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Abstract

To assess key characteristics of the retail crack market and the role of users as buyers and sellers, data from a survey inside and outside institutional setting among 1,039 crack users in the three largest Dutch cities were analyzed to explore their role in the crack market as buyers and sellers. Of the total number of users, 42.3% bought crack in public places, 39.6% through home delivery, and 13.9% at dealer's addresses. Near one-third reported participating in selling drugs, defining themselves as "go-betweens" (21.4%) or "dealers" (9.2%). User-sellers and nonselling users did not differ with regard to gender and ethnicity. Cluster analysis resulted in three distinct types of user-sellers (freelancers, assistants, and amateurs), each characterized by time spent selling drugs, type of drugs sold, and earnings. Amateurs seem quite similar to what scholars have labeled "social dealers" in recreational drugs markets. This study suggests the need for a more differentiated law enforcement policy toward drug-selling users.

Keywords

crack, heroin, retail drug market, quantity, drug dealing, typology

Introduction

Since the 1990s, many European countries, including The Netherlands, are increasingly concerned about the emergence of crack cocaine, particularly in urban areas, where it has become a drug of choice, often together with opiates, for many marginalized and problematic hard drug users (Connolly, Foran, Donovan, Carew, & Long, 2008; EMCDDA, 2007; Hope, Hickman, & Tilling, 2005; Oliveira, 2010; Stoevers, 2002). Throughout the 1980s in The Netherlands, cocaine powder (cocaine hydrochloride) increasingly found its way into the world of heroin users, who either injected the drug or smoked it in a pipe ("free basing"; Korf, 1995). Different from the United States, where crack already was being sold in a ready-to-use form (Agar, 2003), in The Netherlands, users themselves cooked cocaine powder with baking soda or ammonia to its base form, thereby making it suitable for smoking (Grund, 1993). From the early 1990s onward, pre-cooked crack superseded powder at the retail market targeting at chronic and marginalized users (Blanken, Barendregt, & Zuidmulder, 1999) but not in segments of the cocaine market for socially integrated, recreational users (Nabben & Korf, 1999). National treatment figures indicate a steadily growing number of crack users until the mid-2000s, followed by some years of stabilization, and more recently a downward trend. Between 1994 and 2004, the number of

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clients in out-patient drug treatment with crack as primary or secondary drug problem more than doubled, from approximately 5,000 to 12,000 (Landelijk Alcohol en Drugs Informatie Systeem [LADIS], 2006; Mol, Van Vlaanderen, & De Vos, 2002). In 2010, this number had dropped to approximately 9,000 (Van Laar et al., 2012). Only recently, prevalence rates of crack use have become available for The Netherlands (total population: 16.7 million), resulting in a national estimate of 12,400 problematic crack users who do not use opiates (Cruts & Van Laar, 2010). For the three largest Dutch cities (Amsterdam, Rotterdam, and The Hague, total population 1.9 million), the number of frequent crack users, including those who also use opiates, was estimated at around 6,600 (Pérez, Cruyff, Benschop, & Korf, 2013).

In this study, our focus is on the supply side of the crack market at the retail level. With regard to illegal retail drug markets, Curtis and Wendel (2000) distinguished three types: street level, indoor, and delivery sales. Although this typology can be assumed to be generally applicable, the relative presence and nature of the three types are likely to differ according to the type of drug and context, for example, time period and policy. While Curtis and Wendel's typology was largely based on research among sellers at the retail heroin market in the United States (New York City) in the late 1990s, this study focuses on the retail crack market, crack users as buyers and sellers in particular, in Europe (three Dutch cities) during 2009-2011. In addition, there are differences in drug policies, for example, a much stronger orientation toward harm reduction in Europe, The Netherlands in particular, than in the United States (Hedrich, Pirona, & Wiessing, 2008; Inciardi & Harrison, 2000).

The rise of crack in Europe took place when so-called open drug scenes, with publicly visible drug use and drug dealing in streets and parks, had become a major source of concern in metropolitan areas, such as Barcelona, Frankfurt, Hamburg, Vienna, and Zurich (Bless, Korf, & Freeman, 1995). In Amsterdam, Rotterdam, and The Hague, the inner-city areas near railway stations in particular had become major meeting points for marginalized drug users and their suppliers. This triggered a reorientation in drug policy. Authorities began to intensify repressive measures and initiated new ones, including CCTV, local curfews (Kaal & Korf, 2003), and the closing down of apartments in which people were dealing drugs (Blanken et al., 1999). In addition, social and harm reduction projects were initiated or got more capacity, for example, shelters for drug-addicted homeless, and user rooms (Bröer & Noyon, 1999). More recently, drug use is also tolerated in many social housing projects and specialized residences for drug addicts. These developments have strongly contributed to the dispersion, if not disappearance, of open drug scenes in The Netherlands. Today, publicly visible drug dealing has become very uncommon.

