

## Teen drug sellers— An international study of segregated drug markets and related violence

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*This study explores patterns of drug dealing in a multi-site sample of detained youth. Data are derived from the Drugs, Alcohol, Violence International (DAVI) study of male and female adolescents between the ages of 14-17 in four metropolitan areas: Amsterdam (The Netherlands), Montreal (Canada), Philadelphia (US), and Toronto (Canada). In a sample of 764 juvenile detainees, 60% overall reported predetention involvement in selling drugs, but this varied by site: 35% in Amsterdam, 61% in Philadelphia, 68% in Montreal, and 77% in Toronto. Typically, respondents were mostly selling drugs to friends and acquaintances. Cluster analysis*

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*revealed that teen drug sellers in our sample, despite the fact that many of them are involved in the sale of a variety of drugs, tend to specialize into three types of segregated markets: cannabis sellers, party drug sellers, and street drug sellers. Cannabis sellers are predominantly involved in selling marihuana and/or hashish, have relatively low transactions and sales, and violence is less common. Party drug sellers are distinguished by selling substances like ecstasy, powder cocaine, and amphetamines, and have high rates of violence. Street drug sellers' specialties are crack and heroin, and violence though common, is less prevalent than among the party drug sellers. These three types were found in all sites in our study, but were not equally prevalent across sites.*

KEY WORDS: *Drug dealing, adolescents, detainees, violence, cross-national.*

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Who provides the drugs for youthful drug users? The myth of the older adult lurking around the schoolyard offering drugs to naïve youngsters has been replaced by a less palatable truth. Youth do indeed provide drugs to other youth; some may devote considerable time and energy to this profitable “business;” and youth involved in the drug trade are also likely to adopt violent tactics (Blumstein, 1995; Brunelle, Brochu & Cousineau, 2000; Erickson, Butters, Korf, Harrison & Cousineau, 2007). Yet little detailed knowledge has been available about the nature of youthful illicit drug markets due to the double challenge of studying illegal, secretive activities and doing so by gaining the trust of young people who are engaged in drug selling. The DAVI study recruited a large, representative sample of incarcerated youth from each city with the expectation that, while the charge of drug trafficking is rare in youthful crime statistics, this seriously delinquent population would display high rates of self-reported drug sell-

ing. This was indeed the case, and enabled the team to analyze the patterns and correlates of drug selling and their relationships to violence inflicted on or by the youth in the course of illicit drug market transactions. After reviewing the relevant literature, this article will describe our methods and findings, and consider the consistencies and differences between sites.

Illicit drug use typically begins during adolescence with cannabis (marijuana and hashish), and may expand to hallucinogens and stimulants, and eventually to opioids for a minority of users (Kandel, 2002). Current drug use is predominantly manifest among adolescents and young adults (Comité permanent de lutte à la toxicomanie, 2003; EMCDDA, 2005; LeBlanc, 2005; OAS/SAMHSA, 2005; Rodenburg, Spikerman, van den Eijnden & van de Mheen, 2007). Epidemiological studies of drug use among the general population and school students, as well as more specific drug studies, indicate that the onset of drug use commonly occurs among friends. The drugs are generally supplied by friends, close relatives or other family members—in other words, the first use occurs within social networks (Brochu & Parent, 2005; Hibell, Andersson, Bjarnason, Ahlstrom, Balakireva, Kokkevi & Morgan, et al., 2004). Surveys also report that drugs are relatively easily available to many young people (Hibell, et al., 2004; AHRN, 2005; Warburton, Turnbull & Hough, 2005; Johnston, O'Malley & Bachman, 2003). A few studies also examine how current drug users acquire drugs, such as whether they buy them themselves, where they acquire them (i.e., on the streets or in a home), and how they are related to the suppliers (i.e., friends vs. strangers, older vs. same age). (For overview, see: Harrison, Erickson, Korf, Brochu & Benschop, 2007)

In most cases, cannabis is not only the first, but also often the only, illicit drug people ever use. In an overview of findings from school surveys among students aged 15-16 in 35 European countries, Hibell et al. (2004) found that cannabis was the drug most likely to be used by youth, and few had tried other illicit drugs. Further, cannabis was the first illicit

drug used by a large margin, followed at much lower levels by ecstasy and amphetamines. For the initial drug experience, the drug was generally given by an older sibling or older friend, or shared in a group. It was much less likely to be bought from a friend or stranger. Overall more than half the students (55%) reported one or more places where they could easily buy cannabis. Discotheques, bars, and clubs. were mentioned most often (27%), followed by public places such as streets and parks (19%), dealers' houses (23%), schools (16%), and "other" (13%).

