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Abstract | An analysis of 2018–19 Drug Use Monitoring in Australia data suggests 64 percent of police detainees obtained methamphetamine from someone they knew, while 28 percent bought from a dealer. The most common location to obtain methamphetamine was the home of a known person. Detainees reporting methamphetamine dependence were more likely to buy from a dealer and those injecting methamphetamine were more likely to obtain it at an agreed public location. The findings suggest detainees most commonly obtained methamphetamine through closed drug markets using social supply. However, detainees with more harmful patterns of use also commonly used semi-open markets.

How and where police detainees obtain methamphetamine

Laura Doherty and Tom Sullivan

Retail markets for illicit drugs are often categorised as open or closed markets. Open drug markets, such as open-air 'street markets', allow equal access to all buyers and typically operate from fixed geographic locations at specific times to ensure buyers and sellers can locate each other (Fowler, Kinner & Krenske 2007; Hough & Natarajan 2000). In contrast, closed drug markets typically operate in private spaces and are restricted to known and trusted individuals such as family members, friends and acquaintances (Hough & Natarajan 2000). The exchange of drugs between people known to each other on a non-commercial or non-profit basis is referred to as 'social supply' (Hough et al. 2003; Potter 2009).

The grey areas between open and closed markets are typically referred to as semi-open markets, and these can incorporate aspects of both markets. For example, drug transactions within semi-open markets may take place in privately-owned public places or previously agreed upon locations—such as nightclubs and pubs—between known people or strangers (Fowler, Kinner & Krenske 2007). Drug users may tend to prefer closed drug markets as they are perceived to have fewer risks associated with law enforcement and drug quality (Parker 2000).

This study seeks to understand the types of markets from which a group of drug users in Australia obtain methamphetamine, and how this varies according to demographic factors and patterns of use. It examines who methamphetamine users obtain their drugs from (a social dimension of the market) and where (a geographic dimension). Understanding how methamphetamine users engage with illicit drug markets in Australia is important, as high-frequency use of methamphetamine, particularly 'ice', has been increasing since 2010 among the general population (Australian Institute of Health and Welfare 2017). Further, the proportion of police detainees testing positive for methamphetamine increased to 52 percent in 2018 (Voce & Sullivan 2019).

Method

Sample

This study used data from the Australian Institute of Criminology's Drug Use Monitoring in Australia (DUMA) program, which collects quarterly information from police detainees about their drug use, criminal offending and sociodemographic characteristics. In October and November 2018 and January and February 2019, a special DUMA addendum asked detainees who had used methamphetamine in the past 12 months about how they had obtained it. Urine samples were obtained from consenting participants in October and November 2018 in Bankstown and in January and February 2019 in Adelaide, Brisbane, Perth and Sydney.

Of the 1,144 detainees aged 18 years and over who participated in DUMA in this period, 672 reported using methamphetamine in the past 12 months and responded to the methamphetamine section of the drug markets addendum. Four in five detainees (80%, *n*=535) who reported having used methamphetamine were men and one-quarter of the sample (25%, *n*=166) was Indigenous. The median age of the sample was 33 years (mean=34 years). Respondents who reported dependency on methamphetamine in the 12 months before interview accounted for 45 percent of the sample (*n*=305) and those who had injected methamphetamine in the past 12 months represented 61 percent (*n*=412). Most of the sample reported using ice, the crystalline form of methamphetamine (70%, *n*=471). Overall, 252 detainees responded to the methamphetamine addendum and provided a urine sample, and 78 percent (*n*=196) of these tested positive for methamphetamine.

Analysis

Chi-square tests were used to identify relationships between categorical variables, with Fisher's exact test used when one or more of the cells had expected frequencies of five or less. The analysis included tests to identify whether specific methods of obtaining methamphetamine differed significantly based on whether detainees were dependent, whether they injected or their frequency of use. The analysis also tested whether obtaining methamphetamine from particular locations was associated with dependence, injection or frequency of use. Adjusted chi-square residuals were used to identify the cells in which the observed values were significantly different from the expected values. Analyses of data related to how detainees obtained methamphetamine and where they obtained it excluded 'other' and 'don't know' responses. The results section excludes analysis of the frequency of use variable because no significant associations were found between frequency of use and how or where detainees obtained methamphetamine (see Table A3).