Another major change (technologically, rather than policy induced) that redefined the rules of drug dealing has been the emergence of mobile phones. Drug dealers were among the first to take advantage of this new "working tool" (Barendregt, 2006; May & Hough, 2004), allowing them to be called at any place, to make their appointments with customers, and to deliver drugs at their homes or wherever else they choose, thus making drug transactions more flexible and less visible, thereby reducing risks of arrest, for both dealers and buyers. This change also brought new opportunities for less organized, less hierarchical forms of entrepreneurship (Barendregt & Van de Mheen, 2009; Curtis, Wendel, & Spunt, 2002; May & Hough, 2004).

At the retail level, it is sometimes difficult to draw a clear line between seller and consumer (Johnson, 2003; Johnson, Golub, & Fagan, 1995). Transactions can be performed by crack users themselves, who might carry drugs for someone else, buy some extra quantities to sell them, or recruit other customers for a dealer in exchange for drugs, money, or both. Crack users who are well connected with dealers might collect money from a group of users to buy larger quantities. Such "bulk-buying" results in price reduction for the group, as well as in a larger share for the well-connected user, understood as an incentive for his/her effort and risk taking, as has been observed with ecstasy users (Sales & Murphy, 2007) and injection drug users (Kerr et al., 2008).

These transactions show strong similarities with what has been defined as “social supply,” that is, user-sellers at the very end of the drug distribution chain providing drugs for friends and acquaintances, usually as a way to cover expenses for their own use, often not defining themselves as “real dealers” (Potter, 2009). However, so far this phenomenon has only been researched for cannabis (Coomber & Turnbull, 2007; Werse, 2008) and “party drugs” (Jacinto, Duterte, Sales, & Murphy, 2008; Parker, 2000; Sales & Murphy, 2007), and it is uncertain whether this concept can also be applied to the crack market, also because the need for money among crack users is usually much more stringent, and achieving stable, longstanding relationships is more complicated (Sterk & Elifson, 1992).

The overall purpose of this study is to elaborate on the nature and key characteristics of the retail crack market from the perspective of users. More specifically, the first objective is to describe the buying behavior of crack users, to assess the relative presence of three types of suppliers where users buy crack (public place, delivery, and indoor), and to characterize these types with respect to the user profile and user buying behavior. Since buying crack on the street entails more risks of attracting attention of law enforcement, we hypothesize that crack users who buy drugs in public places will do so more often during daytime, profiteering from the anonymity that day activity provides (Jacobs & Miller, 1998). And because with drug transactions in public places it is presumably more difficult to negotiate, we also hypothesize that crack users who buy their drugs on the streets will be less likely to get discounts. The second objective is to explore to which extent crack users are involved as sellers, and whether and how user-sellers can be differentiated from nonselling users. We hypothesize that crack users who are involved in selling drugs are more likely to purchase larger quantities of crack, receive higher rates of discounts and, to assure a steady supply, will have more suppliers than nonselling crack users. The third objective is to assess whether and how users who define themselves as “dealers” differ from users who define themselves as “go-betweens.” The fourth and final objective is to explore whether the self-defined roles of “dealers” and “go-betweens” can be statistically objectified and/or whether further differentiation of user-sellers exists by classifying user-sellers according to their degree of involvement in the drug trade into different types that emerge from cluster analysis, and characterize these types in terms of demographic profiles and buying and selling behavior.

