you need to wear masks, gloves, there are limits in stores, that you need to distance. Really nothing bothered me.*”). One woman with several pre-

existing health conditions developed a severe case of COVID-19. She described her experience as follows:

“Yea, my whole family, we all got sick. I was in the hospital on a ventilator for 4 days, I had a really bad case. My [T] cells fell a lot... After that, after being sick [with COVID-19], I now have 25% lung damage, and, as far as my health, I’m short of breath, I have complications with my joints. I mean, I began to feel worse and worse and that’s when this [depression] began.”

Others watched family members fall ill with COVID-19 or felt deep anxiety over the risk that elderly relatives might become infected with the virus (*“My mother...I don’t know how I would get by without her, and she’s already 80, my aunt is 90, if they got infected, they most likely would die”*).

Most PWID did not voluntarily seek out a COVID-19 test at any point during the pandemic. Several participants, even one who became ill with COVID-19 symptoms, did not believe the virus was real (*“I was sick a couple of weeks ago. Temperature was 38 [degrees Celsius], no big deal... I didn’t take [a COVID-19 test] because I don’t believe in it”*). One received a test when hospitalized. Others didn’t pursue testing despite worrying about others around them who became quite ill (*“One friend was on a ventilator, he barely made it. Another friend died from it...No, I never did [get tested]”*). Those few who reported receiving a COVID-19 test at any point reported being tested during hospitalization for un-related issues (*“I was in the hospital not that long ago and was tested”*).

Though no PWID with HIV in this study were receiving treatment for substance use disorder at the time of data collection, an addiction specialist reported that COVID-19 testing was a barrier to others in her care. Specifically, all new patients entering her clinic’s inpatient detoxification program needed a negative test result before they could be admitted; however, her addiction clinic was not an authorized COVID-19 testing center.

We [at the addiction treatment center] don’t have the formal system to provide that test for free, so we had to refer them out [for a COVID-19 test], and the paper the referral is written on said it was from an [addiction specialist]. And some of them said, “No, don’t give me that, I am not going to show this thing there.” And they all paid for the test somewhere else...

Thus, obtaining the necessary test was complicated by structural barriers and anticipated stigma related to substance use as a result of the referral document.

PWID anticipated similar barriers to the COVID-19 vaccine. One participant received the vaccination (*“Yes of course, I was vaccinated a while ago”*) but the remainder had not, citing a variety of reasons. One participant declined to pursue vaccination because he was confident that his HIV status would be a barrier. When asked what worries him the most about the current pandemic situation, the following conversation ensued:

Respondent: Oh well, nothing. To get vaccinated faster, but it seems to me that we will be the last to be vaccinated. First will probably be the ordinary people.

Interviewer: And what are you, then?

Respondent: Well, I mean people with HIV.

Interviewer: You and others who have HIV will be the last to get vaccinated?

Respondent: Well, I imagine so, because even doctors treat people who are sick with HIV in a completely different way than they treat ordinary patients. Like there, if you are sick with HIV, then you, to them, are a drug addict, not even a person and all that.

Many other PWID reported the belief that the vaccine was contraindicated by their HIV status. One participant reported that she and her husband, also a participant, had both long been unsure whether

they were eligible to receive the vaccine (*“Sometimes I say to my husband, ‘Maybe we need to go to the AIDS Center to find out if people with HIV are being vaccinated or not’”*). Other participants reported mixed beliefs about vaccine eligibility according to their treatment status. For example, one participant said that he could not be vaccinated with HIV while he was not receiving ART (*“I have HIV, I can’t [get vaccinated]. Once I start taking therapy only then will it be possible to get vaccinated”*) while another said they had been explicitly told to avoid vaccination because they were receiving ART (*“[My doctor] told me that for anyone on ART, in general, it’s better not to do this [get vaccinated], because it would be unnecessary, the therapy we take protects us from infection”*). Finally, one participant reported being told that the vaccine was contraindicated by his substance use: *“People say that it doesn’t affect people who use drugs. The vaccine. It doesn’t work.”*

Economic impacts and financial stress

Some PWID with HIV interviewed in this study continued to work during the pandemic and reported no unusual or pandemic-related financial hardships. or, including one participant who made a living as a taxi driver:

Interviewer: During the pandemic, many people stayed at home, but you drive a taxi...Did things get easier in the pandemic or was it harder to make money?