There is minimal in-depth research on drug dealing among youth as most research focuses on adults and mainly those in poor or marginalized groups (Erickson, 1996; Erickson, Butters & German, 2002; Faupel, 1991; Reuter, MacCoun & Murphy, 1990). Nevertheless, since youth typically acquire drugs in their own social networks, it follows that there are substantial numbers of youth involved in drug selling (Smart, Adlaf & Walsh, 1992). Some reasons suggested for minors' involvement in drug selling activities include as part of a rite of passage (i.e., to prove that they are good potential gang members), because they get lower sentences than adults (Blumstein, 1995), are more vulnerable to optimism bias (i.e., that they won't get caught (Reuter, et al., 1990), have social proximity to users (Harrison, et al., 2007), and as a lucrative way to finance their own drug use or other luxury items (Brunelle, Brochu & Cousineau, 2000; Erickson, 1996; JHSA, 1999; Thomas, 2004; Robinson, 2004).

Some interesting ethnographic studies on drug dealing among young people have been conducted by Williams (1989) in the U.S., Sansone (1992) in the Netherlands, and Fernandez (1999) in Portugal. In general, these studies present detailed information about the lifestyle of young drug sellers and the organization of specific segments of the illicit drug market—mostly 'problem drugs' or 'street drugs' such as heroin and crack cocaine. Also, they often exclusively focus on males and on marginalized groups such as a specific racial or ethnic group,

i.e., Blacks, Latin Americans, or Caribbeans (Reuter, et al., 1990; Sansone, 1992; Williams, 1993).

From a review of 15 studies evaluating drug market involvement among inner city adolescents in the late 1980s and early 1990s in the US, Centres and Weist (1998) concluded that about one in six youth were involved in drug selling activities. They found strong evidence supporting a connection between drug dealing and weapon carrying among urban youth. Economical motivations were presented as an important factor: "Many urban youth perceive their opportunities for legitimate employment as quite limited, and view drug dealing as one of the few opportunities available to advance financially" (p. 406). This is in line with findings from Reuter, et al. (1990) who concluded: "Drug selling is clearly an important career choice and major economic activity for many young black males living in poverty in the District of Colombia" (pp. xi). In a study of a multi-ethnic sample of 300 gang members (median age 22 years) in San Francisco, Waldorf (1993) concluded that the majority of gang crack sellers did not use crack themselves, while the majority of marijuana, powder cocaine, and heroin sellers did use the drugs they sold. Valdez and Sifaneck (2004) found that many Mexican American gang members were users/sellers and not-profit oriented dealers.

A leading US criminologist recently commented, "transnational comparisons are a necessary part of virtually all serious work in criminal justice and the study of criminal behavior" (Zimring, 2006:615). This also applies to the study of drug use behavior, legal or illegal, which is governed by laws, norms and cultural expectations (Edwards, Anderson, Babor, Caswell, Ferrence, Giesbrecht, et al., 1994; Goode, 1993). Social-environmental factors, including drug policies and related services and enforcement, may have a significant impact on the character of the drug market that serves the demand among users (Hibell, et al., 2004; Zinberg, 1984). The three countries involved in this article vary in alcohol and drug availability and norms of acceptability (Adlaf, Korf, Harrison

& Erickson, 2006). This is evident in their drug policies (Edwards et al., 1994; Reinerman, Cohen & Kaal, 2004). Marijuana possession in Canada is a criminal offence that can result in imprisonment. Although those convicted of such an offence are rarely jailed, they do receive a criminal record (Erickson, Hathaway & Urquart, et al., 2004). In the U.S., states generally prosecute marijuana-possession offences, and sentences vary from fines to mandatory detention. Under federal sentencing guidelines, a person convicted of possession could be sentenced to a year in detention. In the Netherlands, the use of illicit drugs is not forbidden, but possession and trafficking are illegal. The law distinguishes between cannabis and all other illicit drugs (hard drugs), and in general penalties for cannabis are lower than for hard drugs. Although trafficking cannabis is illegal, retail is tolerated in “coffee shops” under certain conditions (Korf, 2002), one of which is a minimum age for buyers of 18 years. Since the DAVI respondents are younger than 18, they are not allowed in coffee shops. Nevertheless, Amsterdam respondents could indirectly still have better access to cannabis. Research has shown that youth below 18 in Amsterdam most often get cannabis from friends (Abraham, Kaal & Cohen, 2002; Korf, Wouters, Nabben & Van Ginkel, 2001), and these friends often purchase it in coffee shops (Korf, Wouters, Nabben & Van Ginkel, 2005). Van Gemert (1988) found that with the introduction of coffee shops, street dealers in Amsterdam shifted from cannabis to hard drugs. Based on these differences in national drug policies, it is expected that cannabis dealing among teen drug sellers is lowest in Amsterdam.