Method

Between March 2009 and January 2011, we conducted a survey among crack users in the cities of Amsterdam, Rotterdam, and The Hague. The study was approved by the ethical committee of the Faculty of Medicine at the University of Amsterdam. Inclusion criteria were smoking crack at least 2 days per week in the last month, being at least 18 years of age, and residing in the city areas. In each city, we interviewed random samples of crack users from two institutional settings (user rooms and low-threshold opiate substitution facilities), and a sample obtained through respondent-driven sampling (Heckathorn, 1997, 2002). Together these three groups constitute a large and diverse sample of crack users both inside and outside institutions. Details of data collection for this study have been documented in a previous article (Oteo Pérez, Korf, & Benschop, 2012). Data from the three cities and samples were aggregated and duplicate cases (i.e., respondents present in more than one sample within a city) were eliminated, resulting in a total sample of 1,039 unique crack users. Participants signed an informed consent form before being interviewed and received €10 after completing a face-to-face structured questionnaire, which lasted 30 to 45 min and covered a whole array of issues regarding crack use. Our focus in this article is on those questions related to the crack market.

First, to investigate the nature of buying crack, we asked the respondents for the prices they paid for different units and whether they got discount when buying several units. To estimate

price per quantity, we used a high-definition real-size picture of four different quantities of crack (from A = 12 mg to D = 100 mg). We asked participants which quantity (from less than A to more than D) they usually put in their crack pipe. Subsequently, we asked how many pipes they could usually get from the units that they mostly bought. The product of the number of pipes per unit and the quantity per pipe is an approximation of the quantity per unit. Getting a discount on grams is used as an indicator of buying larger quantities, that is, several grams. Second, from the buyers' perspective, we assessed profiles of three types of suppliers, largely in line with the typology developed by Curtis and Wendel (2000): public place (street or park, even if the meeting was arranged by telephone), delivery (the user and supplier make an appointment and the supplier brings drugs to user's address or another private location), and indoor (the user goes to the supplier who sells drugs at his or her own address, in a shelter, café, or user room). Third, we compared crack users who were involved in retail drug selling in the last 30 days with nonselling users. And fourth, within the group of user-sellers, we compared subgroups, according to (a) their self-reported role as either "dealers" (have sold drugs) or "go-betweens" (have helped a dealer in selling drugs, or brought in customers in exchange for drugs, money, or both), and (b) three types of user-sellers resulting from cluster analysis.

To avoid inconsistencies in terminology, in the next sections, we will only use the terms *dealer* and *go-between* in the context of self-defined roles. For both activities, as well as for all other involvement in providing or helping to provide other people with drugs, we will use the generic terms *selling* and *seller*. Persons from whom respondents acquired drugs will be referred to as *suppliers*.

Analysis

Three sets of variables were used to compare groups. *Demographic characteristics* included age, gender (female vs. male), and ethnicity (non-Western vs. Western; cf. Benschop, Harrison, Korf, & Erickson, 2006). *Buying behavior* included type of supplier (public place, delivery, indoor); number of crack suppliers in the past month (1-2, 3-4, 5+); buying crack (alone vs. with others); time of day respondent buys crack (daytime, night, any time); availability, that is, time taken to buy crack from the moment respondent decides to buy (up to 15 min, 16-30 min, 30+ min); buying other drugs together with crack from the supplier (yes vs. no); total crack purchase (€) in the past 7 days; buying several grams, that is, getting discount on grams (described earlier; yes vs. no); and maximum discount obtained (%). *Selling behavior* (sellers only) included self-reported role as a seller ("dealer," "go-between"); being paid (by a supplier) with crack in the last month (yes vs. no); selling crack (yes vs. no); selling opiates (yes vs. no); selling stimulants (yes vs. no); earnings (€) with selling drugs past week; and number of days selling drugs past month.

Statistical analyses were carried out using SPSS, version 20.0. In the case of between-group comparisons, categorical data were analyzed using Pearson's chi-square and continuous data using ANOVA with Levene's or Welch's *F* test. The two-tailed significance level was set to .05. To assess a typology of crack-using sellers, selling behavior variables from sellers (except self-reported role as a "dealer" or "go-between") were entered into a two-step cluster analysis. The two-step method allows the creation of cluster models based on both continuous and categorical variables. Since variables were measured on different scales, they were standardized to *z* scores prior to the cluster analyses. Because final two-step cluster solutions are very sensitive to order effects, we repeated the analysis several times with randomly ordered and reordered cases. These consecutive analyses consistently returned the same results, indicating a robust cluster solution. The two-step algorithm was applied to automatically determine the number of clusters using the Bayesian Information Criterion (BIC).

Results

Respondents were aged 46.0 years on average ($SD = 8.6$), with less than one fifth (18.5%) female and half non-Western (49.5%).

