Middle Articles

CONTEMPORARY THEMES

Drug-taking in Delinquent Boys

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Summary: A retrospective survey was conducted on 67 boys in a London remand home during the years 1965-7 inclusive who were known to have taken drugs. The boys were divided into a "hard" and a "soft" group according to whether or not there was evidence of narcotic taking. The groups were compared and the hard group showed a significantly greater incidence of abnormal personality, family history of psychiatric illness, and disturbed relationships within the family. The subsequent drug careers of all boys were followed by means of Home Office records. Nine boys in the soft group had progressed to hard drugs by June 1969.

Introduction

Since the late 'fifties the increasing illicit use of drugs by the young has caused concern and publicity. Convictions for offences in connexion with cannabis (mainly possession) increased from 51 in 1957 to 2,393 in 1967, while convictions for the possession of amphetamines had increased to 1,650 in 1967. There are dangers in equating changes in conviction rates with changes in the incidence of an activity. A survey by Schofield (1965), however, suggested that 3% of boys and 2% of girls had tried drugs, while Weiner (1969) found by questionnaire an incidence of drug-taking in London schoolchildren of 5.39%, though most of these admitted taking drugs on only a few occasions.

It is important to know the true incidence of drug taking, not only because of the possible deleterious effects of the drugs themselves but also because of the possibility that this drug-taking may be an indicator of other social and psychiatric pathology and may lead to the taking of more powerful addictive drugs, such as heroin. During the decade 1957-67 offences in connexion with drugs included in Schedule 1 of the 1965 Drugs Act (predominantly heroin and cocaine) increased from 30 to 573. Bewley *et al.*, (1968) document the increase in the number of heroin addicts known to the Home Office and their high morbidity and mortality.

This paper presents information on the family and personal characteristics of drug takers in a London remand home. An attempt is made to describe the differences between boys taking "soft" drugs and those taking "hard" drugs and to follow up their subsequent drug careers.

Subjects

The subjects were 67 young males who were admitted for court reports to a London remand home during the years 1965-7 inclusive, and who were known to be taking drugs in the period immediately preceding admission. They were identified by noting which boys had been remanded for a drug offence and by searching the medical and psychiatric

records of other boys. During the period of the survey the staff were alert to the possibility of drug-taking, and the sick-bay staff used a standardized schema to record symptoms of drug intoxication and withdrawal. The subjects were divided into a hard group and a soft group, according to whether or not there was evidence of narcotic taking.

Of the 47 subjects in the soft group, 43 were charged with a drug offence (illegal possession). That only four boys, apart from those charged, were discovered to be taking soft drugs reflects the extreme difficulty in detecting such drug-taking in a remand home situation (Scott and Wilcox, 1965). The drugs mentioned in the charges for the soft group were amphetamine 22, cannabis 13, barbiturates 1, chlorthalidoxepoxide (Librium) 1, unspecified at the time of remand 6. Although amphetamine was the commonest drug used, most boys taking amphetamines would also smoke cannabis on occasion and vice versa. Some boys also took barbiturates and tranquillizers when available. None of these boys admitted to having injected themselves with drugs or to have taken narcotics or methedrine.

The 20 subjects in the hard group had all taken narcotics intravenously—18 had taken heroin, often in conjunction with cocaine, and two admitted to taking cocaine only. Seventeen admitted also to taking either cannabis or amphetamines, and five to injecting themselves with methedrine on at least one occasion. Only nine of this group were charged with a drug offence. Seven were charged with illicit possession, one with illicit sale, and one with forging a prescription to obtain heroin and cocaine. The other hard-drug takers were detected by the discovery of needle-marks or the symptoms of drug ingestion or withdrawal. Sometimes the history of drug-taking was known on admission and often the taking and obtaining of drugs dominated the pattern of the boy's life.

Method

The notes of the 67 subjects were retrospectively analysed. They contained reports from a probation officer, psychiatric social worker, psychologist, and psychiatrist, and teaching- and house-staff assessments, a sick-bay schema specifically prepared for drug takers, and a school report. In a few instances, where the existing reports were inadequate from the point of view of the survey, further inquiries were made to the above sources.

To facilitate quantification of data a standardized item sheet was constructed and scored for each subject. To test the reliability of the item sheet random samples of 10 of the hard subjects and 15 of the soft subjects were scored independently—each by a psychiatrist who was unaware of the purposes of the survey. The between rater correlation coefficients† were calculated and were respectively 0.762 (S.D. 0.030) and 0.729 (S.D. 0.031).

$$\dagger \text{Kappa} = \frac{P_c - P_e}{1 - P_e}$$

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Results

Social Class.—The classification of occupations produced by the General Register Office (1966) was used to classify the boys according to the occupation of the head of the family. The results are given in Table I. There is little difference in social class between the two groups. Relatively few boys in either group came from social class V.