Alternatively, it can be hypothesized that drug market involvement, rather than being related to drug policies, may be best understood as an expression of a deviant or marginalized way of life (cf. Vermeiren, Schwab-Stone, Deboutte, Leckman & Ruchkin, 2003). For example, social control theory suggests that weak ties with the community universally increase the likelihood of both criminality and drug use (Hirschi, 1969; Junger-Tas, 2000). Indeed, scholars that focus on sub-cultural aspects

have found that drug use may add to one's status within youth groups (Brochu & Parent, 2005; Parker, Aldridge & Measham, 1998). Thus, among high-risk youth such as juvenile detainees, involvement in drug market activities might be quite similar in our four sites, despite different drug laws in their countries.

This is the first study to examine this phenomenon in comparable samples using the same methods and time frame. The goal of this article is to explore patterns of drug selling in an international context among delinquent, detained youth. The data are derived from the Drugs, Alcohol, and Violence International (DAVI) study of male and female youth, aged 14-17 years, in four metropolitan areas: Montreal (Canada), Philadelphia (US), Toronto (Canada) and a comparable tri-province area surrounding Amsterdam (Netherlands). Uniformity was pursued through the employment of consistent methodological procedures by teams at all four sites, including definitions of target populations, instructions for sampling, modes of interview, and standardized questionnaires, professionally translated into Dutch and French. The detainee sample is representative of youth who have committed offences that led to their being held in custody; we did *not* solicit the nature of the offence (Adlaf, et al., 2006). Therefore, this group of adolescents was not pre-selected on the basis of any known record of violence or drug selling.

## Methods

**Sample** The DAVI detainee sample (n=764) includes respondents from Amsterdam (n = 205), Montreal (n = 214), Philadelphia (n = 183), and Toronto (n = 162). Inclusion criteria were age and residence, and youth were not screened on the basis of past or current drug use, drug selling or violence. In Canada, detention services are organized at the provincial level, in the Netherlands, they are organized at a national level, and in the U.S. they are organized at a county level. The samples in Toronto, Montreal, and Amsterdam reflect a census of eligible

youth in all local institutions housing detained youth from these cities during the time period of the fieldwork from 2000 to 2003. The sample in Philadelphia included a first stage selection of 5 of the 12 detention centers in the metropolitan area. The Philadelphia data are weighted for sample selection characteristics to represent the population of detained youth in the Philadelphia Consolidated Metropolitan Area (based on the annual number of youth detained, but not controlling for gender differences). Another important sample dimension is that in Toronto and Montreal, researchers were allowed access only to sentenced youth, whereas in Philadelphia and Amsterdam, detained youth awaiting disposition were also included. However, discussion with institutional officials indicated no *a priori* reason to assume that those sentenced were more serious offenders, compared to those held in custody prior to their trials. Females were purposefully over-sampled in all sites. In Amsterdam and Montreal, females in custody under a judicial child welfare protection measure were recruited in order to approach the targeted male-female ratio. These girls were only included when they (also) had been arrested for criminal offences, regardless of whether this was the official or main reason for their custody.

The analysis of drug selling is based on 457 detained youth who report providing drugs for someone by either selling drugs for money or exchanging drugs for something of value. This distinction was necessary because in piloting, we found that youth are not willing to identify themselves as a “drug dealer,” reserving that designation for someone at a higher echelon of the distribution hierarchy. Non-sellers included 288 respondents who had never sold any drugs and 15 respondents who had only sold drugs “a few times” (not quantified), and had therefore skipped pertinent questions. Four respondents were omitted from the analysis due to missing data on the drug selling/exchanging question.

**Measures** Five sets of items from the DAVI questionnaire were used in the analyses: demographic characteristics, general characteristics of

drug transactions, drugs sold, having been arrested and/or incarcerated for drug selling, and violence associated with selling.