Participant: No, everything was the same. Nothing changed [financially].

Yet, the majority of participants described experiencing some kind of economic vulnerability (including reduced feelings of safety and security at work)—often related to their HIV status or substance use. For example, one participant who is employed by a state agency as a skilled worker (a well-protected form of employment) expressed concern that his history of substance use would justify letting him go when money was tight: *“My boss at work is aware that I had problems with drugs before, but he still hired me. And when the pandemic began, I already began to worry about what could happen, about losing this job.”* He did not lose his job during the pandemic but felt particularly vulnerable to the possibility of job loss compared to other employees. Some, however, did lose their primary source of income. One woman lost her position at a hotel while the business was temporarily shut down: *“There was no work, but it was only 3–4 months...my husband had a job...but it’s hard [to live] on a single salary.”* Another was so concerned about her vulnerability to severe COVID-19 while at work that she voluntarily quit to shelter at home: *“Well, I’m sick, I’m HIV-positive, I have low [T] cells, I did it so as not to get sick, to sit out the pandemic at home.”*

Many participants described periods of significant financial stress during the pandemic. Some had been living with little to no financial support even before the pandemic, relying on the meager pensions of their elderly relatives that were paid out during the pandemic:

I still have my father, he has [Parkinson’s]... He is already stage three, and he is receiving a pension, because he once lost his work, and there is mom’s pension and salary, well, that salary is practically nothing. My mother also, well, she worked, well, only as a courier once a week and there was practically no money and the quality of life, well, we only had money for food, only 7000 [95USD at the time of study], really, for the three of us.

Others, by contrast, faced acute challenges as a direct result of the initial pandemic lockdown (*“I didn’t work during lockdown, and my financial situation really deteriorated”*; *“For four months there was no work at all, I had to live on my savings”*). One reported resorting to shoplifting food from local markets during periods of financial insecurity (*“Honestly, you have to steal to go shopping... from the stores, there, coffee, butter”*). Staff from the local harm reduction organization, where participants can seek assistance accessing healthcare, reported that some had requested hospitalization simply to have their basic needs met (*“They were just laid off*

from work, a person who worked there in the shopping centers, girls [who are hired] as cleaners, and they too were left without any money, and had to—one of them wrote me saying ‘Put me in some hospital, where at least I know I will be fed’”).

Social isolation

Some PWID with HIV claimed that social isolation during quarantine did not affect them much. Many observed that their social circles were already small prior to the pandemic (“*The fact is that I always spent a lot of time at home, so, I mean, by and large nothing [about my life] has changed...I only go out when I have to*”). As a result, they didn’t see their social worlds contract as the pandemic began. A few reported that their longstanding estrangement with close relatives further minimized the impacts of pandemic isolation, as surviving without these support networks was already customary for them:

Interviewer: Speaking of the pandemic generally, what would you say has been the most challenging thing for you...emotionally?

Respondent: Yea, no, because I have a small social circle, married with a kid, so I don’t have any special kind of friendship with anyone else.

Interviewer: What about other family? Close people like your parents, maybe...

Respondent: I haven’t talked to my mom in 10 years. Not even a “hello.” My dad passed away, and my husband has no parents, they’ve passed away. So there’s no relatives left.

Thus, for many, the impact of pandemic restrictions on their social lives was not significant, as they were already relatively isolated when the pandemic began.