TABLE I.—Social Class of Subjects and Families

Class	Hard	Soft
I Professional, etc.	1	2
II Intermediate	3	4
III Skilled	4	22
IV Partly skilled	8	12
V Unskilled	2	7
Total	18*	47

*It was not possible to trace the occupations of the heads of families in two boys in the hard group.

Immigration.—It was noted whether the boys were born within the British Isles. Only three of the 47 soft-drug takers and none of the hard-drug takers were immigrant.

Age.—The youngest boy was 13.9 years old and the eldest 17.5 years. The groups were closely matched for age. The mean age of the hard group was 16.13 years (S.D. 0.76) and of the soft group 16.10 years (S.D. 0.84).

Intelligence.—I.Q. testing was performed by a psychologist on 14 of the hard group and 41 of the soft group. The mean I.Q. of the soft group was 104.5 (S.D. 17.3) and of the hard group 104.6 (S.D. 7.74).

Previous Convictions.—Eleven of the soft group had no previous convictions. The remaining 36 had been convicted of 129 offences (mean offences per boy 2.53). These were larceny 70, traffic offences 47, violence 7, drugs 5. Three of the hard group had no previous convictions and the remaining 17 had 49 convictions between them (mean 2.45). These were larceny 37, traffic offences 8, violence 4. No boys in either group had convictions for sexual offences. Six boys in the soft group and three in the hard group had also appeared before the courts as being in need of care and protection or for truancy.

Personality and Previous Psychiatric Morbidity.—The incidence of psychiatric morbidity and of personality abnormality recorded in the notes are given in Table II. These are significantly higher for the hard group. The incidence of abnormal personality in the hard group is very high (95%). These boys were usually severely disturbed, showing pronounced anxiety, mood swings, poor social adjustment, and a need for dependent relationships. Although 59.6% of the soft group had been rated as abnormal by those preparing reports on them, these abnormalities were more often of a minor nature. It is of interest that, in spite of the high incidence of personality disturbance, only five boys in the hard group and two in the soft group had received treatment for drug-taking before remand.

TABLE II.—Personality and Previous Psychiatric Morbidity

	Soft		Hard		χ^2	P
	No.	%	No.	%		
Suicide attempt	2	4.3	2	10	0.76	N.S.
Psychiatric referral	6	12.8	10	50	10.7	< 0.005
Child guidance referral	4	8.5	7	35	7.17	< 0.01
Abnormal personality	28	59.6	19	95	6.82	< 0.01

Morbidity Previous to Drug-taking.—The incidence of abnormal personality traits and psychiatric disturbance recorded previous to drug-taking was noted to ascertain if the greater morbidity of the hard group shown in Table II was simply consequent on the deleterious effects of narcotic taking. Eighteen (90%) of the hard group and 22 (46.8%) of the soft group showed prior personality abnormality ($\chi^2=10.87$,

$P<0.001$), while eight (40%) of the hard group and six (12.8%) of the soft group showed prior psychiatric disturbance ($\chi^2=6.2$, $P<0.02$).

Disturbed Family Pattern.—The occurrence in the two groups of six items connected with a disturbed pattern of family life is compared in Table III. A greater percentage of the hard subjects' families showed evidence of disturbance on all six items. In order to compare the two groups statistically a "disturbed family pattern score" was constructed for each subject, by rating as one each item on which there was evidence of disturbance. With the use of this comparison the mean disturbed family pattern score for the hard group was significantly higher than that for the soft group ($P<0.001$).

TABLE III.—Disturbed Family Pattern

	Soft		Hard	
	No.	%	No.	%
Illegitimate	4	8.5	4	20
Parents separated or divorced	14	29.8	8	40
Long-standing marital disharmony	15	31.9	9	45
Poor family discipline	34	72.3	16	80
Parent unloving to child	11	23.4	7	35
Child hostile or ambivalent to parent	13	27.67	8	40
Mean score	1.70		2.55	
Variance	2.26		2.05	
	$t=5.42$		$P<0.001$	

Child-Mother Relationship.—Six items concerned with the relationship between the child and its mother are given in Table IV. The hard group showed greater percentage of disturbance on all these items and the mean scores were significantly different ($P<0.001$). Of the hard group mothers 65% were rated as having an abnormal personality, 25% had had previous mental illness, and 10% had attempted suicide. The corresponding percentages for the soft group were 38.3%, 19.2%, and 2.1%.