***Demographic characteristics:*** Gender, age, and Western origin are included. The latter is a measure developed to allow for cross-national racial/ethnic comparisons of countries with different traditions of assessing ethnicity. The social history and meanings of the terms “race” and “ethnicity” varies between cultures. What is common language in North America (i.e. race is “black” vs. “white”) is not acceptable, nor in the same way is it applicable (i.e. ethnicity) in a very multi-cultural, multi-state Europe. We have tried to solve this problem by developing a uniform measure that could be applied to respondents from all four sites in our study (Benschop, Harrison, Korf & Erickson, 2006). Western (ethnic majority or white) and non-western (ethnic minority or non-white) origin is distinguished.

***Drug transactions:*** Several variables related to the characteristics of typical drug transactions are included. One variable divides sellers into those working alone (solo sellers) and those selling as part of a gang, with, or for someone else (collaborative sellers). Customers are divided into mostly strangers *versus* mostly people they know (acquaintances), the latter including students from the same or other schools, family members, boyfriends/girlfriends, other friends, co-workers, and (fellow) gang members. The number of transactions in the most recent week of selling was recoded into a 5-quintile ordinal scale because of outliers. Quintiles were at 10, 35, 78, and 149 transactions. The amount of money made from sales and the value of any drugs received as payment were included as ordinal level variables.<sup>1</sup>

***Drugs sold:*** Includes cannabis, cocaine, crack, hallucinogens (ecstasy, magic mushrooms, LSD and other), amphetamines, and heroin.

***Arrest/Incarceration:*** These variables measure whether the youth was arrested and/or incarcerated due to drug selling in

the past 12 months (self-reported). Note that drug selling was not necessarily the offence for which respondents were detained, and far fewer were arrested for this offence than admitted doing it.

**Violence:** Two items were selected that reflected both perpetration and victimization. In the past 12 months, respondents reported whether they seriously injured and/or assaulted and robbed someone while selling drugs, and whether the respondent was injured and/or assaulted and robbed by someone else while selling drugs. A variable also measured whether respondents ever carried and/or ever used a weapon while selling drugs.

The timeframes of these measures differ somewhat, from *ever* selling drugs and carrying/using a weapon, to arrest/incarceration and violence in the past 12 months, and transactions and sales in the most recent week of selling. However, considering the respondents are 14 to 17 years of age, the differences in the timeframes should have minimal implications.

**Analysis** Exploratory analytical techniques include cross tabulations, Chi Square analyses, Student T-tests, and ANOVAs. The major exploratory analytical tool is a Two-Step cluster analysis; performed to distinguish different groups of sellers based on the measures described above. A Two-Step cluster analysis was selected because it allows for both continuous and categorical variables. While the number of clusters can be automatically determined, the final solution (number of clusters and cluster assignment) may depend on the order of cases in the data file. Exploring different alternatives after randomization and re-randomization of the file resulted in predominantly two or three cluster solutions, and it was determined a three-cluster solution provided the best fit. The problem of variable cluster assignment through randomization of the data file was solved by assigning cases to the most prevalent cluster of 25 independent runs of the Two-Step cluster analysis. Concordance between the independent analyses was fairly high, with 57.3% of the cases assigned to the same cluster 25/25 times and

86.3% assigned to the same cluster 20/25 times. Subsequent discriminant analysis revealed 96.0% of the cases correctly classified. Variables were standardized into Z-scores before entering the cluster analyses, to equal the weight of variables with different scales of measurement. A total of 35 additional cases (7.7% of the sellers) could not be clustered because of missing data on the measures used in the analysis. Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS Inc., 1989-2004, version 13.0). Statistical significance was accepted at  $p < 0.05$ .

## Results

Drug sellers comprise a smaller proportion of the Amsterdam detainee sample, compared to the other three sites. About a third of the Amsterdam detainees (35.3%) had provided drugs for someone more than a few times in their life, while the majority of the detainees had done so in Philadelphia (61.2%), Montreal (68.1%), and Toronto (77.0%).

Compared to non-sellers, drug sellers were more often male (77.5% versus 52.6%;  $\chi^2 = 53.864$ ,  $p < .001$ ), of western origin (54.1% versus 37.0%;  $\chi^2 = 23.505$ ,  $p < .001$ ) and were slightly older on average (16.0 years versus 15.7 years;  $t = 4.378$ ,  $p < .001$ ). The majority of sellers most often sold cannabis (55.2%), while 41.2% most often sold other illegal drugs, and the remainder (3.5%) reported selling both cannabis and other illegal drugs. Sellers more often worked as part of a group (often working for someone else), rather than working alone. Their customers were mostly people they know. In the most recent week of drug selling, they made a median of 50 transactions, and an average of 143 transactions (s.d. 339). Sales in that week amounted to more than 500 CAD/EUR/USD for more than half of the sellers. Forty percent of the sellers added to those sales by receiving drugs as payment.

