Urban crack users in The Netherlands: Prevalence, characteristics, criminality and potential for new treatments

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Summary
8.1. INTRODUCTION (Chapter 1)

In the first chapter of this thesis we described the rationale for our study on the urban population of frequent crack users in the three largest Dutch cities (Amsterdam, Rotterdam and The Hague). We discussed the terminology applied to define crack cocaine, and the different terms used by users and in academia. We gave an overview of the appearance of crack, globally and more specifically in the Netherlands and of the social and economic context around the crack market in the Netherlands, where crack appeared on the existing urban heroin market. A short narrative introduced the groups involved in the appearance and spread of crack in the Netherlands, such as young Surinamese men, and the reasons why smoking crack, as opposed to injecting cocaine, became popular in Dutch cities. Also the reasons behind the appearance of ready-to-use crack on the streets within hard drug scenes were discussed, as well as the measures that the authorities took to deter street markets, resulting in the current situation, where drug dealing has become less visible and more mobile. Finally, a brief overview was given of the prevalence of cocaine and – as far as available – crack cocaine globally and in the Netherlands, showing that the Americas and Europe have the largest markets for these substances. While cocaine use had slightly declined during the past years, there were indications that crack use had remained stable. In the Netherlands, levels of cocaine use prevalence were average among European countries, but there were no reliable estimates for the number of crack users. We concluded that there was a lack of currently available treatment options, and assumed that a substantial number of crack users would have no, or only incidental, treatment contacts. Hence, treatment seeking crack users were likely to represent a selective proportion of the total crack user population, for example in terms of age, gender, ethnicity, drug use patterns, and associated problems.

Next, the aim of this thesis was presented, i.e.: to describe the main characteristics of urban frequent crack users, to estimate the size of the urban population of frequent crack users in the three largest cities in the Netherlands, to determine their involvement in crime, particularly drug dealing, and to gain insight into their initial interest and willingness to participate in pharmacological treatment. This led us to five main research questions:

1. What are the patterns of use and socio-demographic characteristics of urban frequent crack users in the Netherlands?
2. What is the prevalence of frequent crack use in the three largest cities in the Netherlands.
3. To what extent and how are (types of) frequent crack users involved in drug dealing?
4. To what extent and how are (types of) frequent crack users involved in drug-related crime?
5. To what extent are (types of) frequent crack users interested and willing to participate in pharmacological treatments with new, potentially efficacious medications for cocaine dependence?

The core of the data was gathered through a survey among 1,039 frequent crack users inside and outside institutional settings based on a respondent-driven sampling approach (RDS, 536 respondents) and two randomized surveys in opiate substitution treatment facilities (ST,
407 respondents) and in user rooms (UR, 233 respondents). Inclusion criteria were being resident in the city area under study, speaking Dutch, being at least 18 years old and currently (last month) using crack at least two days per week. In addition data from registration lists from the substitution treatment (ST) and user rooms (UR) in each city, together with data from the RDS samples were used to estimate the number of frequent crack users.

8.2. DIFFERENTIAL PROFILES OF CRACK USERS USING RDS VS. INSTITUTIONAL SAMPLES (Chapter 2)

Statistically representative samples of populations such as frequent crack users are not easily obtainable. Due to the illegal or stigmatised character of their behaviour, many users remain hidden from official registries or are not reachable through traditional sampling methods. In the second chapter we introduced respondent driven sampling (RDS) as a technique that had been proven useful for surveying ‘hard-to-reach’ populations like those of injecting drug users. RDS is used to obtain samples that resemble representative samples and so it can be used to obtain prevalence estimates of a trait within the subject population. We were the first to use RDS to recruit a sample of crack users as a specific population, and compared characteristics of the interviewed users with those from users in random institutional samples (low threshold opiate substitution facilities and user rooms).

Statistical comparisons were made for each of the three cities under study. We tested differences in demographic characteristics (such as age, gender and ethnicity), drug use and institutional contact. In the total sample (1,039 unique participants), the mean age was 45.1 years, 81.5% were male, 49.5% were non-Western, 52.1% used crack nearly daily, and 85.5% had been using crack for 10 years or more. In comparison, crack users recruited through RDS belonged more often to the younger age group (<35 years of age) and less often had a long crack-using career (1 to 10 years) than the crack users in the institutional samples. However, also most RDS respondents belonged to the older age group, and very few (9/440) were younger than 23 years (the minimum age in practice for UR and ST). This is in accordance with the findings in earlier studies that crack use in the Netherlands is very uncommon among young people. Prevalence of heroin use was lower in the RDS sample than in the UR and ST samples and homelessness was more prevalent in the UR sample.

