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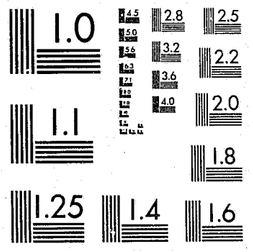

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National Institute of Justice
United States Department of Justice
Washington, D.C. 20531

10/30/86

Trends in the Commission of Crime Among Narcotic Addicts Over Successive Periods of Addiction and Nonaddiction

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March, 1983

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Analysis of these data was supported by Grant No. 82-IJ-CX-0031 from the National Institute of Justice.

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Abstract

Although several studies have documented high levels of criminal activity among narcotic addicts, especially during periods of active addiction, few studies have delineated the types of criminal activities involved or have attempted to uncover trends in such activities over successive periods of addiction and nonaddiction in addicts' careers. In the present series of analyses, the criminal activities of 354 male narcotic addicts were categorized and traced individually over time using five, standardized, crime-days-per-year-at-risk measures in the areas of theft, violence, dealing, con games, and other crimes. In addition, a sixth composite measure was also employed. Although large differences among addicts in patterns of criminal activity over time were much in evidence and may be useful as a basis for a criminal typology, this same heterogeneity tends to preclude definitive statements concerning addicts as a group. This caveat notwithstanding, there does appear to be a general tendency for criminal activity to diminish over successive periods of nonaddiction and to increase irregularly over successive periods of addiction. The agreement of these findings with those of earlier group analyses by the authors is discussed.

Introduction

In several previous communications (Ball et al., 1980, 1981, 1983), the authors have documented the exceedingly high prevalence of crime among narcotic addicts, especially during their actual periods of addiction. High crime rates among addicts have also been reported by Chaiken and Chaiken (1982), Inciardi (1979), and Nurco and DuPont (1977). Thus, there can be little doubt that narcotic addicts, especially while actively addicted, contribute disproportionately to the burgeoning crime statistics in the United States. In addition, there is evidence that crime rates among addicts tend to be rather stable throughout their addiction careers (Ball et al., 1983).

Although the above statements are amply and consistently supported by the findings of diverse studies, it must be emphasized that, strictly speaking, they apply only to narcotic addicts as a group. Thus, it may well be that some addicts commit little or no crime, while others commit multiple crimes on a near-daily basis. Moreover, certain addicts may maintain rather stable levels of crimes committed, while others may trend upwards or downwards as addiction careers extend over time. The present paper, therefore, represents an attempt to analyze individual patterns of criminal activity among addicts, in terms of magnitude, type, and trend, as they proceed from an initial active period of addiction to succeeding ones.

Method

Subjects and Data Base. Detailed interview and agency record data were available on 354 male narcotic (principally heroin) addicts from the Baltimore metropolitan area. This group of 354 male addicts resulted from

a stratified random sample of 4,069 known narcotic users arrested (or identified) by the Baltimore police department between 1952 and 1971. The sample was unselected for criminality but stratified by race and year of police contact. Of the 354 subjects, 195 were Black and 159 were White. Mean age at time of interview was 34.1 years, with a standard deviation of 7.9 years.

Interviews were conducted between July, 1973 and January, 1978 by specially trained personnel familiar with the Baltimore addict subculture. These interviews lasted some three hours and were focused upon six topics: drug use, criminal activity, work, living arrangements, drug selling, and sources of income. Information thus obtained was supplemented by penal, hospital, and other institutional record data, where applicable. Evidence for the veridicality of the interview data has been presented in an earlier paper (Bonito et al., 1976).

To be eligible for inclusion in the study, subjects had to have used narcotics on at least four separate days a week for a period of at least one month while at large in the community. Since a major purpose of the interview was to obtain detailed chronological information concerning crime and addiction from the time of first regular narcotic use to the time of interview, each subject was asked to describe in detail his addiction, abstinence, and incarceration periods, with the criteria for addiction being the same as that for inclusion in the study. For all 354 subjects, the number of separate addiction periods ranged from one to 14, with a median of 3 and a mean of 3.61. In a similar manner, each subject was asked to recount his illegal sources of income during each addiction and nonaddiction period, a reconstruction that involved an enumeration of specific offenses committed on a daily, weekly, or monthly basis. This reconstruction of criminal activity

engaged in was facilitated by skillful interview probes and cross-checks that emphasized circumscribed time periods, places of residence, and friends and associates during each period.