TABLE IV.—Child-Mother Relationship

	Soft		Hard	
	No.	%	No.	%
*Maternal separation 0-5 years	1	2.1	3	15
*Maternal separation 6-15 years	10	21.3	9	45
Mother overprotective	5	10.6	5	25
Mother unloving	5	10.6	3	15
Child overdependent on mother	2	4.3	7	35
Child hostile or ambivalent to mother	6	12.8	3	15
Mean score	0.62		1.55	
Variance	1.21		0.72	
	$t=3.77$		$P<0.001$	

*Separation for a period of six weeks or more.

Child-Father Relationship.—The child-father relationship on the same criteria used for the child-mother relationship is shown in Table V. The hard group showed a greater incidence of disturbance on five of the six items. The mean scores

TABLE V.—Child-Father Relationship

	Soft		Hard	
	No.	%	No.	%
*Paternal separation 0-5 years	5	10.6	7	35
*Paternal separation 6-15 years	14	29.8	13	65
Father overprotective	0	0	2	10
Father unloving	6	12.8	4	20
Child overdependent on father	0	0	0	0
Child hostile or ambivalent to father	7	14.9	5	25
Mean score	0.66		1.45	
Variance	0.84		1.85	
	$t^\dagger=2.38$		$P<0.05$	

*Separation for period of six weeks or more.

† Using Welch's modification of the t test as the variances of the two groups are significantly different.

were significantly different ($P<0.05$). Of the hard group fathers 30% were frequently unemployed and 25% were unemployed at the time of remand. These incidences for the soft group were 8.5% and 17%. Of the hard group fathers 75% were rated as having an abnormal personality, 15% had

attempted suicide, and 20% had had previous mental illness. The corresponding incidences for the soft group were 38.3%, 0, and 8.5% respectively.

Siblings.—The hard group had 41 siblings (25 boys, 16 girls). The mean number of siblings per subject was 2.05 and the mean age 12.66 years. The soft group had 124 siblings (66 boys, 58 girls). The mean number per subject was 2.64 and the mean age 14.73. Eighteen (43.9%) of the hard group siblings and 24 (19.4%) of the soft group siblings either had juvenile court convictions or were known to the authorities to be in need of care. This difference is significant ($\chi^2=9.78$, $P<0.005$).

School Record.—Reports from the boys' schools were available and the subjects were rated for truancy, behaviour, and quality of school work on a three-point scale, as shown in Table VI. The differences between the groups did not reach statistical significance, though a higher proportion of the hard group were rated poor on all three categories.

TABLE VI.—School Record

		Soft		Hard	
		No.	%	No.	%
Truancy	None (good)	10	21.3	2	10
	Occasional (average)	23	48.9	10	50
	Frequent (poor)	14	29.8	8	40
Behaviour	Good	2	4.3	1	5
	Average	28	59.6	10	50
	Poor	17	36.2	9	45
School work	Good	3	6.4	1	5
	Average	27	57.5	11	55
	Poor	17	36.2	8	40

Occupational Record.—The occupational record of the 16 hard subjects and 31 soft subjects who had left school were assessed and rated as poor if there was frequent unemployment or changes of job. Thirteen (81.3%) of the hard group and 17 (54.8%) of the soft group had poor work records. This difference falls just short of statistical significance ($\chi^2=3.1885$, $P<0.1$).

Assessment by Housefathers and Teachers.—The boys were usually remanded for two to three weeks. During this time reports on the boys were prepared by the housefathers and teaching staff. On the basis of these reports discipline, school work, and interpersonal relationships were rated as good, average, or poor, and scored 0, 1, or 2 respectively, and the scores added to give a composite score for each subject on the three items. The hard group scored worse on all three items, the difference being most pronounced for interpersonal relationships. The mean difference in scores was significant ($P<0.02$).

TABLE VII.—Assessment by Housefathers and Teachers

		Soft		Hard	
		No.	%	No.	%
Interpersonal	Good	15	31.9	2	10
	Average	24	51.0	6	30
	Poor	8	17.0	12	60
Discipline	Good	23	48.9	9	45
	Average	19	40.4	7	35
	Poor	5	10.6	4	20
Work	Good	18	38.3	3	15
	Average	24	51.1	10	50
	Poor	5	10.6	7	35
Mean score		2.72		3.3	
Variance		2.19		3.4	
		$t=2.66$, $P<0.02$			

Withdrawal Symptoms.—All drugs were stopped on admission. Boys developing withdrawal symptoms were looked after in the sick-bay and a record of the withdrawal symptoms and of any medication prescribed was kept on a standardized schema. None of the soft group suffered from withdrawal symptoms and consequently no medication was prescribed to cover withdrawal in these boys. Of the hard group 10 had no withdrawal symptoms, seven had mild symptoms, and three moderate symptoms. The three boys with moderate

symptoms and six boys with mild symptoms were sedated with chlorpromazine during the withdrawal period.