These results confirmed our hypothesis that through RDS a different subpopulation of crack users would be found than in institutions. Overall, there were more demographic differences between the RDS and UR samples than between RDS and ST samples. Most notably, RDS resulted in more female and Western crack users, while ST was quite similar to RDS with regard to these characteristics. Low education was more frequent in both institutional samples than in the RDS sample, and more working crack users were found in the RDS sample than in the ST sample. In sum, RDS generated more diverse samples of frequent crack users and indicated more completeness, thus suggesting better representativeness than institutional samples. However, representativeness can only be tested against a normative sample like a general household survey, but, as we already noted, such a sample is very difficult to realize with regard to frequent crack users (and was not
available in our case). More empirical evidence of the capacity of RDS to obtain unbiased population estimates was recommended.

8.3. ESTIMATING THE SIZE OF THE POPULATION OF CRACK USERS (Chapter 3)

In the third chapter we introduced Capture-recapture (C-RC) as a method to estimate the size of a population that cannot be fully found in registries or through surveys. The observed data from the three sample types (RDS, ST and UR) were ordered into a $2 \times 2 \times 2$ contingency table, with the empty cell (i.e., the number of subjects not present in any of the three data sources) representing the unobserved population which is estimated through log linear modelling. The precision of C-RC estimates depends on the extent to which certain conditions (perfect matching, homogeneity, independence of samples, closed population) are met. We explained these assumptions, as well as our measures to comply with them or to minimize their violation.

The number of unobserved crack dependent users was estimated at 4,242 in the three cities altogether, providing an overall estimate of 6,659 (95% CI: 5,891–7,761), from which 2,524 (95% CI: 2,185–2,977) in Amsterdam, 2,362 (95% CI: 2,032–2,766) in Rotterdam, and 1,773 (95% CI: 1,463–2,172) in The Hague. The prevalence of crack dependence for the population aged 15–64 years was estimated at 0.46% (95% CI: 0.40–0.54) for Amsterdam in 2009, 0.58% (95% CI: 0.50–0.68) for Rotterdam in 2010, and 0.53% (95% CI: 0.44–0.65) for The Hague in 2010. The estimated percentage of females was 23.0%, with no significant differences across the three cities. The estimated proportion of those younger than 35 was 12.8%, with more crack users in this age group in The Hague (21.8%) than in Amsterdam (8.4%) and Rotterdam (10.8%).

8.4. BUYING AND SELLING CRACK AND THE ROLE OF USER-SELLERS (Chapter 4)

To assess key characteristics of the retail crack market and the role of users as buyers and sellers, in Chapter 4 we analysed self-reported data of the 1,039 respondents. Of the total sample, 42.3% reported that in the past 30 days they had 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 non selling 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 seemed quite similar to what scholars have labelled ‘social dealers’ in recreational drugs markets. Our findings suggested the need for a more differentiated law enforcement policy toward drug-selling users.
8.5. CRIMINAL INVOLVEMENT AMONG CRACK USERS  
(Chapter 5)

We assessed factors associated with current criminal involvement and specialization in selling drugs, property crime and violence among our cohort of crack users, by using bivariate and logistic regression analyses. A total of 431 participants (41.5%) had engaged in criminal activities in the past 30 days. This mostly involved selling drugs (68.9%), followed by property crimes (34.4%) and a few cases of violent crime (9.7%). Younger age, homelessness, heavier patterns of use and a more prolific criminal justice history were associated with current criminality. Those receiving welfare benefits tended to be more likely to specialize only in selling drugs as opposed to (also) property crimes. We concluded that reducing drug use among criminally involved crack users and addressing their housing conditions could have a significant impact on reducing drug-related crime. Welfare benefits might act as protective factor against committing property crimes but not against the selling of drugs.

8.6. INTEREST IN PHARMACOLOGICAL TREATMENT  
(Chapter 6)

We explored the potential additional reach of treatment if pharmacotherapy were to become available among our sample of crack users. The majority (73.7%) wished to reduce or quit their crack use in the near future for reasons related to finance, health, relationships, age, positive perceptions of future life conditions and negative perceptions of present life conditions. Only one third (32.4%) were interested in reducing or quitting with the aid of currently available treatment, but another 35.9% showed interest in doing so with (hypothetical) pharmacotherapy, indicating that the reach of treatment might potentially double if pharmacotherapy were to become available. The potential added reach of pharmacotherapy was characterized by less severe patterns of crack use and a less extensive treatment history and included crack users of mixed age, gender, ethnicity, homelessness, criminal involvement and health.

Although the efficacy of pharmacological treatment strategies for crack dependence has yet to be proven, pharmacotherapy could substantially broaden treatment reach and increase the coverage of social and health care among crack users.