Derivation of Criminal Activity Measures. In previous publications (Ball et al., 1981, 1983), the authors have described different measures of criminal activity, all of which embody the concept of crime days per year at risk. Conceptually, a crime day is defined as a 24-hour period during which one or more crimes of a specific type is committed by a given individual. Thus, a crime day measure tends to be a conservative estimate of the amount of crime actually committed, since multiple offenses committed on a single day still constitute only a single "crime-day" of a specified type. However, since addicts rarely keep diaries or records of their criminal behavior, it is felt that such a conservative approach to the measurement of criminal activity is warranted. This is especially true since the commission of specific types of crime during a given period are typically reported in terms of number of times per week, and certain operational conventions are necessary to translate this information to an estimate of the number of separate days on which such crimes were committed. The following six crime day measures employed in the present series of analyses all refer conceptually to 24-hour periods during which one or more crimes of the type specified were committed: Crime-Day Theft (one or more property thefts); Crime-Day Violence (one or more violent offenses); Crime-Day Dealing (one or more drug sales--mere drug use or possession not included as crimes); Crime-Day Con Games (one or more confidence game offenses or forgery of checks); Crime-Day Other (one or more offenses not included elsewhere, e.g., gambling, pimping, fencing, etc.); and Composite Crime Day (one or more crimes of any type committed). It should be noted that

the sixth measure, Composite Crime Day, incorporates the first five and is thus a very conservative index of total crime committed since an individual could have committed more than one type of crime on any given day.

Each of the above six crime-day measures was further refined by annualizing, i.e., the number of crime-days accumulated within a specified addiction or nonaddiction period while at large in the community was expressed as Crime-Days Per Year at Risk by taking the ratio of crime days to total days in the period and multiplying by 365. Thus, criminal activity in each of the five areas as well as the composite is expressed as a yearly rate which in this sense is independent of the actual length of the period involved. Through the use of such measures, it becomes possible to compare rates for different individuals and for different types of crime, even though the time periods involved may vary considerably.

Statistical Analysis. For each subject, the number of crime days per year at risk in each of the five areas as well as the composite was computed for each period of actual narcotic addiction while at large in the community. Similarly, these measures were also computed for each period of nonaddiction. Afterwards, and considering the addiction periods separately from the non-addiction periods, each addict's crime-days per year at risk measures (ordinate) were plotted against his successive periods of addiction (abscissa), and the linear and nonlinear regression coefficients were calculated. Thus, the linear and nonlinear trends in each area of criminal activity could be determined for each subject, and the statistical significance of any such trends for the entire group was tested using the methods described by Shaffer (1979). In addition, the average level of criminal activity across addiction periods was calculated for each subject on each measure.

A problem inherent in the analysis of naturally-occurring data over time such as these is that the number of addiction periods is not constant

across subjects. We have elected to deal with this problem by performing a series of trend analyses in which the number of addiction periods involved varied from two to 14. For any given analysis, the number of subjects involved were those who had at least the number of active addiction periods in question. Thus, each of the 153 subjects included in the four addiction period analysis had four or more periods of active narcotic addiction. Moreover, since the mean number of addiction periods was 3.61 and the distribution was markedly skewed to the right, analyses involving more than seven addiction periods included too few subjects to be practically meaningful. For nonaddiction periods, meaningful analyses were precluded on more than four such periods because of too few subjects.

Results

Comprehensive trend analyses using all available subjects were performed across all possible numbers of succeeding addiction and nonaddiction periods separately. Thus, 13 such analyses were performed for the addiction periods (involving subjects having from two to 14 periods of addiction), and seven such analyses were performed for the nonaddiction periods (involving subjects having from two to eight periods of nonaddiction). Moreover, separate analyses were performed for each of the six crime-day measures.

In view of the fact that the mean and median number of addiction periods was 3.61 and 3, respectively, for the 354 subjects as well as the fact that the number of subjects available for analysis declines drastically beyond this point, we have elected to confine the presentation of results to the first four succeeding periods of addiction. For similar reasons, the presentation is limited to the first three periods of nonaddiction. (The mean and median number of nonaddiction periods were 1.75 and 1, respectively.) This somewhat selective

reporting of results is justified on two grounds: 1) the results presented are the most representative of the total and attempt to strike a compromise between the desire to maximize the longitudinal aspect and the desire to include a sufficient (and representative) number of subjects; and 2) the conclusions reached on the basis of these analyses are essentially supported by those involving more or fewer subjects having more or fewer periods of addiction or nonaddiction.