Results

How do detainees obtain methamphetamine?

Almost two-thirds (64%, *n*=424) of detainees had obtained the methamphetamine they had most recently used from a person known to them. This included purchasing from a friend (26%, *n*=174), family member (2%, *n*=12) or acquaintance (9%, *n*=62), and receiving methamphetamine from a friend or family member without paying (27%, *n*=176; see Table 1). In comparison, 28 percent (*n*=187) had purchased methamphetamine from a dealer.

The largest proportion of men purchased methamphetamine from a known person (41%, *n*=212), followed by purchasing from a dealer (29%, *n*=150). Women were most likely to receive methamphetamine from a known person without paying (38%, *n*=51), and equally likely to purchase methamphetamine from a known person (26%, *n*=36) or a dealer (27%, *n*=37).

Table 1: Method used to obtain methamphetamine by gender

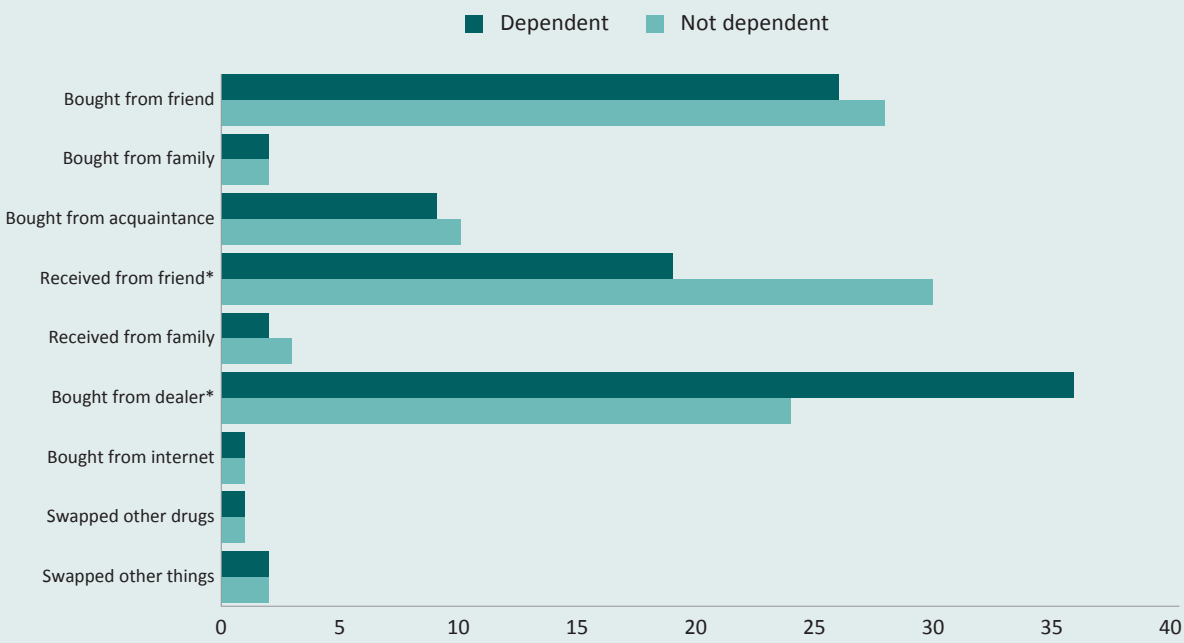
	Male		Female		Total	
	n	%	*n*	%	*n*	%
Bought from friend	152	29	22	16	**174**	**26**
Bought from family member	9	2	3	2	**12**	**2**
Bought from acquaintance	51	10	11	8	**62**	**9**
Bought from known person	**212**	**41**	**36**	**26**	**248**	**38**
Received from friend without paying	113	22	46	34	**159**	**24**
Received from family member without paying	12	2	5	4	**17**	**3**
Received from known person	**125**	**24**	**51**	**38**	**176**	**27**
Swapped for other drugs	5	1	1	1	**6**	**1**
Swapped for other things	9	2	4	3	**13**	**2**
Swapped with someone else	**14**	**3**	**5**	**4**	**19**	**3**
Bought from dealer	150	29	37	27	**187**	**28**
Bought from internet	4	1	3	2	**7**	**1**
Other	12	2	4	3	**16**	**2**
Total	**523**		**136**		**659**	