Others were affected by the isolation of the pandemic in different ways. One participant noted, “*A big ‘pro’ for parents [is that]...we spent more time at home with our children...but we were confined at home. This was a big ‘con’ of course.*” Another recounted struggling with mental health due to isolation (“*I became depressed from not going anywhere [during lockdown]. I was so isolated in my apartment, and things got really bad. I was depressed, and my doctor even prescribed me anti-depressants*”). One woman described at length how, prior to the pandemic, she had resolved to stop using drugs and had cut off her friends who also used drugs. She hoped to rekindle relationships with older friends from her “*past life,*” but was unexpectedly prevented by pandemic restrictions:

I have friends from my earlier life who have nothing to do with drug use and they are always, when I am connected with them, when we were connected, they supported me, always came, always met me. I somehow lost track of all this, and now, during the pandemic, I can’t meet them at all. I call, and they are like, [Dear], you understand that we can’t go anywhere.”

Thus, more than frustrating her recovery goal of rekindling past friendship, quarantine left her completely isolated during a stage in her recovery when she already felt emotionally and socially vulnerable.

Discussion

This qualitative study among PWID with HIV in St. Petersburg, Russia demonstrates a range of negative pandemic impacts experienced broadly, but unevenly, by this population. Our data show that social and structural vulnerabilities already experienced by PWID, by people living with HIV, and by those who experience the intersection of these two concerns may increase financial and psychological hardships during pandemic restrictions. Indeed, many of this study’s participants in St. Petersburg relied on elderly relatives for survival even prior to the pandemic, as social stigma and regressive laws governing addiction treatment bar many from meaningful work and pay. This study also shows that those vulnerabilities can, depending on circumstance, be further exacerbated by increased feelings of social or physical vulnerability and/or

by severed social support networks that could otherwise shelter them from financial impacts of pandemic restrictions. This study, therefore, partially confirms the predictions that PWID would be at increased risk of negative health (Volkow, 2020), psychosocial (Melamed et al., 2020; Ornell et al., 2020), and economic impacts (Krier et al., 2020). As well, the reduced availability of addiction treatment noted by study participants may be synergistic with financial stress, worsening substance use trends in this key population (Nagelhout et al., 2017). The facts that addiction treatment in the Russian Federation excludes evidence-based medications for opioid use disorder and that most participants in this study found available treatment to be of poor quality, reducing their interest in care, do not necessarily mitigate the possibility of such synergy.

At the same time, participants described the easing of several longstanding structural burdens under pandemic restrictions. Most noteworthy is the reprieve from regular police harassment. The relationship between policing and health outcomes among PWID is complex but direct, with the preponderance of evidence suggesting that punitive responses to substance use drive or exacerbate associated harms (Latimore & Bergstein, 2017; Lunze et al., 2014, 2016; Mital et al., 2020). Some scholars predicted that over-policing of PWID would increase—or have increased impacts—during the pandemic (Holloway et al., 2020). Participants in this study, however, described police agencies restricting their activities. While the risk-reduction benefits of reduced police activity for PWID who are actively engaged in the illicit trade is immediate and clear, the potential impacts on PWID with HIV are no less significant. HIV prevalence (as well as the prevalence of tuberculosis and co-occurring mental health conditions) among incarcerated populations in the Russian Federation is very high (Burgermeister, 2003), and prior incarceration in Russian penitentiaries is associated with higher rates of HIV risk behaviors and lower HIV treatment uptake after release (Heimer et al., 2015; Ruiz et al., 2018). Thus, reduced contact with police and potential entry into the criminal justice system likely reduces a host of synergistic risks for people living with HIV who do—and who do not—also use drugs.

Notably, high-barrier HIV care also effectively transformed into accessible, low-barrier care for those who sought treatment. Our data shows that the positive impact of these changes on some PWID with HIV in this study was substantial. Stigma against PWID and against people with HIV pose significant barriers to healthcare access in the Russian Federation and elsewhere (Bor et al., 2021; Vetrova et al., 2021), and ease of access to HIV care may create opportunities to access other kinds of primary or mental health care through HIV care providers. Future research could explore these possibilities. Once again, it is also unlikely that such benefits were limited only to PWID with HIV; people living with HIV regardless of substance use history had access to the same accommodations and very likely extracted similar benefits from them to varying degrees. A more robust exploration of the nature and variation of the benefits of pandemic-era changes to HIV care experienced by people living with HIV across socio-cultural and behavioral groups seems merited.