Home Office Notification and Drug Careers

Hard-Drug Takers.—Of the 20 hard-drug boys 11 were known to the Home Office to be on narcotics, either at the time of remand or subsequently. There was a correlation between having withdrawal symptoms and appearing on the Home Office list. Thus eight out of the 10 boys with withdrawal symptoms were known to the Home Office. Although there is considerable under-reporting of addicts, those who take drugs most heavily and frequently (hence the withdrawal symptoms) are most likely to be notified. This under-reporting may be less since the introduction of compulsory notification by the Dangerous Drugs Act 1967.

Soft-Drug Takers.—None of the boys in the soft group was known to the Home Office to have taken narcotics at the time of the remand home assessment. Nevertheless, subsequent examination of Home Office files showed that 9 (19.1%) had progressed to hard drugs by June 1969. The drugs reported as being taken and the numbers using each drug were: heroin 6, methedrine 4, pethidine 1, methadone (Physeptone) 1, morphine 1. It is ominous that a fifth of these boys should have progressed to hard drugs, particularly in view of the under-reporting, mentioned above, which would suggest that the actual progression rate is considerably higher. The number (nine) in this subgroup was too small for detailed statistical comparisons. Compared with the other soft-drug users, however, the boys who had progressed to hard drugs tended to be worse off in the degree of their personality abnormality, the incidence of psychiatric morbidity within the family, and in having poor work records.

Discussion

There is a considerable disparity between most estimates of the incidence of drug-taking and the number actually convicted by the courts. Chance and the ill-documented selective processes of the law determine which boys from the large population of adolescent drug takers are detected, convicted, and eventually remanded. A remand home population of drug takers is selective rather than typical. This selectivity probably results in the high incidence of delinquency, both in the subjects and in their siblings. This population is also likely to be more generally disturbed than the average, in that magistrates are probably more likely to remand boys who seem to be in need of care.

These provisos, however, apply to the remand home drug takers as a whole, and it is unlikely that the greater morbidity of the hard group when compared with the soft group is simply a result of this selection, particularly as these groups were closely matched for age, intelligence, and social class, so that these variables could not account for the differences between them.

The narcotic takers here do not correspond to the American stereotype (Chein *et al.*, 1964; Scher, 1966) in which narcotic-taking occurs predominantly in coloured and recent immigrant groups living in poverty and urban squalor. None of the hard group was immigrant. As in the case of the soft group their homes were generally materially adequate and their parents usually came from social classes III or IV. These narcotic takers were characterized not by differences in race, class, or material circumstances but by the higher incidence of disruption in the family and psychiatric morbidity in the parents, leading to a child with an abnormal and vulnerable personality and poor interpersonal relationships and work record.

The finding that 17 of the 20 hard group had previously taken cannabis or amphetamines is in line with the findings of

most workers that virtually all narcotic takers have used soft drugs beforehand. The progression of a fifth of the soft-drug users to hard drugs within the relatively short period of follow-up is more ominous, particularly as the true proportion is likely to be higher owing to under-notification to the Home Office. It suggests that boys convicted of soft-drug offences should be looked on as a risk for the future progression to hard drugs. The findings here suggest that this risk is particularly important for those who show the sort of personality and family disturbance associated with narcotic-taking. The majority of adolescent drug-takers probably take drugs on only a few occasions and are unlikely to appear before the courts (Weiner, 1969). Nevertheless, the number of convictions for drug offences is increasing and is of more than purely legal importance. A conviction for a drug offence usually provides the first opportunity for medical and social assessment of the treatment needed. Of the 67 boys in this survey only seven had received treatment for drug-taking previous to their remand.

The division of drug-takers into hard and soft according to whether or not narcotics are used may seem arbitrary, but it is

a distinction which is commonly made and correlates well with a number of measurements of morbidity. Recent attention (Hawks *et al.*, 1969) has been drawn to the dangers of intravenous amphetamines. In this survey all five boys using amphetamines intravenously at the time of remand were on narcotic drugs, while none of the boys in the soft group admitted to taking any drugs intravenously. The illicit use of intravenous drugs is ominous and usually suggests considerable involvement in the drug scene.

