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Abstract | This study examines the methamphetamine market and prevalence of methamphetamine use in Perth during the COVID-19 pandemic. Data from the Drug Use Monitoring in Australia program indicate that 38 percent ($n=55$) of Perth police detainees interviewed between April and June 2020 reported recent methamphetamine use—a significantly lower rate than in January–February 2020. Detainees who used methamphetamine did so on a median of five days in the past month—significantly less often than in previous years (median=15) and in January–February 2020 (median=16).

Detainees also reported a threefold increase in the price of methamphetamine (from \$30 to \$100 per point), and significant declines in methamphetamine availability and quality.

COVID-19 pandemic constricts methamphetamine supply in Perth

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The COVID-19 pandemic has had a significant impact on the global economy, public health and day-to-day life (World Health Organization 2020). World leaders have taken drastic measures to limit the spread of the virus, such as the closure of national and state borders (United Nations Office on Drugs and Crime (UNODC) 2020). In Australia, COVID-19 has led to large-scale restrictions on international, interstate and intrastate travel; limitations on trade and social gatherings; mass unemployment across many industries; widespread shortages of household supplies; and disruptions to international mail and air, land and sea freight (Morrison 2020).

The trafficking of illicit drugs and precursor chemicals for their manufacture relies on freight (such as interstate trucking), post, and face-to-face interactions between buyers and sellers. Reports from European countries with strict mobility restrictions have indicated an overall shortage of numerous types of drugs at the retail level, increased prices, reductions in purity, and an increase in consumer substitution of drugs (European Monitoring Centre for Drugs and Drug Addiction and Europol 2020; UNODC 2020). According to the United Nations Office on Drugs and Crime (2020), disruptions to methamphetamine production in Mexico and the European Union have led to a twofold to sixfold increase in methamphetamine prices in these regions. Early indicators from the Burnet Institute suggest methamphetamine in Melbourne continues to be accessible, although almost half of the participants reported weak purity (Dietze & Peacock 2020). Previous 'shocks' to drug supply chains may indicate how the illicit market will react to the COVID-19 pandemic. During 2001, Australia experienced a 'heroin drought' involving a sudden and substantial drop in the availability of heroin, resulting in a notable increase in price and decrease in quality (Degenhardt, Day & Hall 2004; Dietze & Peacock 2020).

Methamphetamine is a drug of national concern in Australia and particularly problematic in Western Australia. Surveys of police detainees suggest that methamphetamine is the most widely available drug in Australia, with two-thirds of those in Perth ($n=682$, 65%) rating the availability as very high (Voce & Sullivan 2019). Methamphetamine is often trafficked into Perth through international, interstate and intrastate distribution networks (Australian Border Force 2018). In response to the COVID-19 pandemic, the Western Australian Government (2020) declared a state of emergency on 16 March 2020, followed by bans on international travel (19 March), interstate travel (5 April) and intrastate travel (31 March). Given Western Australia's geographic remoteness from other states and countries, these border closures had the potential to disrupt the methamphetamine market in a manner similar to the 2001 heroin drought.

Aim

This study aims to examine whether the COVID-19 pandemic was associated with changes in the methamphetamine market in the Perth metropolitan area. Data were collected between April and June 2020 in Perth through the Drug Use Monitoring in Australia (DUMA) program. Although the DUMA program is a national survey conducted quarterly in police stations and watch houses across Australia, data collection had to be suspended in Brisbane, Adelaide and Sydney sites during the early stages of the COVID-19 pandemic for health and safety reasons. Fortunately, DUMA data collection was able to continue in Perth due to the availability of non-contact interview rooms, providing a unique opportunity to examine whether the COVID-19 pandemic was associated with any disruption to the methamphetamine market in Western Australia.

Method

This study uses data collected through the DUMA program from police detainees in Perth during quarter two (April–June) of 2020 ($n=145$), when COVID-19 related restrictions were in force. Detainees' patterns of methamphetamine use and perceptions of the methamphetamine market during quarter two of 2020 were compared with those of detainees interviewed during two reference periods. First, we merged datasets collected during quarter two (April–May) of 2017 ($n=171$), 2018 ($n=201$) and 2019 ($n=204$), described as 2017–19 in this report. This allowed us to calculate the averages across the three preceding years, and adjust for seasonal variations in drug use patterns (eg higher rates of drug use during summer holidays). Second, we used data collected during quarter one (January–February) of 2020 ($n=202$), to represent the period immediately preceding the COVID-19 outbreak in Australia.