Cannabis was sold by over three-quarters of the sellers, whether or not they reported it as the drug they most often sold. Crack, powder cocaine, and hallucinogens were each sold by about a third of the sellers. Amphetamines and heroin were each sold by just over a tenth of the sellers. A majority of sellers (63.6%) had **not** been arrested or incarcerated due to drug selling in the past 12 months prior to admission to the facility.

Respondents were more often perpetrators than victims of violence during drug selling. While a quarter of the sellers were injured or assaulted and robbed by someone while selling in the past 12 months, almost half of the sellers injured or assaulted and robbed someone else. Two-thirds of the sellers have carried or used a weapon while selling.

#### Cluster analysis

Cluster characteristics are presented in Table 1 differentiating types of drug sellers by site. All differences are significant at the  $p < .001$  level. Discriminant analysis identified the amount of money made from drug sales to be the most distinguishing variable, followed by selling cannabis, selling hallucinogens, ethnicity, selling crack, injuring or assaulting and robbing someone while selling, selling cocaine, receiving drugs as payment, selling amphetamines, getting arrested or incarcerated while selling, carrying or using a weapon while selling, getting injured or assaulted and robbed while selling, selling to strangers or acquaintances, selling alone or in collaboration, and finally gender.

On the whole, the substances sold seem to play an important role in cluster discrimination, with the first cluster scoring highest on cannabis, the second cluster scoring highest on cocaine, amphetamines, and hallucinogens (including ecstasy) and the third cluster scoring highest on crack and heroin. Similar findings resulted from initial exploratory cluster analyses for each of the individual sites. This led us to characterize the three clusters as cannabis sellers, party drug sellers, and street drug sellers, respectively.

The *cannabis* sellers are predominantly western males. About a third are of non-western origin and about a third are female. Obviously, a vast majority of the cannabis sellers sell cannabis, but other substances—mainly hallucinogens and cocaine—are sometimes sold as well. Compared to the other two types of sellers, the sales especially of crack and heroin are very low. Compared to the party or street drug sellers, the cannabis sellers make the least amount of money selling drugs. Over half do not make more than 200 CAD/EUR/USD. Nearly half (43%) add to their sales by receiving drugs as payment, but usually no more than the equivalent of 100 CAD/EUR/USD. They make a median of 20 transactions in a week, with a mean of 41 (s.d. 61). Most of their customers are people they know and most sellers work for or with someone else. However, this holds for all three types. No more than about a tenth were arrested or incarcerated in the past year for selling drugs. The cannabis sellers score relatively low on violence-related items (perpetration, victimization, weapons), although almost half of the cannabis sellers have carried or used a weapon while selling.

The cluster that was labeled as “*party drug* sellers” predominantly consists of males (89.4%) of western origin (79.5%). On average, the party drug sellers are about six or seven months older than the two other types of drug sellers. This may not seem to be a large age difference, but considering this study focused on a four-year age range of 14 to 17 years (with less than 5% of respondents falling just outside those ages), the difference may be meaningful. Hallucinogens, cocaine, and amphetamines are sold far more often than other drugs. However, about 90% of the party drug sellers also sell cannabis, and even crack is sold by more than a third of the sellers. The sale of drugs seems to be a lucrative business for those in this cluster, because seventy-five percent make more than 500 CAD/EUR/USD a week. Two-thirds received drugs as payment, sometimes in large amounts as well. Party drug sellers make a median of 80 transactions a week, or an average of 183 (s.d. 479). More so than cannabis or street drug

sellers, the party drug sellers work in collaboration with others rather than alone. Police involvement and violence are pronounced with the party drug sellers. A little over half have been arrested or incarcerated for drug selling in the past year. Nearly half have been injured or assaulted by someone, and more than eighty percent have injured or assaulted someone else. The vast majority (82.6%) of party drug sellers reported carrying or using a weapon while selling.