Table 1 presents the means of the six crime day measures for each of the first four periods of addiction for the 153 subjects who had four or more such periods. Table 2 presents analogous figures for each of the first three periods of nonaddiction for the 78 subjects who had three or more such periods. Also presented are the mean slope coefficients and the results of the univariate statistical tests for the significance of any linear and nonlinear (quadratic) trends for all subjects in these analyses. These slope coefficients were computed using normalized orthogonal polynomials to permit direct comparisons between the magnitudes of linear and quadratic components (Shaffer, 1979).

It will be noted from Table 1 that there was a significant increase in drug dealing over the four periods of active addiction that reached a peak at period three and declined somewhat by period four. The latter phenomenon is reflected in the significant quadratic component observed in addition to the significant linear increase. In a similar vein, the Composite Crime-Day measure revealed a significant quadratic component with a peak at period three; however, the overall linear trend was not statistically significant. None of the other Crime-Day measures revealed significant trends over this four-period span, either linear or nonlinear (including cubic).

Turning now to Table 2, it will be seen that there was a significant linear decrease in theft over the three-period span of nonaddiction, and that this same phenomenon was observed with respect to the Composite Crime-Day measure. Moreover, all of the crime-day measures register decreases over these three periods that were predominantly linear; however, only the Theft and Composite Crime-Day measures attained statistical significance in this regard owing to the considerable heterogeneity in individual patterns over time.

In the interest of completeness, all of the above analyses were repeated using nonoverlapping groups, i.e., separate analyses were performed using subsets of subjects having exactly three, four, five, and so on up to 14 periods of addiction. Similarly, separate analyses were performed on subsets of subjects having three, four, five, and so on up to eight periods of nonaddiction. Nothing in those subsidiary analyses contradicted the general findings already presented based on four or more periods of addiction and three or more periods of nonaddiction, viz., that there is a general tendency for criminal activity to diminish over successive periods of nonaddiction, and an irregular and rather unstable tendency for criminal activity to increase in certain areas, primarily drug dealing, over successive periods of active addiction.

Discussion

In a previous paper (Ball et al., 1983), the authors presented findings concerning addict criminal activity during successive periods of addiction and nonaddiction that were based on overall group data involving different numbers of subjects at the several different periods examined. The present series of analyses, on the other hand, involved the same subjects at each period for any given analysis. Moreover, the present analyses entailed the computation of separate trends for individuals over time which were afterwards averaged and the mean trends tested for statistical significance

as recommended by several writers (McCall and Appelbaum, 1973; McNemar, 1962; Shaffer, 1979).

In spite of differences in analytical methodology between the two series of analyses, the results have been essentially the same. In both, there is a marked tendency for addict criminal activity to decline over successive periods of nonaddiction. During successive periods of addiction, however, no clear and unmistakable trends are evident. Although there were occasional, nominally-significant linear or nonlinear trends for a particular crime-day measure over a certain number of successive periods, these "significant" trends were rarely maintained when a different number of subjects and a different number of addiction periods were analyzed. Thus, it would be impossible to assert that the addict group as a whole displayed any clear tendency to commit more or less crime as their careers progressed over successive periods of addiction. By and large, then, the findings of the earlier group analyses which suggested rather stable levels of criminal activity among addicts as a group while addicted have been essentially confirmed using a different analytical methodology.

The above group findings notwithstanding, it is nonetheless true that the present analyses revealed marked differences among individuals with regard to magnitude, type, and trend of criminal activity over successive periods of addiction and nonaddiction. Some addicts committed rather small amounts of crime or confined their criminal activities to a single area, while others committed literally hundreds of crimes in several different areas. Similarly, some addicts engaged in a rather stable level of criminal activity while others fluctuated wildly or displayed rather pronounced upward or downward trends over time. Thus, it is clear that addicts differ greatly with respect to level, type, and trend of criminal activity, but that these differences tend to cancel

when the data are averaged for the group as a whole. However, it should be possible to delineate specific types of addicts based on level, type, and/or trend of criminal activity over time, and attempts at such identification will be the subject of future papers in this series. In addition, it may be possible to uncover certain distinguishing characteristics, precursors, or correlates of these different patterns of addict criminality, so that those persons likely to engage in high levels of criminal activity could be identified and the effectiveness of various countermeasures subsequently explored. In conclusion, it is quite clear that just as all addicts are not alike with regard to lifestyles or personality traits (Nurco and Shaffer, 1983), neither are they alike with regard to patterns or levels of criminal activity.