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CONFERENCES AND MEETINGS

American Rheumatology Conference

[FROM A SPECIAL CORRESPONDENT]

The 1969 interim session of the American Rheumatism Association was held in Tucson, Arizona, on 5 and 6 December. A large selection of papers were presented covering many aspects of the rheumatic diseases.

The relation between rubella infection and synovitis was the subject of two independent studies. The incidence and characteristics of arthritis complicating a field trial of rubella virus vaccine was described by G. R. THOMPSON and his colleagues (Michigan). The vaccine had been given to 11,758 children in Michigan during 1969, and of these 329 (2.8%) had reported definite joint symptoms. Forty-nine (0.42%) were considered to have definite arthritis, distributed equally between boys and girls. The commonest presenting symptoms were carpal tunnel compression, arthritis of the knee joint, and polyarthritis. The interval between vaccination and onset of symptoms was up to 55 days, and symptoms persisted up to 46 days. Though sometimes recurrent, all joint symptoms had cleared completely without residual impairment.

The more specific inter-relationship between synovial cells in culture and rubella virus was reported by A. I. GRAYZEL and C. BECK (New York). Their studies showed that, whereas human non-rheumatoid synovial cells were highly susceptible to rubella virus, rheumatoid synovial cells propagated in culture were resistant to it. This resistance was not due to detectable interferon production but might reflect the acquisition of new genetic information gained by virtue of an "interfering" agent within rheumatoid synovial cells, such as a latent or defective virus.

Response to Herpes Virus

An impaired immunological response to herpes simplex virus in rheumatoid arthritis was suggested by J. D. SMILEY (Dallas) and

H. L. CASEY (Atlanta). They had compared the sera of 20 patients with rheumatoid arthritis with those of 62 normal subjects with respect to antibody titres to herpes simplex, varicella-zoster, adenovirus group antigen, cytomegalovirus, rubella, and psittacosis-lymphogranuloma virus. The only agent showing a significant difference in complement-fixing antibody titre between the two groups had been found to be herpes simplex, only one rheumatoid serum being positive, compared to positive titres in 39 of the normal sera. This observation was confirmed in a second group of rheumatoid patients compared to an age-and-sex matched control group. Thus it appeared that patients with rheumatoid arthritis might have selective impaired production of humoral antibodies to herpes simplex. Further, the addition of rheumatoid serum to antibody-positive normal serum, reduced the complement fixing titres in some cases. It was postulated that rheumatoid patients might have an acquired immunological tolerance to herpes simplex antigen; or that the presence of rheumatoid factor itself somehow inhibited the anti-viral antibody.

More direct and long-term virological studies in both systemic lupus and rheumatoid arthritis were reported by P. E. PHILLIPS and C. L. CHRISTIAN (New York). Though no transmissible agent had been detected in renal or synovial tissue from several patients with systemic lupus, the sera of many patients with this disease contained strikingly raised titres of measles antibody as measured by the sensitive micro-haemagglutination-inhibition technique. The mean titre in 33 lupus sera was 1:116, with the higher titres evident in patients with neurological symptoms. By contrast, normal titres were found in rheumatoid arthritis and Reiter's disease. During long-term culture of synovial tissue from patients with various

primary joint diseases, herpes-like virus had been repeatedly isolated from a 6-month-old culture taken from a patient with juvenile rheumatoid arthritis, and from a 9-month-old culture from one with arthrogryposis congenita multiplex. Nevertheless, infection of the tissue donors has not yet been proved, so that any aetiological role of herpes virus in these diseases must remain speculative.

Therapy

The long-term results of cyclophosphamide treatment for rheumatoid arthritis were reported from several centres. Though some patients undoubtedly benefited from "high"-dosage (150 mg./day) treatment, the complication rate was high. Out of 108 patients treated over a 6-year period, W. M. FOSDICK (Tucson) reported gastrointestinal symptoms in 60%, hair loss in 42%, leucopenia of less than 2,000/cu.mm. in 30%, herpes zoster in 10%, haemorrhagic cystitis in 9%, and ovarian suppression in 6%. He considered that cyclophosphamide therapy in rheumatoid arthritis should probably be restricted to patients with severe, resistant disease. The results of a properly controlled double-blind trial of this cytotoxic drug in the treatment of early rheumatoid arthritis should be forthcoming in the near future.

The more fundamental question of the role of bed-rest in rheumatoid arthritis was considered by R. S. PINALS and his co-workers (Syracuse and Boston). Bed-rest for 22 hours daily had not been shown to be superior to unrestricted activity in the management of patients admitted to hospital for exacerbation of rheumatoid arthritis. As expected, the main factors affecting response to either type of management were the duration of disease and the presence of erosive radiographic changes.