The cluster that was characterized as “*street drug* sellers” is mostly male (79.9%) and, contrary to the other two types, mainly of non-western origin (85.9%). Crack is sold by almost three-quarters of the street drug sellers. Other drugs sold are cannabis, cocaine, and heroin. However, compared to the other types, cannabis is much less likely to be sold. Cocaine is also much less likely to be sold, compared to the party drug sellers. Although only about a quarter sell heroin, it is far more often sold by street drug sellers than by cannabis or party drug sellers. Sales are as high as the party drug sellers with the large majority earning more than 500 CAD/EUR/USD a week, but drugs are far less often accepted as payment. Street drug sellers are the busiest sellers with a median of 100 transactions a week, and an average of 226 (s.d. 356). Like the other types, most of their customers are acquaintances, but more than a third of the street drug sellers sell mostly to strangers. Like the party drug sellers, about half have been arrested or incarcerated for selling drugs in the past year, and the majority have carried or used a weapon while selling. Regarding violence experienced as a perpetrator or victim while selling drugs, the street drug sellers fall in between the other two types.

Similarities  
and  
differences  
across sites

As was noted, drug sellers comprise a smaller proportion of the Amsterdam detainee sample, compared to the other three sites. In the population of drug sellers overall, cannabis sellers, party drug sellers, and street drug sellers are more or less equally represented. However, Table 2 shows this distribution is not the same for each of the four sites. (We assumed that the 35 respondents that were excluded in cluster analysis were

TABLE 1 **Characteristics of three types of drug sellers\***

		<i>TOTAL</i> <i>n = 457</i>	<i>cannabis</i> <i>sellers</i> <i>(n = 155)</i>	<i>party drug</i> <i>sellers</i> <i>(n = 141)</i>	<i>street drug</i> <i>sellers</i> <i>(n = 126)</i>
Gender	Male	77.4%	66.5%	89.4%	79.9
	Female	22.6	33.5	10.6	20.1
Age	Mean	16.0 yrs.	15.8 yrs.	16.4 yrs.	15.9 yrs.
	Standard deviation	1.07	1.11	0.98	1.00
Ethnicity	Non-western	45.9%	35.5%	20.5%	85.9%
	western	54.1	64.5	79.5	14.1
Mode of operation	Collaborative	57.4%	49.7%	72.7%	52.2%
	Solo	42.6	50.3	27.3	47.8
Customers	Mostly acquaintances	75.3%	91.6%	70.5%	63.0%
	Mostly strangers	24.7	8.4	29.5	37.0
Transactions	10 or less	20.3%	40.6%	6.8%	10.3%
	11-35	20.3	26.5	15.8	14.0
	36-78	19.4	16.8	24.1	16.9
	78-149	20.0	12.9	30.8	28.7
	150 or more	20.0	3.2	22.6	30.1
Sales in EUR/CAD/USD	< 50	6.7%	17.9%	0%	0.7%
	50-200	18.0	40.4	3.8	6.7
	201-500	19.7	28.2	21.2	6.7
	> 500	55.6	13.5	75.0	85.9
Drugs as payment in EUR/CAD/USD	0	59.6%	57.4%	37.1%	83.6%
	< 50	7.3	15.5	5.3	0
	50-100	12.4	19.4	13.6	4.5
	101-200	7.5	5.2	12.9	3.7
	> 200	13.3	2.6	31.1	8.2
Drugs sold	Cannabis	77.8%	96.8%	90.9%	42.2%
	Hallucinogens	29.5	17.4	65.9	8.2
	Cocaine	35.1	9.7	64.4	33.3
	Amphetamines	13.1	5.2	36.4	0
	Crack	35.8	4.5	34.8	71.9
	Heroin	11.8	0	11.4	27.4
Arrest/ incarceration	Been arrested &/or incarcerated for sales and violence	36.4%	10.3%	51.1%	49.6%
	Been injured &/or assaulted by someone.	26.6	10.3	42.4	27.4
	Injured &/or assaulted someone else	47.9	22.6	81.8	43.7
	Carried &/or used weapon while selling	68.5	45.8	82.6	78.5

\* The three types do not add to n=457, due to 35 respondents who were excluded in the cluster analysis.

proportionally distributed over the total sample of sellers as well as over the four sites). Toronto typifies the overall distribution. In Amsterdam and Philadelphia, street drug sellers are more prevalent, at the expense of party drug sellers. In Montreal, party drug sellers are over-represented and street drug sellers are scarce.