Interviews were conducted by trained members of Edith Cowan University's Forensic Interview Team, independent from the police. Data collection was approved by Edith Cowan University's COVID-19 Response Committee. The questionnaire was administered to detainees who had given informed consent in a non-contact interview room in the Perth Police Watch House.

Detainees who reported using methamphetamine in the past 30 days were asked about the availability, quality, price and social supply of methamphetamine during the 30 days before their arrest. Availability was rated on a scale from one (extremely hard or impossible to get) to 10 (readily available or overabundant). Quality was also rated on a scale from one (extremely poor quality or purity) to 10 (excellent quality or purity). These detainees were also asked:

- whether the average price of methamphetamine had increased, decreased or remained stable compared with three months prior;
- whether the number of dealers in the methamphetamine market had changed in the last three months; and
- to estimate how much of their methamphetamine they had sold, shared or given away during the past month.

We also compared the standardised price per point of methamphetamine (total cost of most recent purchase divided by the number of points purchased), and the average quantity purchased, among those interviewed in quarter one versus quarter two 2020. These analyses were restricted to detainees who purchased 'personal quantities' of less than two grams of methamphetamine, based on the quantity threshold for the presumption of intent to supply methamphetamine in Western Australia (Office of the Director of Public Prosecutions for Western Australia 2020). Comparisons of categorical variables were made using Pearson's chi-square, and comparisons of (skewed) continuous variables were made using Wilcoxon's rank sum. To preserve the largest sample size possible, detainees were excluded from analysis only for variables for which data were missing.

Finally, all survey respondents were asked to describe the current methamphetamine market in Perth. Analysis of these data provided more context about the associations between the COVID-19 pandemic and illicit drug markets.

Compared to detainees interviewed during quarter two 2017–19, those interviewed during quarter two 2020 were more likely to be unemployed (79%, $n=114$ vs 67%, $n=383$, $\chi^2(1)=11.4$, $p=0.003$, $\phi=-0.13$) and to have a history of incarceration (50%, $n=72$ vs 39%, $n=219$, $\chi^2(1)=5.2$, $p=0.022$, $\phi=0.09$). The most serious offences recorded against those interviewed in quarter two 2020 were also more likely to be related to violent crime (45%, $n=64$ vs 35%, $n=201$, $\chi^2(1)=4.4$, $p=0.036$, $\phi=0.08$), but less likely to be related to breaches (10%, $n=15$ vs 19%, $n=111$, $\chi^2(1)=6.3$, $p=0.012$, $\phi=-0.09$).

Results

Methamphetamine use during the past 30 days

Thirty-eight percent ($n=55$) of detainees interviewed during quarter two 2020 in Perth reported using methamphetamine in the past 30 days. This was not significantly different to the rate in quarter two 2017–19 (43%, $n=250$, $\chi^2(1)=1.4$, $p=0.233$). But it was significantly lower than the rate in quarter one 2020 (57%, $n=114$, $\chi^2(1)=11.9$, $p=0.001$, $\phi=-0.19$), reversing an upward trend in methamphetamine use among Perth detainees over the past two collection periods. Detainees reported using methamphetamine on a median of five days (interquartile range (IQR)=2–15) in the past 30 days. This frequency of use was significantly less than detainees reported in quarter two 2017–19 (median=15, IQR=3–29, $z=2.9$, $p=0.004$, $d=0.4$) and quarter one 2020 (median=16, IQR=5–30, $z=3.8$, $p<0.001$, $d=0.6$).

Methamphetamine market

The median quality rating for methamphetamine in quarter two 2020 (Figure 1) was three out of 10 (IQR=1–5), significantly lower than average quality ratings in quarter two 2017–19 (median=6, IQR=5–8, $z=6.9$, $p<0.001$, $d=1.2$) and quarter one 2020 (median=6, IQR=4–8, $z=5.9$, $p<0.001$, $d=1.1$). Similarly, detainees rated the availability of methamphetamine during quarter two 2020 as two out of 10 (IQR=1–3). This was significantly lower than availability ratings during quarter two 2017–19 (median=10, IQR=7–10, $z=10.1$, $p<0.001$, $d=2.2$) and quarter one 2020 (median=10, IQR=8–10, $z=9.7$, $p<0.001$, $d=2.6$).

In quarter two 2020, 96 percent ($n=51$) of detainees who had used methamphetamine in the past month indicated the price of the drug had increased in the past three months (Figure 2). In quarter two 2017–19, only a quarter of detainees reported that the price had increased (25%, $n=54$, $\chi^2(1)=90.2$, $p<0.001$, $\phi=0.6$), and in quarter one 2020 the rate was even lower (10%, $n=10$, $\chi^2(1)=105.7$, $p<0.001$, $\phi=0.8$).