Purchasing Crack: Quantity, Price, and Discount

The average expenditure on crack during the past week was €135 (median €70). The units that crack users bought can be classified into three categories: small balls (around €10; estimated average weight 92 mg), big balls (around €20; 208 mg), and grams (around €40). About two thirds (68.1%) of respondents reported obtaining some kind of discount when buying several units. The range of discounts was large (3%-58% discount, average 14.2%), but the most common arrangements reported (six €10 balls for €50, three €10 balls for €25, three €20 balls for €50, and getting one extra €10 ball when buying one €50 gram) a discount of 16.7%, while the most common discount while buying several grams (five €40 grams for €150) represented a discount of 25.0%.

Purchasing Crack: Buyers and Suppliers

When asked where they commonly buy crack (Table 1), 42.3% reported public places (street, park), 39.6% got it delivered, and 18.0% acquired crack from indoor suppliers (13.9% supplier's home, 4.1% suppliers in shelter, user room, etc.). The number of suppliers from whom respondents bought crack in the last 30 days varied from 1 to 60, but the vast majority (79.6%) had 4 or less crack suppliers, and the average was 3.5 ($SD = 4.0$). Two out of three respondents were solo buyers, that is, they exclusively or mostly bought crack on their own (67.3%). The remaining respondents bought crack with one or more other users (29.7%), or alternately bought it alone and with others (3.0%). More than half of the sample bought crack in daytime (13.5% morning; 43.7% afternoon), one in five at night (20.6%, including 0.8% after midnight), and close to one quarter any time of the day (22.2%). Regarding availability, the time it usually took respondents to buy crack from the moment they decide to buy crack averaged at 27.0 min ($SD = 24.2$). For more than one third, crack was available within 15 min (36.9%), for almost half it took 16-30 min (45.3%), and for the remaining 17.7% more than half an hour. Almost half of the respondents only bought crack from their (main) supplier (47.5%). If they also bought other drugs from that supplier, in far most cases it was heroin (96.7%; 50.8% of the total sample), but rarely other illicit substances (of all respondents, 4.4% powder cocaine; 0.2% cannabis; 0.1% amphetamines; 0.1% ecstasy) or prescription drugs (0.8% methadone; 0.7% "downers," such as sleeping pills, barbiturates, or tranquillizers).

Respondents buying crack in public places were slightly older (46.3 years) than those buying indoor (44.5 years); less likely to be female (12.8%) than crack users with delivery (23.6%) or indoor suppliers (20.9%); and more likely to be non-Western (64.5%) than respondents with delivery (36.0%) or indoor suppliers (44.4%). Moreover, buyers in public places had more often more than five crack suppliers (24.8% vs. 17.2% delivery and 17.1% indoor), and more often bought crack in daytime (62.2% vs. 54.5% delivery and 51.3% indoor). Furthermore, they reported lower expenditures on crack in the last week (average €108 vs. €151 delivery, and €160 indoor), and were less likely to buy several grams (24.6% vs. 30.4% delivery, and 34.2% indoor). Respondents with delivery least often bought crack alone (58.6% vs. 73.3% public place, and 72.2% indoor). Finally, respondents with indoor supply were most likely to buy their crack within 15 min (52.4% vs. 28.7% delivery, and 37.8% public place).

Table 1. Demographic and Market Characteristics Based on Purchase Location.

	Total	Public place	Delivery	Indoor dealer	Chi ² /F	p
	n = 1,039	n = 439	n = 411	n = 187		
Demographic characteristics						
Average age (SD)	46.0 (8.6)	46.3 (8.7)	46.3 (8.2)	44.5 (9.3)	3.343	.036
Female	18.5%	12.8%	23.6%	20.9%	17.376	<.001
Non-Western ethnicity	49.5%	64.5%	36.0%	44.4%	71.203	<.001
Buying behavior						
Number of suppliers last month						
1 or 2	49.2%	43.8%	52.3%	54.5%	12.010	.017
3 or 4	30.4%	31.4%	30.5%	28.3%		
More than 4	20.3%	24.8%	17.2%	17.1%		
Buy crack mostly alone	67.3%	73.3%	58.6%	72.2%	23.350	<.001
Time of day to buy						
Morning/afternoon	57.2%	62.2%	54.5%	51.3%	14.623	.006
Night/after midnight	20.6%	15.3%	24.3%	25.1%		
Any time of day/night	22.2%	22.6%	21.2%	23.5%		
Availability						
Up to 15 min	36.9%	37.8%	28.7%	52.4%	35.418	<.001
16-30 min	45.3%	45.8%	52.3%	29.4%		
Longer	17.7%	16.5%	19.0%	18.2%		
Buying other drugs with crack	52.5%	49.2%	56.7%	51.3%	4.909	.086
Average crack purchase last week (SD)	€135 (209)	€108 (143)	€151 (248)	€160 (239)	7.075	<.001
Buying several grams	28.7%	24.6%	30.4%	34.2%	6.990	.030
Average maximum discount, % (SD)	14.2 (12.3)	13.9 (12.8)	14.3 (11.9)	14.6 (11.9)	.762	.052

