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BRIEF REPORT

ENROLLMENT IN A DRUG-FREE DETENTION PROGRAM: THE PREDICTION OF SUCCESSFUL BEHAVIOR CHANGE OF DRUG-USING INMATES

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Abstract — Factors predicting the behavior change of drug-using detainees were investigated in detainees in two penitentiaries in The Netherlands. Subjects attended either a standard program or a Drug-Free Detention Program (DFDP) and were assessed at the beginning of detention, at release/transfer, and at 2 years after the end of detention. Predictors of postprogram contact with treatment agencies and changes in criminal recidivism, substance abuse, and psychosocial functioning were investigated using regression analysis. Detainees who started drug use early, without previous DFDP detention, and who frequently expressed self-esteem and who had many family problems realized meetings with drug treatment agencies more often. Those with a legal source of income showed decreases in addiction severity and in the number of days in which hard drugs were used. Comparison of the normal program and the DFDP showed that only for the normal wing could changes in substance use and psychosocial functioning be predicted. Results show the value of multiple-outcome criteria in criminal recidivism research and call for more studies investigating change processes.

Because of the indisputable link between drug use and crime (Ball, Shaffer, & Nurco, 1983; Johnson, Lipton, & Wish, 1986) many of the addicted eventually are involved with the penal system. This creates a good opportunity for treatment. Research on Drug-Free Detention Programs (DFDPs) suggests that these programs can decrease recidivism and drug use rates (Platt, Labate, & Wicks, 1977; Field, 1989; Leukefeld & Tims, 1992; Lipton, 1994). The major determinants of success of DFDPs are: (1) remaining in the program between 9 and 12 months; (2) a relatively older age; (3) a relatively short criminal history. In general, the less severe cases are the ones that are least likely to become recidivists (Lipton, 1994). Notably, these studies address the *status* of the inmates subsequent to the DFDP. While severe cases may result in recidivism more than minor cases in absolute terms, their relative change can be significantly greater. Apart from this, insight in change processes is also needed concerning drug abuse, as well as physical and psychosocial functioning.

The research questions that are the focus of this report are: What is the contribution of the background characteristics of the drug-using inmate to (1) postprogram contacts with treatment agencies, and to changes in (2) criminal recidivism, (3) drug abuse, and (4) psychosocial functioning? And, what is the contribution of the relation-

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ship between the background characteristics and the residence in a DFDP to change subsequent to the detention?

METHOD

Subjects

Eighty-six inmates in a drug-free ward and 42 inmates in a normal ward of the Rotterdam jail and 50 inmates of a drug-free detention center (DOC) in Doetinchem participated in this study (see Amoureus, van den Hurk, Schippers, & Breteler, 1994, for a description). The three groups appeared comparable, with a mean age of 30 (SD 5.8); 54% were of Dutch origin, and the starting age of various drug use ranged from 16 to 22 years of age. The DOC group mentioned more often illegal incomes ($\chi^2 = 7.8$ (4) $p <$ .05). Analysis of *nonresponse* suggests that nonresponders at either of the follow-up measurements felt more social anxiety (IOA, see below) than did responders ($p <$ .05). In addition, at follow-up the prevalence of affective disorders was higher among nonresponders ($p < .05$). The difficulties attached to the use of drugs were severe; only few inmates had been drug free for a prolonged period of time. Most addicts used more than one substance at the time—mainly heroin and cocaine. Problems with alcohol and gambling occurred frequently as did psychopathological disorders. Only one participant had not been detained previously. The duration of detention (mean 12.3 weeks, SD 8.2) was longest for the normal ward: 16.7 weeks (SD 9.9). In DFDP, it was 11.0 weeks (SD 7.4), and in DOC 10.8 weeks (SD 6.8) ($F = -3.7$ (126) $p < .01$).

Programs and Procedures

The main daily activities of all three programs were sports and labor. Apart from this, the DFDP provides protection and care by professional drug workers for addicts who are motivated to change their drug-taking behaviors. Emphasis is placed on making preparations for postrelease treatment and contacts with care facilities. Inmates are admitted on a voluntary basis.

Subjects signed an informed consent and were asked to fill out questionnaires by two trained interviewers. Measures were taken within the first 2 weeks of detention, within 3 months after release/transfer from the regimes, and finally about 1 to 2 years (minimum 10 months, maximum 2.5 years) after release/transfer. The interviews took about 2 hours. Participants were paid 25 guilders ($16) after the last follow-up interview.

Measures

A dossier investigation covering the 2 years before detention was conducted to determine (1) offence severity score and (2) the number of days spent in detention. General registration lists were used to assess background characteristics and the socioeconomic status. The Diagnostic Interview Schedule (DIS; Robins, Helzer, Crougham, & Ratcliff, 1981) was used to measure psychopathology according to the DSM-III. Addiction-related problems were assessed by the Addiction Severity Index (ASI; McLellan, Luborsky, Woody, & O'Brien, 1980; Amoureus et al., 1994). The Self-Efficacy List for Drug Abusers (SELD; van den Hurk, Schippers, & Breteler, 1994) measures craving for drugs and the perceived ability to withstand their use in positive and negative situations. Social support was measured using the Groningen Globale Gepercipieerde Sociale Ondersteunings Lijst (GGPSL; van Sonderen, 1991). Social anxiety was measured by the Inventarisatielijst Omgaan met Anderen (IOA; van Dam-Baggen, 1987). Finally, continuity of drug treatment was assessed.