TABLE 2      **Types of drug sellers per site.**

	<i>Amsterdam</i> <i>n = 72</i>	<i>Montreal</i> <i>n = 145</i>	<i>Philadelphia</i> <i>n = 116</i>	<i>Toronto</i> <i>n = 124</i>	<i>TOTAL</i> <i>n = 457</i>
Cannabis sellers	33.8%	44.6%	32.2%	33.1%	36.8%
Party drug sellers	17.6	47.5	9.3	38.1	31.3
Street drug sellers	48.5	7.9	58.5	28.8	31.9

Because it was expected that the sales of different drugs might be related to the consumption of those drugs among the more delinquent youth, prevalence rates of last year substance use were examined for the total detainee samples (sellers and non-sellers) at each site. Table 3 shows that the proportion of party drugs sellers and the proportion of party drug users does indeed follow the same pattern across sites. However, there seems to be a negative relationship between the use and sale of street drugs: sites with a large proportion of street drug sellers show low rates of crack use and vice versa.

TABLE 3      **Last year drug use per site**

	<i>Amsterdam</i> <i>n = 205</i>	<i>Montreal</i> <i>n = 214</i>	<i>Philadelphia</i> <i>n = 183</i>	<i>Toronto</i> <i>n = 162</i>	<i>TOTAL</i> <i>n = 764</i>
Cannabis	76.6%	90.6%	79.2%	93.8%	84.8%
Hallucinogens	23.0	67.1	14.2	55.0	40.0
Cocaine	14.6	45.5	7.1	29.0	24.5
Amphetamines	7.8	54.5	5.4	17.4	22.3
Crack	3.9	30.7	3.3	11.7	12.9
Heroin	2.4	6.1	3.3	3.1	3.8

## Discussion

The DAVI study provides unique information on adolescent drug sellers within samples of 14-17 year-olds delinquents in custody in Amsterdam (Netherlands), Montreal (Canada), Philadelphia (US) and Toronto (Canada). Teen drug sellers in our sample do not just sell any drug. Instead, they appear to specialize into segregated markets. Cluster analysis resulted in the identification of three types of juvenile drug sellers which were characterized as cannabis sellers, party drug sellers, and street drug sellers. A much smaller proportion of the sample was identified as a drug seller in Amsterdam. The Dutch coffee shop phenomenon could offer an obvious explanation, due to the quasi-legal availability of cannabis in coffee shops. This leaves fewer opportunities for selling marijuana or hashish “underground.” Consequently, one would expect the drug sellers in the Amsterdam sample would predominantly or exclusively be party or street drug sellers. Nevertheless, there are cannabis sellers in the Amsterdam sample, and the proportion of cannabis sellers among sellers in Amsterdam is quite comparable to the other sites. Contrary to popular belief, cannabis is not available in the Netherlands any place, any time, or for anyone. Coffee shops are off limits for minors. This is one of the reasons for the existence of an illegal cannabis market alongside coffee shops (Korf, Wouters, Nabben & Vin Ginkel, 2005).

Of the three types of juvenile drug sellers, cannabis sellers are less active, with relatively low transactions and sales, and less male dominated. Arrests and incarcerations for drug selling, and violence and weapons carrying while selling drugs, are less common. Drug sales focus largely on cannabis and take place within circles of acquaintances. Party drug sellers are mostly males of western origin (ethnic majority or white), selling substances like hallucinogens (ecstasy), powder cocaine, and amphetamines, mainly in collaboration with others. Cannabis can also be readily obtained through these sellers, and even crack and heroin are sometimes available. Party drug sellers sell often and they sell a lot, making themselves an

income of a couple of hundred euros or dollars, either in cash or in drugs. They work within an environment where arrests, injuries, assault and weapons are prevalent.

Street drug sellers are primarily non-western (ethnic minority or non-white) males. They are even more active than the party drug sellers. However, since their cash payments from drug sales is rarely supplemented by payments in drugs, their income might not be greater than the party drug sellers. Their customers are more likely to be strangers than cannabis or party drug sellers. The street drug sellers' specialties are crack and heroin, but cannabis and cocaine can also be obtained. Arrests and/or incarceration and the use of weapons are common in the street drug selling business as well, but violence, although high, is less prevalent than among the party drug sellers.

Internationally, these three types of sellers have a recognizable parallel among adults: the "petty" dealers who do a little cannabis trafficking in their own environment; the more "professional" dealers of party ("club" or stimulant) drugs who operate within a more western orientated environment; and the busy dealers of crack and heroin operating in the more non-western, minority populated areas. Despite the international familiarity of the three types of drug sellers, the distribution within the individual samples from the four sites is not the same. In other words: we find support for the hypothesis that drug market involvement can be understood as an expression of a deviant or marginalized way of life among youth, but this is not irrespective of social and/or policy context. As stated previously, the proportions of sellers who are cannabis sellers are surprisingly comparable across sites. However, street drug sellers dominate the Amsterdam and Philadelphia samples, while party drug sellers are more prevalent in the Canadian samples.