Users and User-Sellers

Table 2 depicts demographic characteristics and buying and selling behavior based on self-reported involvement in the market. From the total sample, 318 respondents (30.6%) reported that they had been involved in selling drugs in the past 30 days, of whom 96 (9.2%) defined themselves as “dealer” and 222 (21.4%) as “go-betweens.” On average, go-betweens (44.8 years, *SD* = 7.9) and dealers (45.0 years, *SD* = 9.5) were slightly younger than nonsellers (46.5 years, *SD* = 8.7). There were no differences between the three groups with regard to gender and ethnicity.

Buying Behavior: Dealers, Go-Betweens and Nonsellers

Dealers more often had more than four suppliers (34.7%) than go-betweens (27.5%) and nonsellers (16.2%), with dealers more often (34.4%) buying crack at any time than go-betweens (24.8%) and nonsellers (19.7%). On average, dealers also spent more money on crack in the past week (€214) than go-betweens (€183), and almost twice as much as nonsellers (€122). In addition, dealers were more likely to buy several grams (60.4%) than go-betweens (35.1%) and nonsellers (22.5%). For dealers, the average maximum discount was 18.4%, which is similar to go-betweens (17.1%), but higher than nonsellers (12.7%). Finally, dealers bought their crack about twice as often from indoor suppliers (30.2%) than users (17.1%) and go-betweens (15.8%).

Table 2. Demographic and Market Characteristics Based on Self-Reported Selling Behavior.

	Sellers				Chi ² /F	p
	Total	Nonsellers	Go-betweens	Dealers		
Demographic characteristics						
Average age (SD)	46.0 (8.6)	46.5 (8.7)	44.8 (7.9)	45.0 (9.5)	3.615	.027
Female	18.5%	19.1%	15.8%	19.8%	1.404	.496
Non-Western ethnicity	49.5%	48.4%	50.5%	55.2%	1.677	.432
Buying behavior						
Number of suppliers last month						
1 or 2	49.2%	54.3%	38.7%	35.8%	34.369	<.001
3 or 4	30.4%	29.5%	33.8%	29.5%		
More than 4	20.3%	16.2%	27.5%	34.7%		
Buy crack mostly alone	67.3%	67.7%	64.9%	69.8%	.917	.632
Time of day to buy						
Morning/afternoon	57.2%	57.1%	59.9%	52.1%	17.484	.002
Night/after midnight	20.6%	23.2%	15.3%	13.5%		
Any time of day/night	22.2%	19.7%	24.8%	34.4%		
Availability						
Up to 15 min	36.9%	35.0%	42.8%	37.5%	10.638	.031
16-30 min	45.3%	46.6%	44.6%	37.5%		
Longer	17.7%	18.4%	12.6%	25.0%		
Buying other drugs with crack	52.5%	50.1%	58.6%	56.2%	5.516	.063
Average crack purchase last week (SD)	€134 (209)	€123 (206)	€139 (183)	€214 (267)	8.454	.005
Buying several grams	28.7%	22.5%	35.1%	60.4%	65.391	<.001
Average maximum discount, % (SD)	14.2 (12.3)	12.7 (12.1)	17.1 (11.8)	18.4 (12.5)	17.749	<.001
Purchase location						
Public	42.3%	42.7%	44.6%	34.4%	11.081	.026
Delivery	39.6%	40.2%	39.6%	35.4%		
Indoor dealer	18.0%	17.1%	15.8%	30.2%		
Selling behavior						
Paid with crack	24.0%		93.7%	42.7%	102.540	<.001
Selling opiates	18.5%		59.9%	61.5%	.067	.796
Selling crack	27.9%		95.5%	81.2%	16.900	<.001
Selling stimulants	3.5%		9.9%	14.6%	1.450	.227
Average earnings selling last week (SD)	€25 (144)		€26 (74)	€259 (392)	2,994.500	<.001
Average days in the month selling (SD)	4.0 (8.5)		11.6 (10.3)	16.8 (11.4)	7,866.000	<.001