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Table 1

Mean Number of Crime Days Per Year at Risk for Six Crime Day Measures Over Four Consecutive Periods of Addiction (N=153)

Crime Day Measure	Period 1	2	3	4	Mean Slope Coefficients Linear	Quadratic
CD-I -Theft	142	140	155	137	-0.0818	-8.3007
CD-II -Violence	3	9	1	6	0.1564	-0.3105
CD-III -Dealing	73	105	126	106	26.5961**	-26.0196**
CD-IV -Con Games	25	27	16	22	-4.0761	2.1340
CD-V - Other	66	57	68	71	5.6326	5.7190
CCD - Composite	234	259	280	255	18.9467	-25.2614**

**p <.01

Note: All means are rounded to nearest day. Slope coefficients are computed using normalized orthogonal polynomials to permit direct comparisons between the magnitudes of linear and quadratic components.

Table 2

Mean Number of Crime Days Per Year at Risk for Six Crime Day Measures Over Three Consecutive Periods of Nonaddiction (N=78)

Crime Day Measure	Period 1	Period 2	Period 3	Means Slope Coefficients: Linear	Means Slope Coefficients: Quadratic
CD-I -Theft	38	30	12	-18.1672**	-3.9255
CD-II -Violence	0	0	0	-0.1269	-0.0419
CD-III -Dealing	54	46	31	-16.0731	-3.1979
CD-IV -Con Games	5	4	3	-1.0607	-0.0576
CD-V -Other	31	22	22	-6.0557	3.9045
CCD -Composite	110	87	62	-34.4579*	-1.1986

**p <.01

*p <.05

Note: All means are rounded to nearest day. Slope coefficients are computed using normalized orthogonal polynomials to permit direct comparisons between the magnitudes of linear and quadratic components.

David N. Nurco received his D.S.W. from The National Catholic School of Social Service. He is a Research Professor in the Department of Psychiatry, University of Maryland School of Medicine. His research interests focus on interdisciplinary planning and treatment for social and behavioral disorders, and he has had extensive experience in conducting studies pertaining to drug abuse, alcoholism, and criminal behavior. His more than 60 published works include local, statewide, and national studies of drug abuse epidemiology and research methodology. In this latter regard, he has completed a number of studies based on follow-up interviews with active street addicts.

John W. Shaffer received his Ph.D. in Clinical Psychology from Pennsylvania State University. He has been on the faculty of The Johns Hopkins University School of Medicine since 1957, and he is currently Associate Professor of Medical Psychology in the Department of Psychiatry and Behavioral Sciences. His major interests are in the area of research design and statistical analysis, and he is author or co-author of more than 80 scientific articles.

John C. Ball is a sociologist at Temple University's School of Medicine in Philadelphia. He received his doctorate in sociology from Vanderbilt University in 1955. He is a widely recognized authority on the social epidemiology of drug abuse. During the past two decades he and his colleagues have pioneered a whole series of basic sociological studies pertaining to the behavior of opiate addicts in the United States. These studies have delineated and analyzed the history and etiology of drug abuse, its regional changes and metropolitan concentration, the incidence and prevalence of abuse by particular drugs, and particularly, the association of criminal behavior with illicit drug use. From 1962 to 1968, Dr. Ball conducted research pertaining to drug

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(3)

April 21, 1983

Abstract of Paper to be Presented at the American Sociological Association Meeting in November, 1983

PRINCIPAL AND SECONDARY PATTERNS OF CRIMINAL VIOLENCE AMONG HEROIN ADDICTS IN BALTIMORE

John C. Ball and David N. Nurco

This study investigates the extent to which heroin addicts are involved in crimes of violence as a principal offense type and as a secondary offense type. These two types of violent offenders are compared with other addict offenders with respect to frequency and stability of their crime-rates.

The sample population consists of 354 male Baltimore addicts identified by the Police Department. Their adult criminality is delineated and analyzed in terms of crime-days per year at risk. Five types of crime-days are employed: theft, violence, dealing, con games and other offneses. The 354 males are classified according to their principal and secondary types of crime. On this basis, both individual and group crime profiles of those addicts involved in violent offenses are compared with those addicts who are not involved in violent offenses.