Demand is one of the possible mechanisms responsible for these differences. The proportion of stimulant sellers is associated with the proportion of users of these drugs across the sites. Along with the largest proportion of party drug sellers,

prevalence rates of hallucinogen, cocaine, and amphetamine use are highest within the Montreal detainee sample. Conversely, the proportion of party drug sellers and the proportion of party drug users are smallest in Philadelphia. However, the demand hypothesis does not explain differences in the proportion of street drug sellers. Sites with the largest proportions of street drug sellers (Amsterdam and Philadelphia) show the lowest rates for the use of crack and heroin among youth in custody. These sellers tend not to use the drugs they sell. Apparently they sell crack and heroin to other consumer groups that may involve older users as well as their own age group.

Why do the party drug sellers in our sample, rather than the street drug sellers, show the highest level of violence and more often sell alone? Violence is commonly more associated with street drugs like crack cocaine than with party drugs. Most likely, our finding reflects the selectivity of our sample: young detainees. One explanation for the finding that party drug sellers in our sample are more violent than street drug sellers might be that the police/criminal justice system are willing to detain street drug sellers even if there is no evidence of violence, but that non-violent party drug sellers are not detained. Then it would be the unusual party drug sellers (e.g., those who committed a violent act) who get detained. Hence, conditioning on being detained, party drug sellers might be more likely to have committed a violent act, even if overall, street drug sellers are more violent. Moreover, within the cluster that was characterized as party drug sellers, the sale of crack and (to a lesser extent) heroin was not uncommon. Consequently, the higher level of violence found among party drug sellers, cannot simply be interpreted as caused by their involvement in the recreational club drugs subculture.

This study has underlined the importance of studying variation in types of adolescent drug sellers in future research. Clearly, specialization occurs, but the market is also shaped by the social context of demand and availability in different sites. One crucial limitation of the study is that only youth who have

been detected and detained (for any offence) are included. It is likely that a lot of drug dealing activity among youth is not detected. We deliberately chose to recruit our respondents from a population of detained youth. Although respondents having been involved in or being detained for specific drug offences were neither selection nor inclusion criteria, many respondents had been selling drugs in the previous 12 months to their detention. The countries in our study vary in their drug policies, but selling drugs is illegal in all three of them. The clearest difference is that the sale of cannabis at retail level is tolerated in coffee shops in the Netherlands, but not to minors. A serious problem of our study is that who is held in juvenile detention is greatly influenced by legal arrangements, priorities and policing practices. Consequently, our study measures the picture of drug markets that appears as a net result of legal arrangements and policing practices. In the two Canadian sites, researchers were allowed access only to sentenced youth, whereas in Philadelphia and Amsterdam, detained youth awaiting disposition were also included. This might explain why, in both the Toronto and Montreal samples, there were more drug sellers than in the Amsterdam sample. However, it does not explain why the Philadelphia sample included many more drug sellers than the Amsterdam sample. It is likely to be the coffee shop policy that best explains the relatively low level of pre-detention drug selling, particularly of cannabis, among juvenile detainees in the Netherlands. Since recruitment procedures in Toronto and Montreal were very similar, it remains an open question why we found more street drug sellers in Toronto, even though pre-detention crack use was most prevalent among the Montreal detainees.

Therefore, it is not clear to what extent the differences observed among the sites for the distribution of drug sellers into one of the three types reflect the real extent and nature of the illicit market. Such a profile is by its very nature of a "black market," impossible to portray accurately and in any depth. Nevertheless, this article has provided important new knowledge about drug market specialization, and highlights

the complexity of gaining knowledge about which youth get involved in selling, and the need to understand why they take serious personal risks to engage in this potentially profitable, but also dangerous, activity.

- Note 1 Although currencies differ between countries, these items are considered comparable across sites. At the time the interviews were conducted, the exchange rate of the Euro (for the Netherlands) against the American Dollar was about 1:1. Based on the Big Mac Index (a simple index developed by The Economist ([www.economist.com](http://www.economist.com)), based on the price of a Big Mac hamburger), one could also argue that the purchasing power of currencies in Canada, the Netherlands and the United States are similar. Moreover, the ordinal scale of measurement and broad categories improve comparability. Five hundred CAD, EUR, or USD, is a lot of money for youth by any measure.

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