Selling Behavior: Dealers and Go-Betweens

In the past month, over three quarters of sellers (77.3%) received crack in exchange for (assisting in) selling drugs, but go-betweens (93.7%) more than twice as often as dealers (42.7%). Getting one crack ball for selling or helping to sell five seemed to be a standard arrangement between suppliers and our respondents, with 50.4% (*n* = 232) of the different arrangements described (not shown in table). The vast majority of sellers had been involved in crack sales, with go-betweens (95.5%) even more often than dealers (81.2 %). Around 60% of both dealers and go-betweens had been involved in selling opiates. Selling stimulants other than crack (powder cocaine,

amphetamines, and/or ecstasy) was much less frequent for both groups (14.6% of dealers, 9.9% of go-betweens). While most dealers earned money from selling drugs in the past week (85.4%), this applied to less than one in four go-betweens (23.9%; not shown in table). For the total group of dealers (including those who did not earn money selling), earnings from selling drugs in the last week averaged €259, 10 times more than those for go-betweens (€26). Finally, the average number of days selling drugs in the past month was higher for dealers (16.8) than for go-betweens (11.6).

Typology of User-Sellers

The cluster analysis was restricted to data from the 318 respondents who defined themselves as sellers (either “dealers” or “go-betweens”). As shown in Table 3, the analysis resulted in a three-cluster solution, with a silhouette measure of cohesion and separation of 0.4, denoting a fair cluster quality. The most influent variable was “being paid with crack,” followed by “selling opiates” and then, with much less influence, “selling crack,” “average earnings from selling in the last week,” “selling stimulants,” and “average days in the month selling.” We labeled respondents in the three clusters as *freelancers*, *assistants*, and *amateurs*, respectively.

Freelancers are characterized by their strongest involvement in selling drugs, with on average 15.6 days per month. Only one in six is paid with crack (15.9%), while they have the largest earnings from selling drugs (average €254 last week). All freelancers sell opiates, two thirds also sell crack (67.1%), and a much smaller part other stimulants (13.2%). In addition to these differentiating cluster variables, freelancers also stand out in most often buying other drugs with crack (78.8%), in most often buying several grams (54.9%), and in lower availability (28.0% needs more than 30 min to get crack from a supplier).

Assistants take an intermediate position, and can be characterized as more of a helping hand to crack suppliers, for instance through what Kerr et al. (2008) describe as “middling” (connecting purchasers with suppliers or conducting sales on behalf of suppliers). On average, they participated in selling drugs 13.5 days in the past month; they were all paid with crack, and in addition, earned an average of €54 with selling drugs in the last week. Assistants only sell crack, and no opiates or other stimulants. In addition to these differentiating cluster variables, assistants also stand out in that they least often buy other drugs with crack (22.0%).

Amateurs are least involved in drug selling (on average 10.1 days per month). They appear to make use of opportunities to earn crack or a little money by acting as a mediator, for example, by steering (guiding potential buyers to suppliers; cf. Kerr et al., 2008) or collecting money and buying for a group of users to receive a buckshee (a little extra for free), rather than actual sales. They were all paid with crack, and in addition earned only €19 on average with selling drugs in the last week. All amateurs sell crack, and often sell opiates (50.0%) and/or other stimulants (18.3%) as well. In addition to these differentiating cluster variables, amateurs are least likely to buy several grams (30.5%).

While three out of four freelancers defined themselves as “dealers” (73.2%), most assistants (82.1%) and even more amateurs (90.2%) defined themselves as “go-betweens” (not shown in table). No differences were found between the three clusters with regard to gender, age, and ethnicity. And regarding buying behavior, we found no differences in number of suppliers, buying crack alone, part of the day buying crack, crack purchase last week, maximum discount, and purchase location.

Discussion

The purpose of this study was to elaborate on key characteristics of the crack market, both buying and selling, at user level, and to explore a typology of user-sellers at the retail level. Ours is the

Table 3. Demographic and Market Characteristics Based on Selling Behavior Clusters (Selling Behavior Entered in Cluster Analysis, Only Sellers Included).