Most detainees interviewed during quarter two 2020 who had used methamphetamine in the past month (75%, $n=38$) reported the number of dealers selling the drug had decreased in the past three months (Figure 2). This compares to 13 percent in quarter two 2017–19 ($n=26$, $\chi^2(1)=81.4$, $p<0.001$, $\phi=0.6$) and 13 percent in quarter one 2020 ($n=13$, $\chi^2(1)=58.4$, $p<0.001$, $\phi=0.6$). The methamphetamine users interviewed in quarter two 2020 were also significantly less likely to have shared, sold or given the drug away to other people in the past 30 days (38%, $n=20$) than those in quarter two 2017–19 (54%, $n=134$, $\chi^2(1)=4.8$, $p=0.029$, $\phi=-0.13$) or quarter one 2020 (58%, $n=66$, $\chi^2(1)=6.2$, $p=0.013$, $\phi=-0.19$).

Figure 1: Ratings of methamphetamine availability and quality (median)

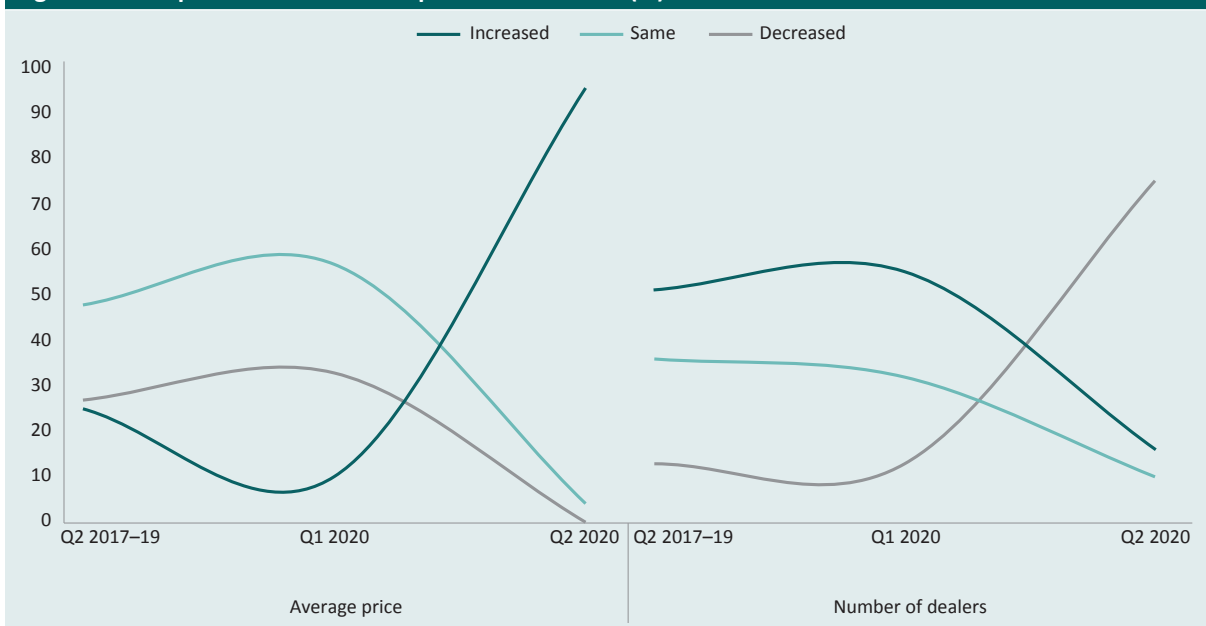


Source: AIC DUMA collection 2017–20 [computer file]

Most recent methamphetamine purchase

In quarter two 2020, detainees reported the median standardised price per point of methamphetamine was \$100 (IQR=\$90–\$150), significantly higher than in January–February 2020 (median=\$30, IQR=\$20–\$50, $z=-8.1$, $p<0.001$, $d=0.04$). Methamphetamine users also reported buying fewer points in their most recent purchase (median=3, IQR=1–5) than those in January–February 2020 (median=5, IQR=2–17, $z=3.0$, $p=0.002$, $d=0.12$).

Figure 2: Perceptions of the methamphetamine market (%)



Source: AIC DUMA collection 2017–20 [computer file]

Other drug use in the past 30 days

In quarter two 2020, nearly two-thirds of detainees (62%, $n=90$) reported using heroin, ecstasy, cocaine, cannabis, inhalants, hallucinogens or non-prescribed medications (benzodiazepines, antipsychotics, steroids, and opiates other than heroin) during the past 30 days. In comparison, 52 percent of detainees interviewed during quarter two 2017–19 reported illicit drug use (other than methamphetamine) during the past month ($n=299$, $\chi^2(1)=4.8$, $p=0.028$, $\phi=0.08$).