Note: Total includes 'don't know' responses. Percentages may not total 100 due to rounding

Source: AIC DUMA collection 2018–19 [computer file]

Fisher's exact test suggested a statistically significant relationship between reported methamphetamine dependence and methods used to obtain the drug ($p<0.05$). Examination of adjusted residuals suggested respondents who reported experiencing methamphetamine dependence in the past 12 months were significantly more likely than those who were non-dependent to have bought methamphetamine from a dealer (36%, *n*=105 vs 24%, *n*=82, adjusted residual=3.55; see Figure 1). In contrast, those who were non-dependent were significantly more likely than respondents who reported dependency to have received methamphetamine from a friend (30%, *n*=103 vs 19%, *n*=56, adjusted residual=2.94).

Figure 1: Method used to obtain methamphetamine by dependence[a] (%)



*statistically significant at $p<0.05$

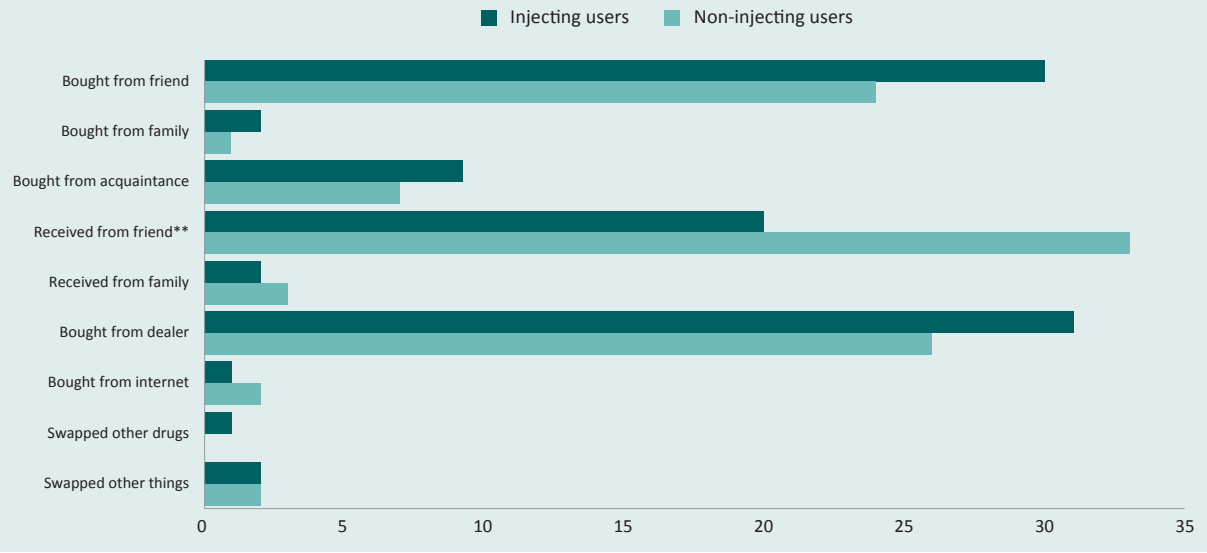
a: Methamphetamine dependence was measured by asking detainees whether they had felt dependent on methamphetamine during the 12 months prior to interview

Note: 'Other' and 'don't know' responses excluded from analysis

Source: AIC DUMA collection 2018–19 [computer file]; see Table A1

Fisher's exact test also suggested a statistically significant relationship between the method of methamphetamine administration and how respondents had obtained the drug ($p<0.01$). Examination of adjusted residuals suggested respondents who used methods other than injection to administer methamphetamine were more likely than those who had injected to have received methamphetamine from a friend without paying (33%, $n=82$ vs 20%, $n=76$, adjusted residual=3.90; see Figure 2). For respondents who had injected, the most common method of obtaining methamphetamine was buying from a dealer (31%, $n=122$), but this was not significantly different to the 26 percent ($n=64$) who had used other methods of administration.