	Total sellers <i>n</i> = 318	Freelance <i>n</i> = 82	Assistant <i>n</i> = 151	Amateur <i>n</i> = 82	Chi ² /F	<i>p</i>	Pred.imp.
Demographic characteristics							
Average age (<i>SD</i>)	44.8 (8.4)	45.6 (9.3)	45.0 (8.3)	45.9 (8.6)	1.690	.188	
Female	17.0%	19.5%	12.6%	23.2%	4.632	.099	
Non-Western ethnicity	51.9%	54.9%	51.7%	50.0%	.410	.815	
Buying behavior							
Number of suppliers last month							
1 or 2	37.9%	46.9%	33.8%	34.1%	6.748	.150	
3 or 4	32.5%	32.1%	35.1%	29.3%			
More than 4	29.7%	21.0%	31.1%	36.6%			
Buy crack mostly alone	66.4%	70.7%	64.2%	68.3%	1.099	.577	
Time of day to buy							
Morning/afternoon	57.5%	54.9%	60.9%	53.7%	7.620	.107	
Night/after midnight	14.8%	12.2%	11.3%	23.2%			
Any time of day/night	27.7%	32.9%	27.8%	23.2%			
Availability							
Up to 15 min	41.2%	37.8%	40.4%	46.3%	16.490	.002	
16-30 min	42.5%	34.1%	50.3%	37.8%			
Longer	16.4%	28.0%	9.3%	15.9%			
Buying other drugs with crack	52.5%	78.8%	22.0%	56.1%	70.748	<.001	
Average crack purchase last week (<i>SD</i>)	€161 (215)	€196 (274)	€170 (14)	€165 (223)	1.492	.228	
Buying several grams	42.8%	54.9%	43.0%	30.5%	9.964	.007	
Average maximum discount, % (<i>SD</i>)	17.5 (12.0)	17.3 (11.7)	18.2 (11.9)	16.8 (12.4)	.418	.659	
Purchase location							
Public	41.5%	34.1%	45.0%	43.9%	8.359	.079	
Delivery	38.4%	39.0%	41.1%	31.7%			
Indoor dealer	20.1%	26.8%	13.9%	24.4%			
Selling behavior (sellers only, <i>n</i> = 318)							
Paid with crack	78.3%	15.9%	100%	100%	251.054	<.001	1.00
Selling opiates	60.4%	100%	0%	50.0%	15.228	<.001	.91
Selling crack	91.2%	67.1%	100%	100%	83.912	<.001	.33
Selling stimulants	11.3%	13.2%	0%	18.3%	15.228	<.001	.06
Average earnings selling last week (<i>SD</i>)	€96 (247)	€254 (416)	€54 (125)	€19 (51)	16.347	<.001	.19
Average days in the month selling (<i>SD</i>)	13.2 (10.9)	15.6 (11.8)	13.5 (10.7)	10.1 (9.6)	5.924	.004	.04

first European study among a large and diverse sample of crack users, both inside and outside institutional settings. Internationally, it is one of the few quantitative studies on user-sellers in the drug market. While this study is obviously not based on a normative sample of crack users, we were able to reach a relatively large number of respondents and to achieve a varied representation in terms of city districts, demographic characteristics, and institutional contact, providing certain generalizability to our results. In addition, this study is based on self-report, and some respondents

might have omitted some information relating to socially unacceptable behavior, such as drug dealing. We tried to prevent this by conducting interviews in privacy and guaranteeing respondents' anonymity. Furthermore, studies show that self-report data appear acceptably valid and reliable for most research purposes (Thornberry & Krohn, 2000; Webb, Katz, & Decker, 2006).

Similar to an earlier American study about the heroin market (Curtis & Wendel, 2000), we found that the current crack retail market in Dutch cities can be divided into three types of suppliers. Over two fifths of respondents predominantly or exclusively buy crack in public places, such as streets or parks; slightly less than two-fifths get it delivered and one-fifth acquires crack from indoor suppliers. At first sight, the finding that relatively many crack users buy crack in public places appears to be in conflict with the dispersion of "open drug scenes," and the observation that publicly visible drug dealing has become very uncommon in The Netherlands. However, there are still some places, such as the surroundings of treatment centers or user rooms, where crack suppliers can hang around waiting for customers to come. More importantly, many crack users who reported buying crack on the street made appointments with their supplier beforehand by mobile phones. Therefore, crack suppliers do not need to congregate at commonly known public locations where customers can easily find them. As hypothesized, we found that users who buy crack in the public domain do this most frequently during daytime. This is in line with the notion that daytime activity, when businesses are open and the streets are crowded, provides sellers and users with an environment where they attract less attention from law enforcement (Jacobs & Miller, 1998).