Table 1. Measures of (multivariate) prediction of the criteria and the relative contribution of the predictors

Predictor	β	R^2 Increase	R^2 Total	*F*	*df*	*p*-value
Continuity of Drug Care						
Criterion: realization of meetings with drug-treatment institutions (dichotomous)						
starting age of soft drug use	−0.27	0.07				
regime (DFDP or not)	0.27	0.06				
frequency of expression of self-esteem (IOA)	0.24	0.05				
no. of problems within family	0.21	0.05	0.23	6.5	4,87	0.01
Substance Abuse						
Criterion: change in the addiction severity (ASI rating score)						
main source of income (legal vs. illegal)	0.27	0.09				
DSM-III alcohol addiction (dichotomous)	0.19	0.04	0.13	6.9	2,97	0.01
Criterion: change in the use of hard drugs in the month prior to the investigation (no. of days)						
main source of income (legal vs. illegal)	0.29	0.08	0.08	9.0	1,98	0.01
Criterion: change in self-efficacy pleasant feelings (SELD)						
DSM-III drug addiction lifetime (dichotomous)	−0.26	0.09				
DSM-III alcohol addiction recent (dichotomous)	−0.23	0.05	0.14	5.6	2,68	0.01
Psychosocial Functioning						
Criterion: change in the frequency of assertive behavior (IOA overall score)						
committed violent offenses (dichotomous)	−0.30	0.09	0.09	7.2	1,70	0.01
Criterion: change in general social support (GGPSL overall score)						
frequency of asking attention for own opinion (IOA)	−0.34	0.12				
DSM-III anxiety disorder recent (dichotomous)	−0.29	0.07	0.19	8.0	2,66	0.01

RESULTS

First, predictors were investigated concerning changes subsequent to detention regardless of the regime in which the inmates stayed (Table 1). A meeting with a civil drug-care institution was mainly realized by those who started using soft drugs at an older age, those who stayed on DFDP regime, those who had high self-esteem, and those who were raised in a family with many problems. Changes in criminal recidivism could not be predicted, whereas substance-use changes could be predicted only to a limited degree. A decrease in addiction severity was mainly found among those whose main source of income had been legal and those who had recently become alcohol addicted. A decrease in drug use in the previous month was found mainly among those whose main source of income had been legal. Inmates who had ever been diagnosed as

substance addicted and those who had been recently diagnosed as alcohol addicted increased in self-efficacy.

Two changes in psychosocial functioning could be predicted. Those who had never committed violent offenses improved their social functioning. An increase in social support was experienced more often by those who were assertive in asking attention for their point of view and by those who did not have a recent anxiety disorder.

Second, predictors were selected that related with the regime as well as with the change in functioning after detention. Multiple analysis of regression revealed that three criteria could be predicted for the non-DFDP (normal) wing only. Those who originated from an intact (complete) family increased more in their expectancy to be able to refrain from using drugs than did those originating from an incomplete family (dichotomous; $F = 11.3$ (1,14) $p < .01$). Inmates who had recently suffered from an affective disorder increased less in their expectancy to be able to refrain from using drugs than did others ($F = 4.8$ (1,14) $p < .05$). Finally, it was found that inmates who asked for more attention to themselves developed more problems in their social relationships ($F = 8.7$ (1,13) $p < .05$).

DISCUSSION

The current study adds valuable information to the results of previous studies that attempted to predict the status of treated drug-abusing detainees. As to the changes, regardless of the regime, changes in criminal recidivism could not be predicted, whereas continuity of care and changes in both substance-abuse factors and psychosocial functioning could be predicted to a limited degree. As to the second research question, no predictors of a successful change in a drug-free jail regime could be established. However, in the regular regime, various subject characteristics predicted changes in drug-use factors and aspects of psychosocial functioning, suggesting different processes of change in the two regimes.

Before commenting on these results, it is necessary to discuss some limitations of this study. The severity of psychosocial problems and the considerable criminal records of the subjects in this study limit comparison with other treatment studies. Although we reported on self-report data, criminal records and urine control deviated scarcely from the self-report data. At first glance, the lack of prediction of changes in recidivism contrasts with the results of previous studies (Field, 1989; Lipton, 1994). Taking into account that others conclude that the less severe cases are the ones that have the least recidivism, one might say that our results support this conclusion.

Most criteria were predicted by only one or two predictors. Moreover, only the main source of income predicted more than one criterion. Those with legal income before incarceration showed a decrease in addiction severity and in the number of days of hard drug use in particular. No causal references should be made here. However, this result warrants further research into the connection between sources of income and drug use.

It is striking that the amount of time in program did not predict changes in any outcome category. Also, neither the age at admission nor the criminal history predicted any criterion. These results differ from previous studies; this may be explained by the severe addiction problems of our subjects and the relatively modest interventions of the study.

Our second research question concerned the predictability of change in drug-free regimes. In the normal regime, change for the worse was predicted by a broken family

background, a recent affective disorder, and frequent requests for attention. A tentative explanation for these differences is that in the normal regime vulnerable subjects suffer from an impersonal climate, whereas in the therapeutic atmosphere of the drug-free regime these subjects maintain their equilibrium. This result suggests that drug-using detainees with these characteristics are better off in a drug-free regime.

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