Figure 2: Method used to obtain methamphetamine by method of administration (%)



**statistically significant at $p<0.01$

Note: 'Other' and 'don't know' responses excluded from analysis

Source: AIC DUMA collection 2018–19 [computer file]; see Table A2

Where do detainees obtain methamphetamine?

More than one-third (37%, *n*=243) of respondents had obtained methamphetamine at the private residence of a family member, friend or acquaintance on their last occasion of use (see Table 2). Another 20 percent (*n*=130) had purchased methamphetamine at a previously agreed upon public location and 18 percent (*n*=117) had obtained methamphetamine at a dealer's home. Only six percent (*n*=39) had bought methamphetamine from a street market and one percent (*n*=5) had purchased online and then had it posted to them. The private residence of a known person was the most common location for male (37%, *n*=190) and female respondents (39%, *n*=53) to obtain methamphetamine.

Table 2: Location where methamphetamine was obtained, by gender						
	Male		Female		Total	
	n	%	*n*	%	*n*	%
Family member's home	8	2	5	4	**13**	**2**
Friend's home	153	30	34	25	**187**	**29**
Acquaintance's home	29	6	14	10	**43**	**7**
Private residence of known person	**190**	**37**	**53**	**39**	**243**	**37**
Pub/bar	8	2	1	1	**9**	**1**
Nightclub	3	1	0	0	**3**	**<1**
Recreational location	**11**	**2**	**1**	**1**	**12**	**2**
Dealer's home	92	18	25	18	**117**	**18**
Agreed public location	107	21	23	17	**130**	**20**
Street market	30	6	9	7	**39**	**6**
Delivered to home by seller	64	12	13	10	**77**	**12**
Online	2	<1	3	2	**5**	**1**
Other	9	2	8	6	**17**	**3**
Total	**516**		**136**		**652**	

Note: Total includes 'don't know' responses. Percentages may not total 100 due to rounding

Source: AIC DUMA collection 2018–19 [computer file]

While not statistically significant, respondents who reported methamphetamine dependence were generally more likely than those who were non-dependent to have obtained methamphetamine at a dealer's home (23%, *n*=66 vs 15%, *n*=50) or an agreed public location (22%, *n*=63 vs 20%, *n*=67), or to have had it delivered to their home (13%, *n*=37 vs 12%, *n*=40). Those who were non-dependent were generally more likely than those who reported dependence to have obtained methamphetamine at a friend's home (32%, *n*=108 vs 28%, *n*=79) or a recreational location including a pub, bar or nightclub (3%, *n*=9 vs 1%, *n*=3).

Fisher's exact test suggested a statistically significant relationship between method of administration and the locations in which respondents had obtained methamphetamine ($p<0.001$). Examination of adjusted residuals suggested a significantly higher proportion of respondents who had injected in the last 12 months had obtained methamphetamine at a previously agreed upon public location compared with those who had not injected methamphetamine (25%, *n*=97 vs 14%, *n*=33, adjusted residual=3.35). Those who had not injected methamphetamine were significantly more likely than those who had injected to have obtained the drug at a friend's home (37%, *n*=88 vs 26%, *n*=99, adjusted residual=3.03) or nightclub (1%, *n*=3 vs 0%, *n*=0, adjusted residual=2.22).

Discussion

These results suggest most police detainees had obtained methamphetamine from closed markets characterised by social supply activities. The majority of detainees reported having bought or received methamphetamine from someone known to them (including family, friends and acquaintances), often in private residences or by home delivery. However, the types of markets respondents engaged with varied on the basis of their patterns of use.