As in most retail drug markets, small quantities are sold based on price and not weight. The most common unit is the €10 ball (usually called small ball) which contains around one tenth of a gram of crack. As with any commodity, buying several units often results in discounts. When buying grams instead of small balls, discounts tend to be a little higher. Contrary to our expectations, the maximum discount crack users obtained was not significantly lower for those buying in public locations than for others, even though grams are less often bought in public locations. The general picture is that while bargains are common (almost 15% discount on average), margins for negotiations at the retail level are small in every crack market type. Near one third of our total sample of crack users reported that they had been involved in selling drugs in the past month. Most of these users defined themselves as "go-betweens," that is, not selling drugs themselves but helping suppliers to sell drugs or find customers in exchange for drugs or money, rather than as "dealers." As we had expected, users involved in selling had more suppliers than those not involved. It is likely that those involved in selling have this strategy to always have a steady supply and find "good deals." Self-defined "dealers" were also more likely to buy from indoor suppliers, which can be expected taking into account that they bought larger amounts of crack, as reflected in their larger week expenditure, and the fact that they were more likely to buy grams. Both "dealers" and "go-betweens" were able to obtain higher discounts from their suppliers than nonsellers. Within the aforementioned narrow negotiating space at the retail level, buying larger amounts and/or helping a supplier as a go-between is still profitable.

Traditionally, females have been less involved in selling crack than males (Adler, 1993; Dunlap, Johnson, & Maher, 1997; Maher & Daly, 1996; Sterk, 1999), although this gender difference tends to be less pronounced at the final stages of the trade chain (Dunlap et al., 1997; Jacobs & Miller, 1998; Maher & Daly, 1996). In our study, we found no significant differences in the distribution of females according to their status as user-sellers. This suggests that gender differences at the final stage of the crack market are not only less pronounced (cf. Dunlap et al., 1997), but also absent. Although these results refer only to those sellers who also use crack, where gender differences are not so acute and, as we have seen, the concept of "dealing" is more of a low-level activity with low profits, these results might indicate that, at least in the Dutch crack market, women can take on supplier roles that have been traditionally seen as male dominated.

Ethnic minorities traditionally played a major role in some segments of the drug market in Western Europe, in particular, at the retail level in open drug scenes (Paoli & Reuter, 2008). These open drug scenes have virtually disappeared, and in our study, non-Western crack users were equally distributed between sellers and nonsellers. Ethnic minorities might or might not be dominant in the higher levels of the crack market (import or wholesale) or even at the retail distribution level, but at the very bottom rung of the drug trade, at the level of user-sellers, ethnicity seems irrelevant.

Within the subsample of crack-using respondents who had been involved in drug selling during the past month, cluster analysis resulted in three types of sellers: freelancers, characterized by their strongest involvement in selling drugs and largest earnings from selling drugs; assistants, who take an intermediate position, and can be characterized as more of a helping hand to crack suppliers; and amateurs, who are least involved in drug selling, mostly receiving drugs in exchange for bringing in customers or collective purchases, and who have the lowest earnings from selling drugs. The freelancers might be regarded as “real dealers” (most defined themselves as such). Although our data do not allow conclusions about whether they are primarily driven by profit or social motives, characteristics of the amateurs, such as very low earnings from drug sales and small number of day dealings per month, suggest that they could fall in the category of “social dealers,” which has been applied in the recreational cannabis and party drugs markets (Coomber & Turnbull, 2007; Potter, 2009; Sales & Murphy, 2007; Werse, 2008). More research exploring how hard drugs are distributed among networks of acquaintances and the motives and social dynamics involved is encouraged.

Drug laws commonly distinguish users from dealers. This study once more illustrates that there is no clear dividing line. Many crack users are also involved in selling drugs. However, many of these user-sellers only make small profits and/or primarily participate at the supply side of the crack market to provide for their fellow crack users. Our findings indicate that carrying several units of crack does not necessarily imply the intention to sell or to make more than marginal/small profits. Consequently, this study suggests the need for a more differentiated law enforcement policy toward drug-selling users.

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