Other scholars have called attention to how pandemic-related restrictions have exacerbated social inequalities in the European region (Iftekhar et al., 2021). While this is true, our data reveals that social inequalities were not universally worsened during the pandemic. To the contrary, in St. Petersburg, numerous state and institutional systems that had long hindered the health and wellbeing of PWID and other people living with HIV were themselves hindered from normal operations by the pandemic. Pandemic preparedness efforts should consider the feasibility of maintaining these changes beyond the pandemic and sustain changes that might evolve over time, to avoid reverting to regressive, high-barrier, or punitive policies as society renormalizes to a post-pandemic world.

One particularly interesting finding is the lack of consensus about whether (and if so, how) the pandemic has impacted the illicit drug market. Clandestine activity is inherently challenging to know and explore (De Leon, 2012; Ritter, 2006; Scheper-Hughes, 2001). Thus, it is not surprising that different participants observed different trends in

an opaque drug market. Yet, despite this inconsistency, our data does not indicate the major drug market disruptions that some have predicted (Holloway et al., 2020). Emerging research indicates local drug markets in cities across Eastern Europe have been transitioning, since before the pandemic, to dark net sales and deliveries via dead drops (Mazhnaya et al., 2021). Perhaps these remote transactions and a robust network of online drug stores afford consumers protection from potential drug supply disruptions resulting from the policing of local drug markets (Carroll et al., 2021). Yet, they may also reduce the protective capacities of interpersonal trust among drug market actors (Carroll et al., 2020). Future research should continue to explore the risks and protections of online drug retail.

An estimated 7400 persons died in Russia from drug-related causes in 2020, a 16% increase from 6300 in 2019 (Mishina & Trentev, 2021). In the United States, unlike in most of Europe, drug overdose deaths surged under pandemic restrictions (U.S. Centers for Disease Control & Prevention, 2020), when essential harm reduction services were significantly disrupted (Bartholomew et al., 2020; Glick et al., 2020). While new federal regulations in the United States for telemedicine and take-home dosing reduced some barriers to medications for opioid use disorder (Krawczyk et al., 2020), many still find themselves in the same—and now markedly less safe—supervised dosing arrangements as before (Figgatt et al., 2021). It is unclear whether the different lived experiences of PWID in Russia, other European countries and in the United States will result in different individual and population health outcomes. Future research should explore how local variations might shape the severity or directionality of pandemic response on rates of substance use related harms.

These findings should be interpreted with certain limitations in mind. Our participants were recruited from St. Petersburg, a large urban center that boasts many resources and civil society organizations. Our findings may not be applicable to non-urban regions or to urban centers outside of Russia. PWID with HIV in this study regularly accessed harm reduction services and may not be representative of all people who use drugs and/or are living with HIV in the region. Further, interviews discussed events and experiences that occurred as long ago as 13 months prior. Our data may be subject to recall bias or reinterpretation in hindsight as the pandemic has evolved.

Conclusion

PWID with HIV in St. Petersburg, Russia, have experienced exacerbated social, emotional, and financial hardships during the SARS-CoV-2 pandemic. Simultaneously, police violence and some administrative and institutional barriers to HIV care were substantially reduced by pandemic restrictions. Future pandemic responses should account for the unique vulnerabilities of PWID with HIV to avoid worsening the structural violence they already experience. Wherever restrictions decreased structural violence, such changes should be maintained.

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Ethics approval

The authors declare that they have obtained ethics approval from the Institutional Review Boards at Elon University (Elon, NC), 21-109, the Boston Medical Center (Boston, MA), H-41187, and the First Pavlov State Medical University (St. Petersburg, Russia).

Declarations of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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