Over half of detainees interviewed during quarter two 2020 reported using cannabis (51%, $n=74$), whereas fewer respondents reported using heroin (6%, $n=8$), ecstasy (8%, $n=11$), cocaine (9%, $n=13$), hallucinogens (3%, $n=4$), inhalants (1%, $n=2$), benzodiazepines (8%, $n=12$), opiates (2%, $n=3$) or antipsychotics (1%, $n=1$). Those interviewed during quarter two 2020 were significantly more likely to report ecstasy use and cocaine use compared to detainees interviewed during quarter two 2017–19 (ecstasy use: 3%, $n=17$, $\chi^2(1)=6.7$, $p=0.010$, $\phi=0.10$; cocaine use: 4%, $n=22$, $\chi^2(1)=6.6$, $p=0.010$, $\phi=0.10$).

Detainee comments about the methamphetamine market

Detainees also provided unsolicited comments reinforcing that Perth had experienced a sudden and significant reduction in the availability of methamphetamine. This change was often directly attributed to the restrictions associated with COVID-19. One detainee said: 'It was fine getting methamphetamine until the coronavirus started. The border restrictions have cut the supply off.' Respondents also noted a substantial increase in the average price of methamphetamine: 'The whole drug market has tripled in price because the borders are shut, particularly methamphetamine, as the [intrastate] borders are closed and the drug comes from the north of Western Australia.'

The quality of methamphetamine was also described as poor. Some respondents said dealers were compensating for the scarcity of methamphetamine by adding adulterants to the drug: 'The quality is shocking and dealers are mixing anything they can into the methamphetamine to try and make more.' Respondents also said the scarcity of methamphetamine had resulted in more violence and led people to substitute methamphetamine for other stimulants: 'There is more violence due to people not getting the drugs they need or expect, especially around the lack of methamphetamine.'

Discussion

This study suggests the unprecedented economic and social impacts of the COVID-19 pandemic in Australia may have had significant consequences for Perth's methamphetamine market. Detainees reported that methamphetamine had become extremely difficult to source in Perth, with fewer dealers selling or sharing the drug. Ratings of methamphetamine availability and quality were the lowest recorded in Perth since the DUMA program introduced these questions in 2013. Detainees suggested the decrease in methamphetamine availability in Perth was due in part to the border closures and travel restrictions introduced to stop the spread of COVID-19.

The price of methamphetamine in Perth also increased more than threefold between quarter one 2020 (an average of \$30 per point) and quarter two (\$100). This inverse relationship between price and availability or quality—in which increased price leads to reduced availability and quality—is a widely documented feature of the illicit drug market, following traditional economic models of demand and supply (Hulme, Hughes & Nielsen 2020).

The proportion of people who reported using methamphetamine in the past month fell by 19 percentage points from quarter one 2020 to quarter two 2020 and declined in comparison with an average of the past three years. Among those who had used methamphetamine in the past month, frequency of use declined from a median of 16 of the last 30 days in quarter one to a median of five days in quarter two 2020. Most methamphetamine-using detainees reported that they had not been able to obtain any methamphetamine in the past month or could not buy and use methamphetamine as often as they had previously.

Detainees were more likely to use non-prescribed drugs or illicit drugs other than methamphetamine during the past month. Although there were some anecdotal reports that people were substituting methamphetamine for ecstasy, the rate of ecstasy use did not differ between quarters one and two 2020. This may have been due in part to the small sample size in quarter two.

Experts have cautioned that an inability to acquire methamphetamine among those who are dependent on the drug may lead to physical and psychological symptoms of withdrawal, which can include violence (Dietze & Peacock 2020). Respondents in this study were more likely to have been arrested for violent offences relative to respondents in previous periods. For people with a history of heavy methamphetamine use, involuntarily abstaining from drug use for a period of time due to reduced availability may lower their tolerance to methamphetamine. This may increase their risk of overdose if the market rebounds and they are again able to access large quantities of methamphetamine (Dietze & Peacock 2020).

In sum, this study presents new evidence that the restrictions and upheaval associated with the COVID-19 pandemic in Australia have disrupted Perth's methamphetamine market. Police detainees reported a shortage of methamphetamine in the region, an increase in the price of the methamphetamine remaining available and a decline in its quality. The DUMA program will continue to monitor the impact of the COVID-19 pandemic on illicit drug markets in Australia, with data collection for quarter three currently being undertaken across sites in Perth, Adelaide, Brisbane and Sydney.

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