Respondents who reported less harmful use of methamphetamine seemed most likely to obtain methamphetamine from closed markets. Respondents who were not dependent on methamphetamine and who used methods other than injection were more likely to have obtained methamphetamine from friends and other people known to them. Notably, non-dependent and non-injecting users were significantly more likely than dependent and injecting users to have received methamphetamine from a friend. More than a quarter of all respondents had received methamphetamine from a friend, family member or acquaintance without paying, providing evidence of social supply.

In contrast, detainees rarely purchased methamphetamine from an open market. Only six percent had purchased methamphetamine from a street market. Of these, two-thirds had purchased or received methamphetamine from a known person, suggesting familiarity and trust had previously been established between buyer and seller. This type of drug transaction in a public location between known individuals is characteristic of a semi-open market.

Respondents who reported injecting methamphetamine and dependence on methamphetamine appeared more likely to have used semi-open markets. Notably, respondents who reported methamphetamine dependence were significantly more likely to have purchased methamphetamine from a dealer. A small number of respondents also reported having obtained methamphetamine at a recreational location such as a pub, bar or nightclub. These respondents were mostly non-dependent methamphetamine users. These findings reflect Hough and Natarajan's (2000) assertion that people whose illicit drug purchases are not driven by their dependence on the drug will typically do business with individuals they trust in private spaces as it is perceived to be less risky.

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Appendix

Table A1: Method used to obtain methamphetamine by dependence

	Dependent		Non-dependent	
	n	%	*n*	%
Bought from friend	74	26	99	28
Bought from family member	6	2	6	2
Bought from acquaintance	27	9	35	10
Received from friend	56	19	103	30
Received from family member	7	2	10	3
Swapped for other drugs	3	1	3	1
Swapped for other things	7	2	6	2
Bought from dealer	105	36	82	24
Bought from internet	3	1	4	1
Total	**288**		**348**	

Note: 'Other' and 'don't know' responses excluded. Percentages may not total due to rounding

Source: AIC DUMA collection 2018–19 [computer file]

Table A2: Method used to obtain methamphetamine by method of administration

	Injecting		Non-injecting	
	n	%	*n*	%
Bought from friend	115	30	59	24
Bought from family member	9	2	3	1
Bought from acquaintance	43	11	18	7
Received from friend	76	20	82	33
Received from family member	9	2	8	3
Swapped for other drugs	5	1	1	<1
Swapped for other things	7	2	6	2
Bought from dealer	122	31	64	26
Bought from internet	2	1	5	2
Total	**388**		**246**	

Note: 'Other' and 'don't know' responses excluded. Percentages may not total 100 due to rounding

Source: AIC DUMA collection 2018–19 [computer file]

Table A3: Method used to obtain methamphetamine by frequency of use

	Less than weekly		Weekly or twice weekly		More than twice weekly		Daily or almost daily	
	n	%	*n*	%	*n*	%	*n*	%
Bought from friend	33	28	22	24	29	31	59	28
Bought from family member	1	1	1	1	2	2	4	2
Bought from aquaintance	9	8	14	16	8	8	15	7
Received from friend	33	28	24	27	18	19	38	18
Received from family member	4	3	1	1	3	3	6	3
Swapped other drugs	2	2	0	0	0	0	3	1
Swapped other things	4	3	2	2	1	1	5	2
Bought from dealer	23	20	24	27	31	33	75	35
Bought from internet	0	0	1	1	0	0	2	1
Other	6	5	1	1	3	3	4	2
Don't know	2	2	0	0	0	0	2	1
Total	**117**		**90**		**95**		**213**	

Note: Sample size may vary due to missing data. Percentages may not total 100 due to rounding. Findings were not statistically significant. Frequency of use categories were drawn from McKetin, McLaren & Kelly's (2005) study and based on the number of days detainees had used methamphetamine in the 30 days before interview. Responses were coded as less than weekly (fewer than four days); once or twice weekly (four to eight days); more than twice weekly (between nine and 19 days); and daily or almost daily (20 or more days)

Source: AIC DUMA collection 2018–19 [computer file]

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